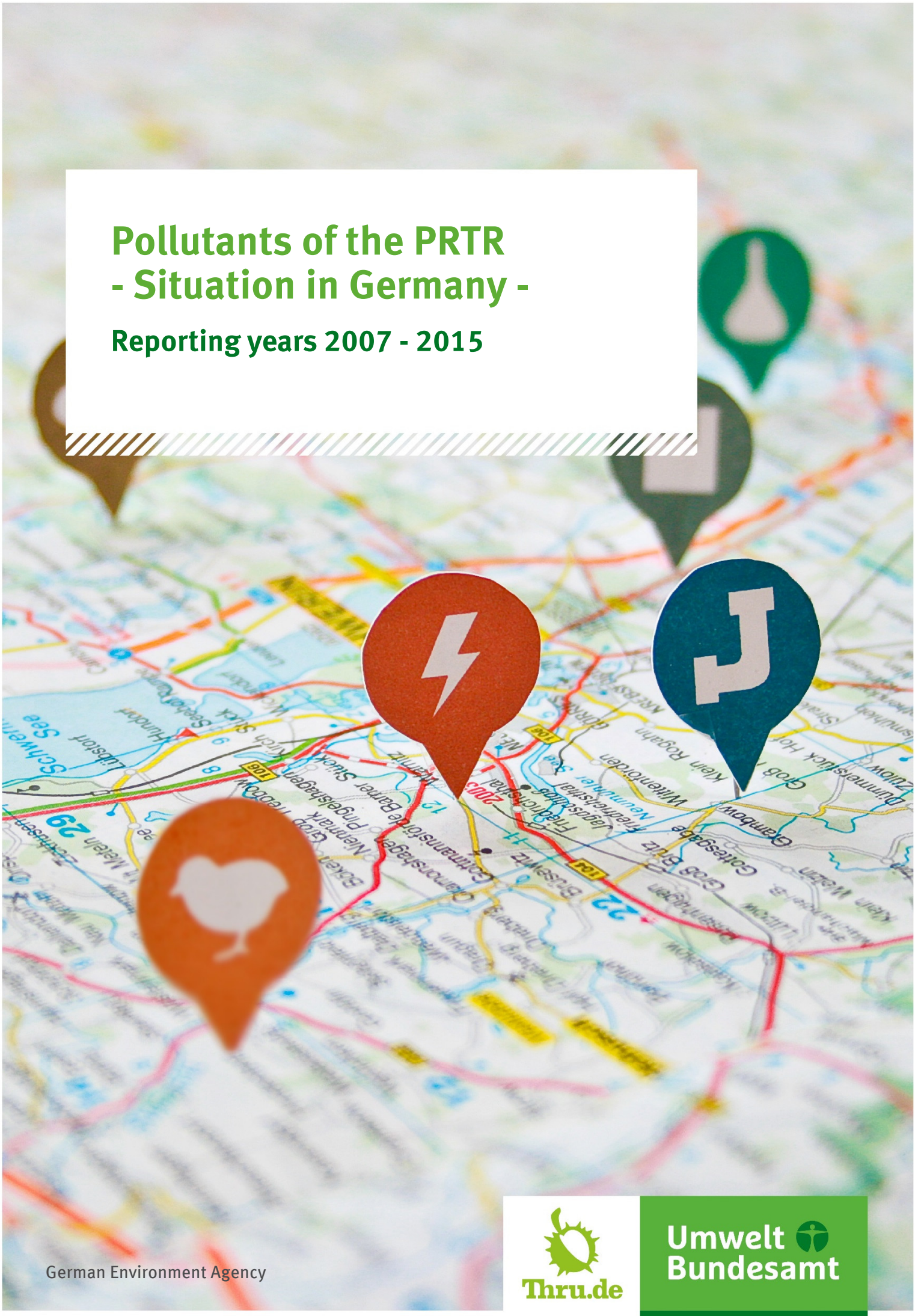
Pollutants of the PRTR
- Situation in Germany -

Reporting years 2007 - 2015



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1 Introduction

Germany, as well as the European Union and its Member States signed the UN ECE PRTR Protocol[1] requiring to establish a national Pollutant Release and Transfer Register (PRTR), which is open to the public. The establishment in Germany was based on the European Regulation (EG) 166/2006 (E-PRTR-VO)[2] and the German PRTR-Gesetz (SchadRegProtAG)[3]. The PRTR compiles annual releases of pollutants into the air, water, land and the off-site transfers in waste water[4] and the off-site transfer of hazardous and non-hazardous waste stemming from certain industrial activities. A report about these releases becomes due, if the applicable tresholds for releases or waste were exceeded[5]. The E-PRTR Regulation lists 91 pollutants[6]. German PRTR data are regularly published on the Internet www.thru.de.

The present volume contains a brief overview of each pollutant listed in the Regulation. Details are compiled in tables and figures grouped according to the releases into the air, water and land and the off-site transfers in waste water. Reporting of releases to land only contains pollutants in waste which are disposed by land treatment or deep injection[7]. The table shows a subdivision of total amounts of pollutants by industrial sectors[8] and the number of reporting facilities for the most recent reporting year. The first figure shows the number of facilities by pollutant as time series subdivided by industrial sectors. The second figure shows the development of releases and off-site transfers in waste water as time series subdivided by industrial sectors. In both figures included is a maximum of five sectors which have the highest amount of pollutants seen in the displayed table for the most recent reporting year.

In this volume only pollutants are considered from which a release or off-site transfer in waste water is reported at least by one facility in the current year. If no threshold is given in the E-PRTR Regulation (see Annex A) reporting for this pollutant is not required.

Further comprehensive information about the German PRTR can be found on the web site www.thru.de where also the complete dataset for all reporting years since 2007 can be downloaded as SQLite database[9]. Information about the European PRTR is available at http://prtr.ec.europa.eu.

This volume is updated regularly as new data becomes available. All numbers are given with at least 3 significant digits. Please send questions or feedback to mail(at)thru.de.

[1] https://www.unece.org/fileadmin/DAM/PRTR_Protocol_e.pdf
[2] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:033:0001:0017:EN:PDF
[3] http://www.gesetze-im-internet.de/bundesrecht/schadregprot/gesamt.pdf
[4] https://wiki.prtr.bund.de/wiki/Definitionen#Verbringung_von_Abwasser_au.C3.9Ferhalb_des_Standortes
[5] http://www.thru.de/fileadmin/SITE_MASTER/content/Dokumente/Downloads/E_PRTR_VO_Anhang_II.pdf
[6] https://www.thru.de/3/thrude/knowledge/pollutants-waste-industrial-sectors
[7] https://wiki.prtr.bund.de/wiki/Definitionen#Freisetzungen_in_den_Boden
[8] https://www.thru.de/3/thrude/knowledge/pollutants-waste-industrial-sectors/
[9] http://www.thru.de/thrude/downloads/

2 Releases to air, water and land

The following chapters cover only releases of pollutants to air, water and land.

2.1 1,2-dichloroethane (DCE)

2.1.1 Releases to Air

The threshold is **1 000 kg "1,2-dichloroethane (DCE)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	3	75	152 850	97.4
Energy sector	1	25	4 130	2.63
TOTAL	4	100	156 980	100

Table 1: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"1,2-dichloroethane (DCE)"** to **Air** of the different industrial sectors including the corresponding shares.

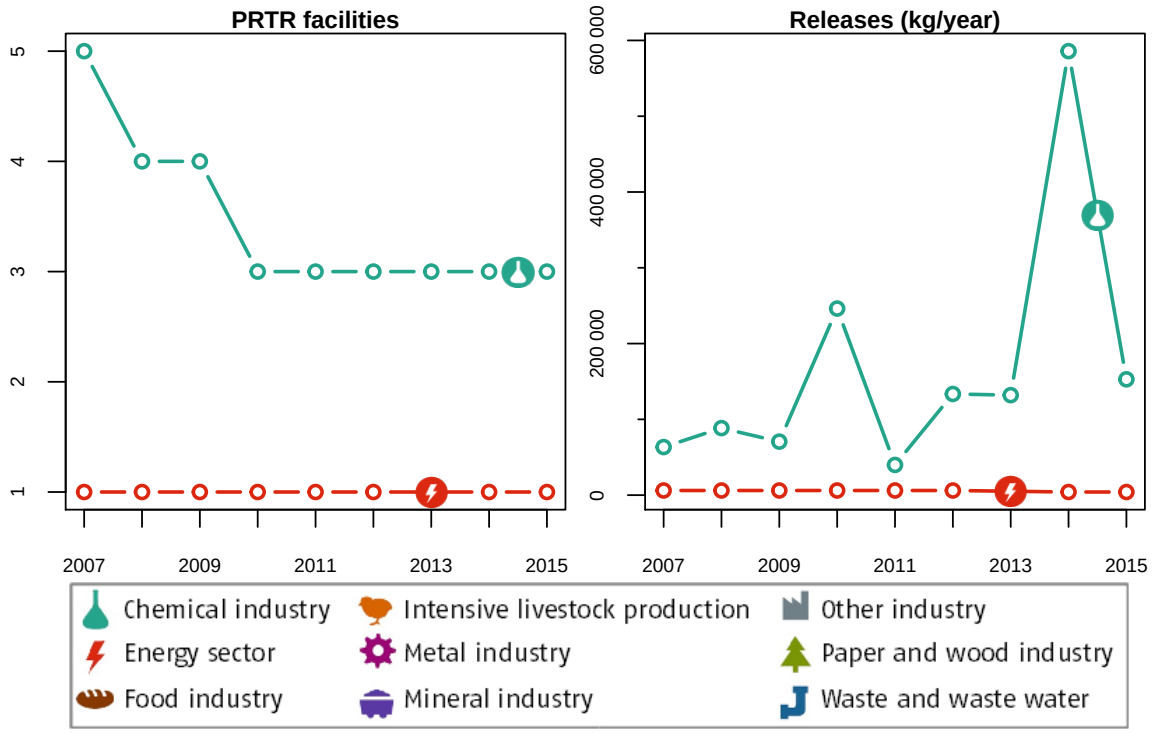

Figure 1: Annual number of facilities (left) and their releases (right) of the pollutant **"1,2-dichloroethane (DCE)"** to **Air**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

2.1.2 Releases to Water

The threshold is **10 kg "1,2-dichloroethane (DCE)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

No facility reported the release of **"1,2-dichloroethane (DCE)"** to **Water** in **2015**.

2.1.3 Releases to Land

The threshold is **10 kg "1,2-dichloroethane (DCE)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"1,2-dichloroethane (DCE)"** to **Land** in **2015**.

2.2 1,2,3,4,5,6-hexachlorocyclohexane (HCH)

2.2.1 Releases to Air

The threshold is **10 kg "1,2,3,4,5,6-hexachlorocyclohexane (HCH)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

No facility reported the release of **"1,2,3,4,5,6-hexachlorocyclohexane (HCH)"** to **Air** in **2015**.

2.2.2 Releases to Water

The threshold is **1 kg "1,2,3,4,5,6-hexachlorocyclohexane (HCH)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	1	100	3.31	100
TOTAL	1	100	3.31	100

Table 2: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"1,2,3,4,5,6-hexachlorocyclohexane (HCH)"** to **Water** of the different industrial sectors including the corresponding shares.

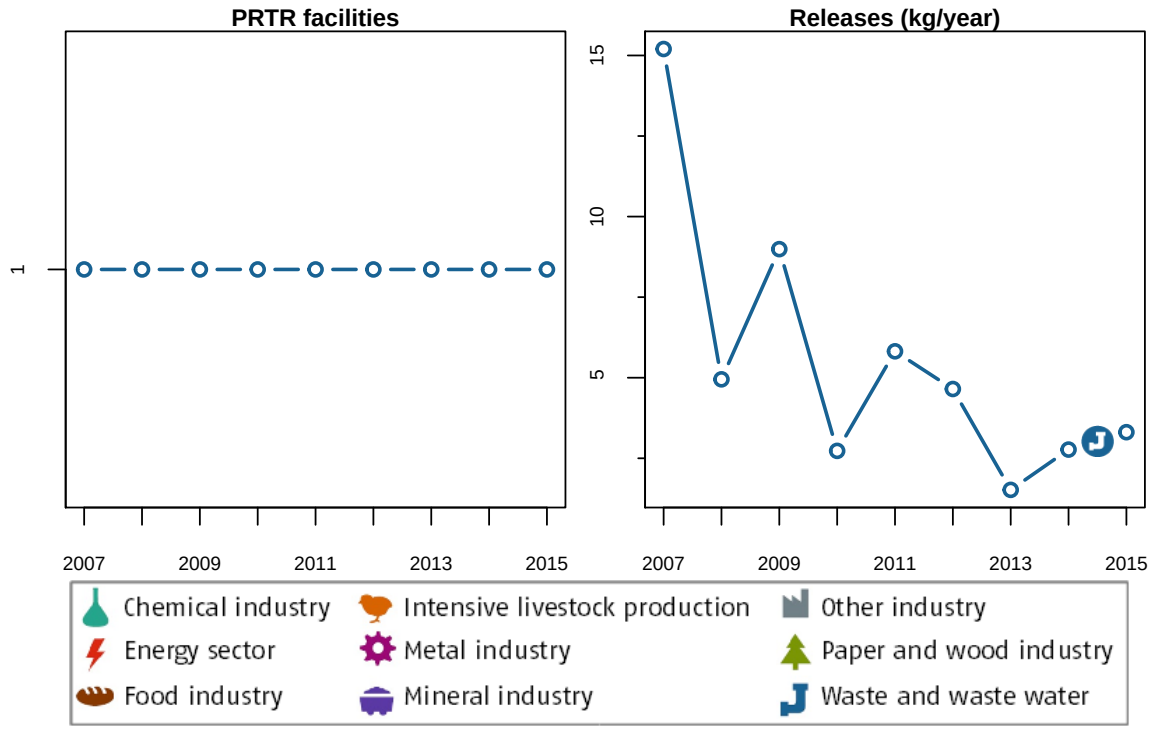

Figure 2: Annual number of facilities (left) and their releases (right) of the pollutant **"1,2,3,4,5,6-hexachlorocyclohexane (HCH)"** to **Water**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.2.3 Releases to Land

The threshold is **1 kg "1,2,3,4,5,6-hexachlorocyclohexane (HCH)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"1,2,3,4,5,6-hexachlorocyclohexane (HCH)"** to **Land** in **2015**.

2.3 Ammonia (NH3)

2.3.1 Releases to Air

The threshold is **10 000 kg "Ammonia (NH3)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Intensive livestock production and aquaculture	614	92.1	13 534 200	78.9
Mineral industry	31	4.65	2 215 500	12.9
Chemical industry	11	1.65	1 220 600	7.12
Energy sector	7	1.05	126 600	0.738
Waste and waste water management	2	0.3	29 800	0.174
Food industry	2	0.3	26 400	0.154
TOTAL	667	100	17 153 100	100

Table 3: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Ammonia (NH3)"** to **Air** of the different industrial sectors including the corresponding shares.

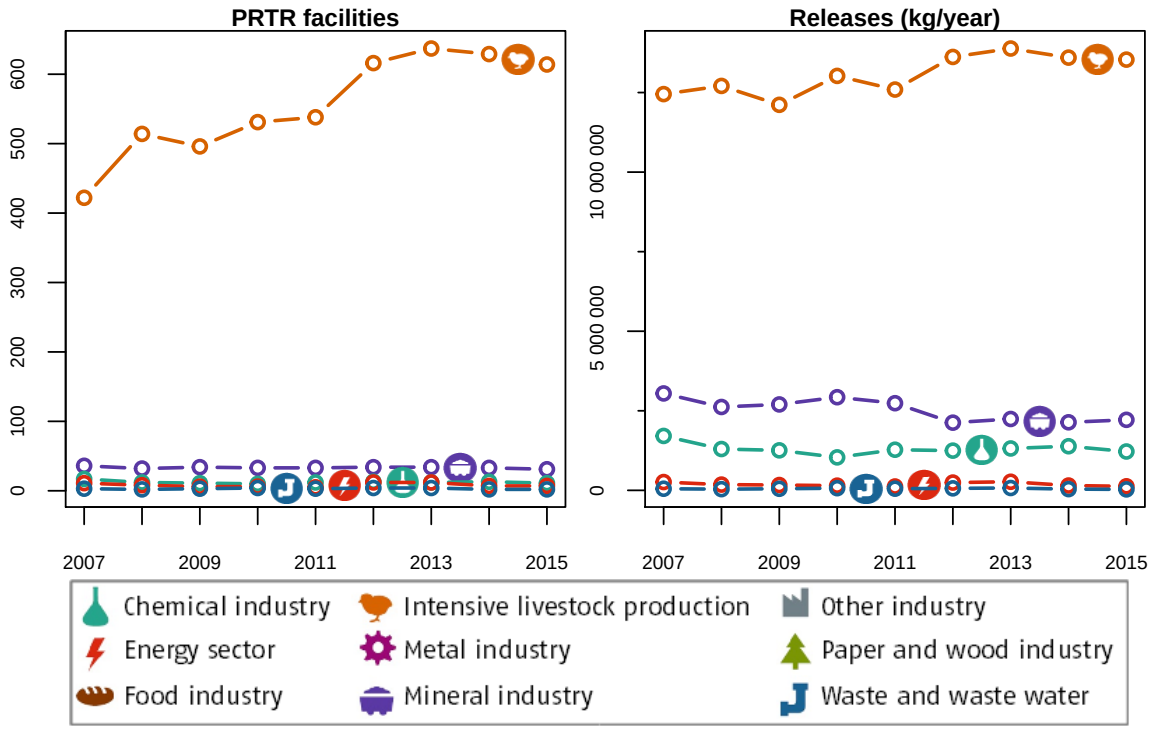

Figure 3: Annual number of facilities (left) and their releases (right) of the pollutant **"Ammonia (NH3)"** to **Air**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.4 Arsenic and compounds (as As)

2.4.1 Releases to Air

The threshold is **20 kg "Arsenic and compounds (as As)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Metal industry	7	29.2	800	50.1
Energy sector	15	62.5	693	43.3
Mineral industry	2	8.33	106	6.63
TOTAL	24	100	1 599	100

Table 4: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Arsenic and compounds (as As)"** to **Air** of the different industrial sectors including the corresponding shares.

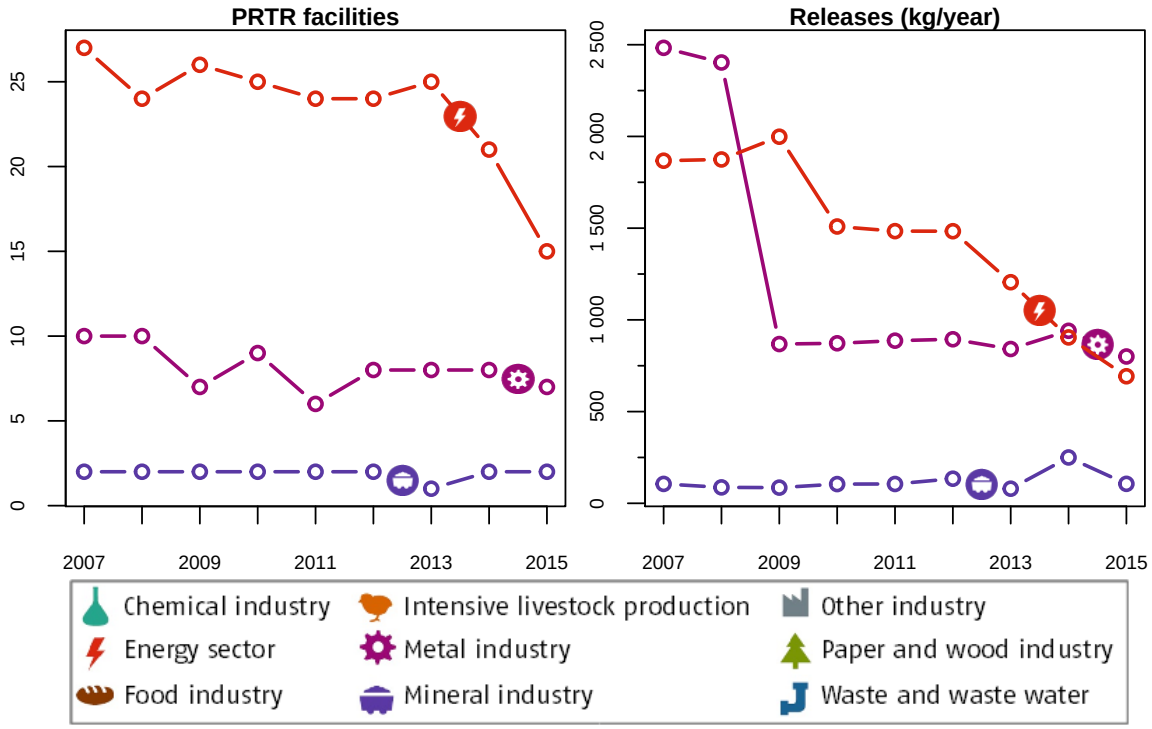

Figure 4: Annual number of facilities (left) and their releases (right) of the pollutant **"Arsenic and compounds (as As)"** to **Air**, each by the 3 industrial sector(s) with the highest emissions in the year 2015.

2.4.2 Releases to Water

The threshold is **5 kg "Arsenic and compounds (as As)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	66	80.5	2 572	77.9
Chemical industry	6	7.32	528	16
Energy sector	3	3.66	100	3.04
Mineral industry	5	6.1	74.1	2.24
Metal industry	2	2.44	26.2	0.795
TOTAL	82	100	3 301	100

Table 5: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Arsenic and compounds (as As)"** to **Water** of the different industrial sectors including the corresponding shares.

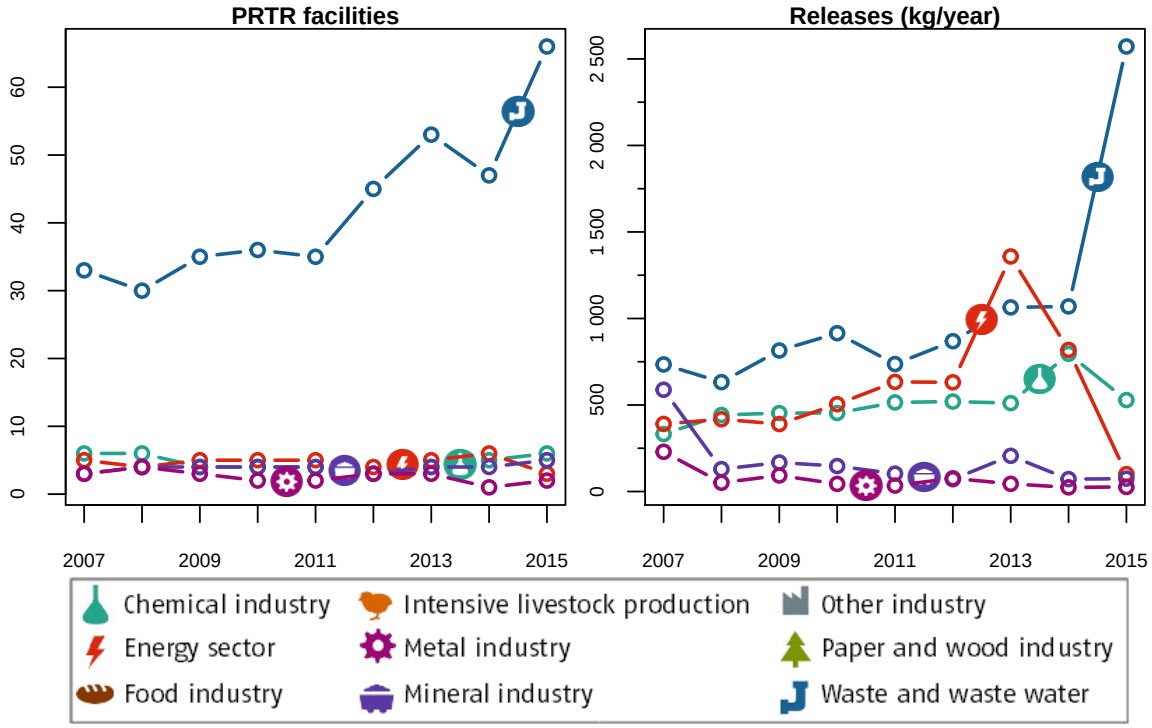

Figure 5: Annual number of facilities (left) and their releases (right) of the pollutant **"Arsenic and compounds (as As)"** to **Water**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.4.3 Releases to Land

The threshold is **5 kg "Arsenic and compounds (as As)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Mineral industry	2	100	112	100
TOTAL	2	100	112	100

Table 6: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Arsenic and compounds (as As)"** to **Land** of the different industrial sectors including the corresponding shares.

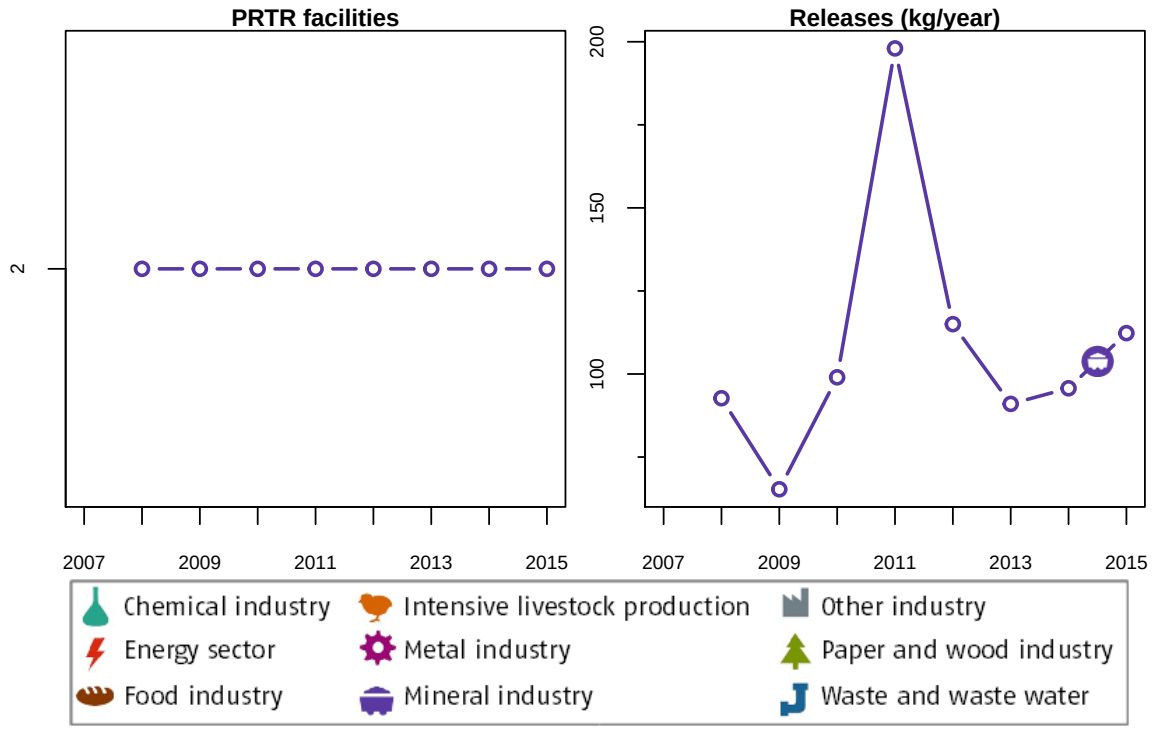

Figure 6: Annual number of facilities (left) and their releases (right) of the pollutant **"Arsenic and compounds (as As)"** to **Land**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.5 Atrazine

2.5.1 Releases to Water

The threshold is **1 kg "Atrazine" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	1	100	1.15	100
TOTAL	1	100	1.15	100

Table 7: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Atrazine"** to **Water** of the different industrial sectors including the corresponding shares.

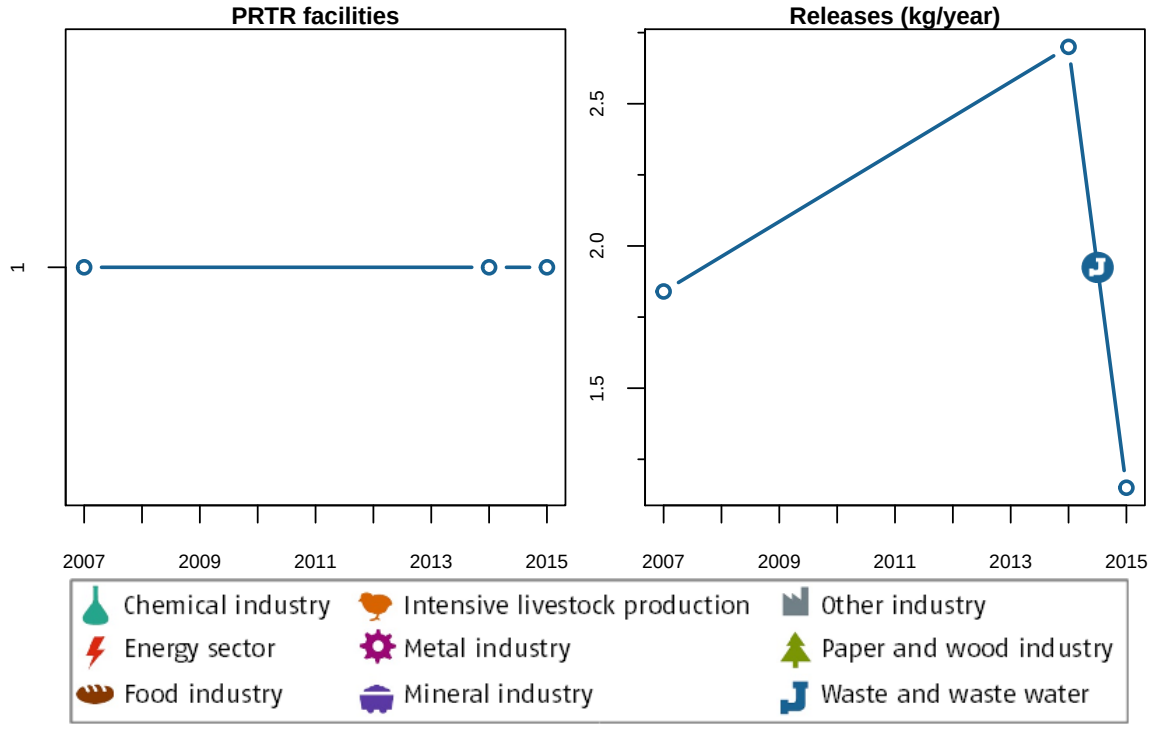

Figure 7: Annual number of facilities (left) and their releases (right) of the pollutant **"Atrazine"** to **Water**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.5.2 Releases to Land

The threshold is **1 kg "Atrazine" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Atrazine"** to **Land** in **2015**.

2.6 Benzene

2.6.1 Releases to Air

The threshold is **1 000 kg "Benzene" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Metal industry	36	52.2	146 740	62.9
Mineral industry	18	26.1	44 140	18.9
Energy sector	11	15.9	33 760	14.5
Chemical industry	4	5.8	8 680	3.72
TOTAL	69	100	233 320	100

Table 8: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Benzene"** to **Air** of the different industrial sectors including the corresponding shares.

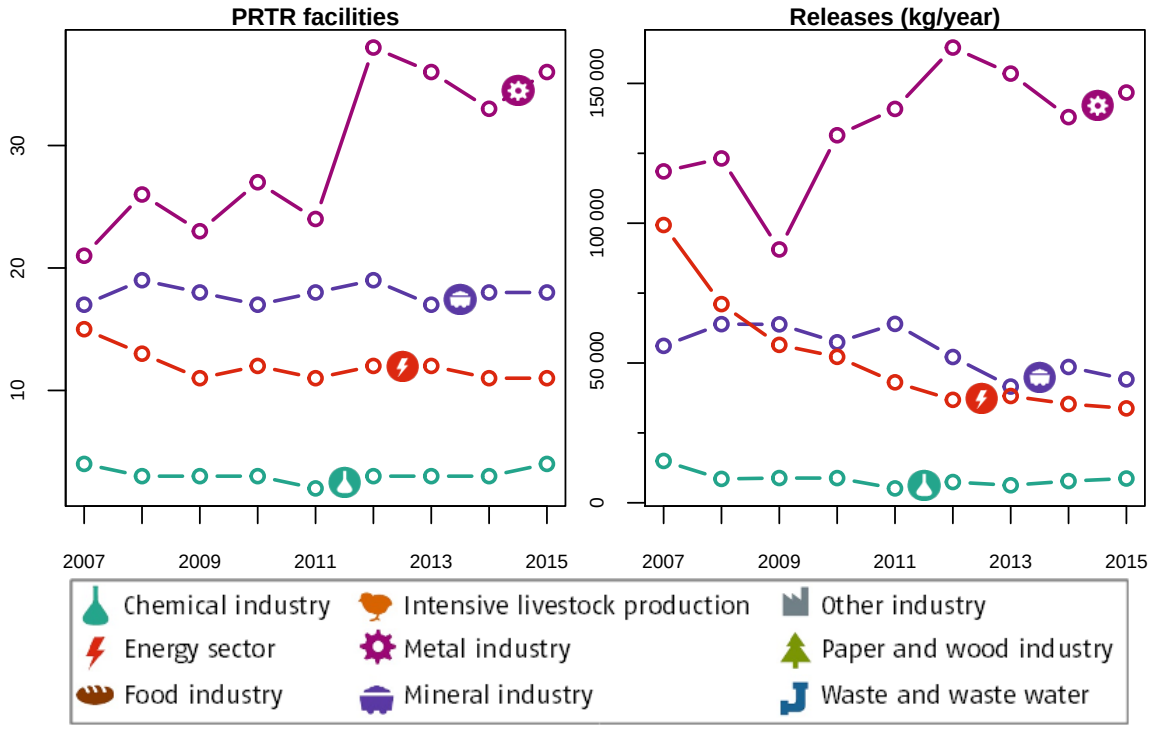

Figure 8: Annual number of facilities (left) and their releases (right) of the pollutant **"Benzene"** to **Air**, each by the 4 industrial sector(s) with the highest emissions in the year 2015.

2.6.2 Releases to Water

The threshold is **200 kg "Benzene" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Benzene"** to **Water** in **2015**.

2.6.3 Releases to Land

The threshold is **200 kg "Benzene" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Benzene"** to **Land** in **2015**.

2.7 Cadmium and compounds (as Cd)

2.7.1 Releases to Air

The threshold is **10 kg "Cadmium and compounds (as Cd)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Metal industry	13	59.1	903	83
Energy sector	8	36.4	172	15.9
Mineral industry	1	4.55	12	1.1
TOTAL	22	100	1 087	100

Table 9: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Cadmium and compounds (as Cd)"** to **Air** of the different industrial sectors including the corresponding shares.

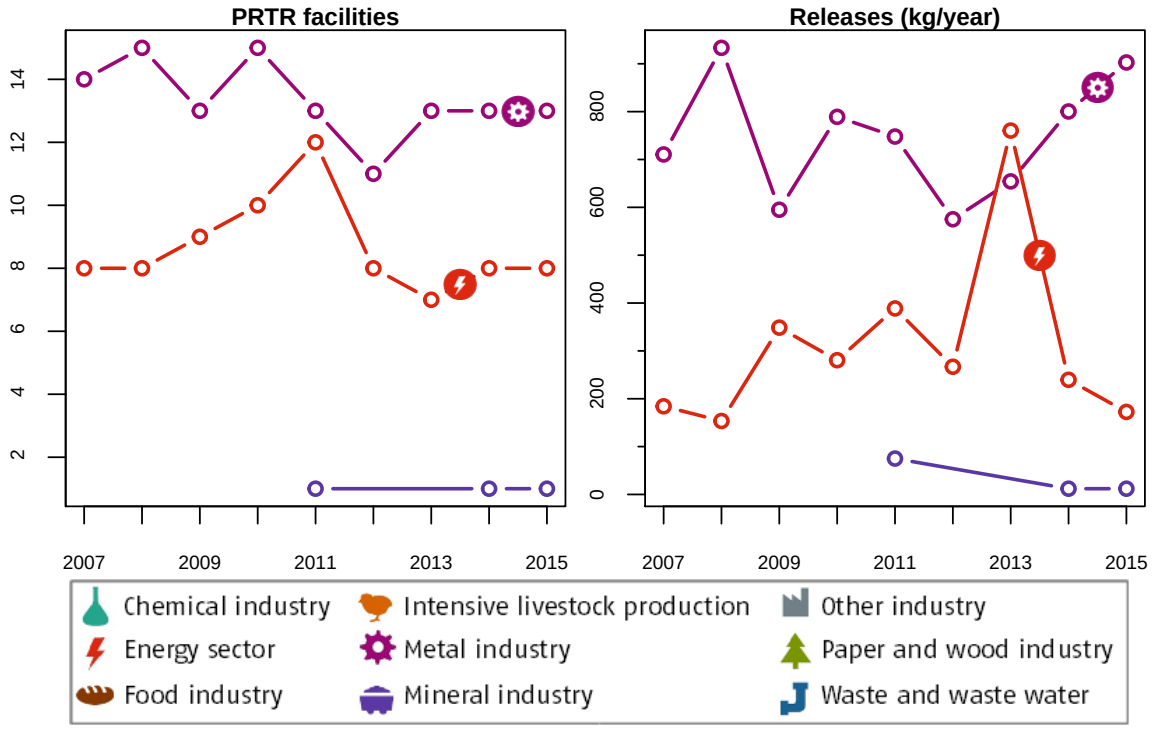

Figure 9: Annual number of facilities (left) and their releases (right) of the pollutant **"Cadmium and compounds (as Cd)"** to **Air**, each by the 3 industrial sector(s) with the highest emissions in the year 2015.

2.7.2 Releases to Water

The threshold is **5 kg "Cadmium and compounds (as Cd)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	19	79.2	275	64.2
Chemical industry	2	8.33	124	28.8
Paper- and wood industry	2	8.33	22.4	5.23
Mineral industry	1	4.17	7.3	1.7
TOTAL	24	100	429	100

Table 10: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Cadmium and compounds (as Cd)"** to **Water** of the different industrial sectors including the corresponding shares.

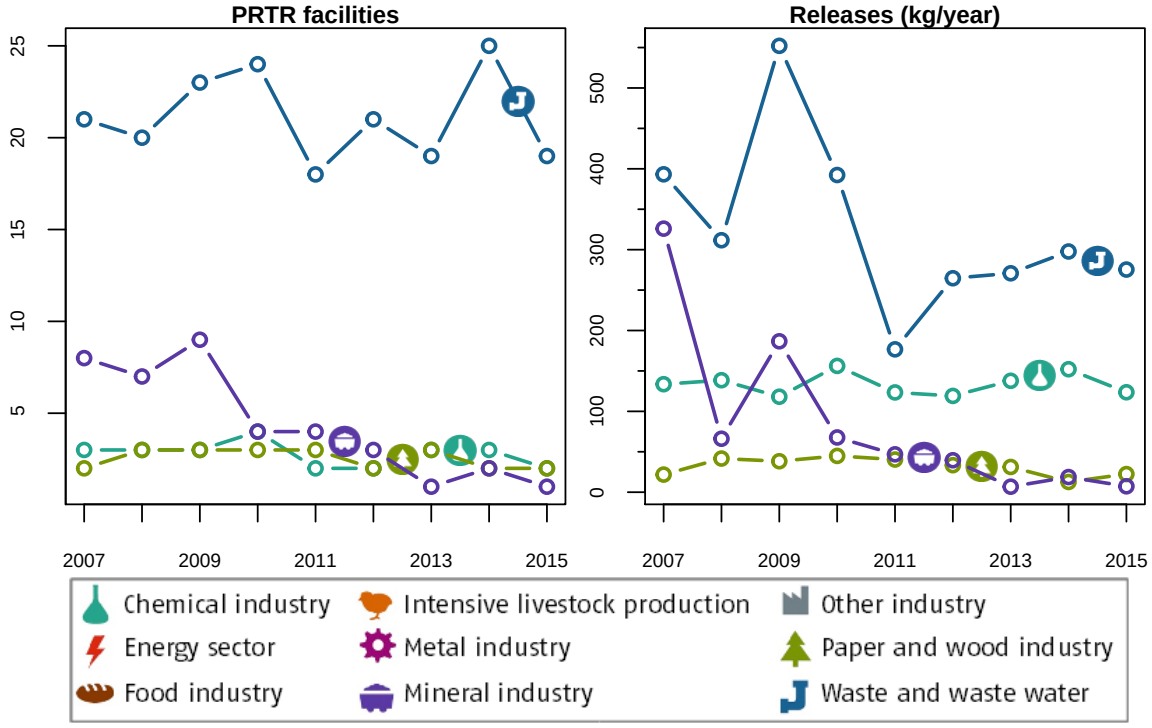

Figure 10: Annual number of facilities (left) and their releases (right) of the pollutant **"Cadmium and compounds (as Cd)"** to **Water**, each by the 4 industrial sector(s) with the highest emissions in the year 2015.

2.7.3 Releases to Land

The threshold is **5 kg "Cadmium and compounds (as Cd)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Cadmium and compounds (as Cd)"** to **Land** in **2015**.

2.8 Carbon dioxide (CO2)

2.8.1 Releases to Air

The threshold is **100 000 000 kg "Carbon dioxide (CO2)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Energy sector	166	41.8	327 485 000 000	73.2
Metal industry	28	7.05	34 008 000 000	7.6
Chemical industry	39	9.82	29 411 000 000	6.57
Mineral industry	61	15.4	26 678 000 000	5.96
Waste and waste water management	68	17.1	20 212 000 000	4.52
Paper- and wood industry	25	6.3	7 981 000 000	1.78
Food industry	8	2.02	1 101 000 000	0.246
Other industry	2	0.504	457 000 000	0.102
TOTAL	397	100	447 333 000 000	100

Table 11: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Carbon dioxide (CO2)"** to **Air** of the different industrial sectors including the corresponding shares.

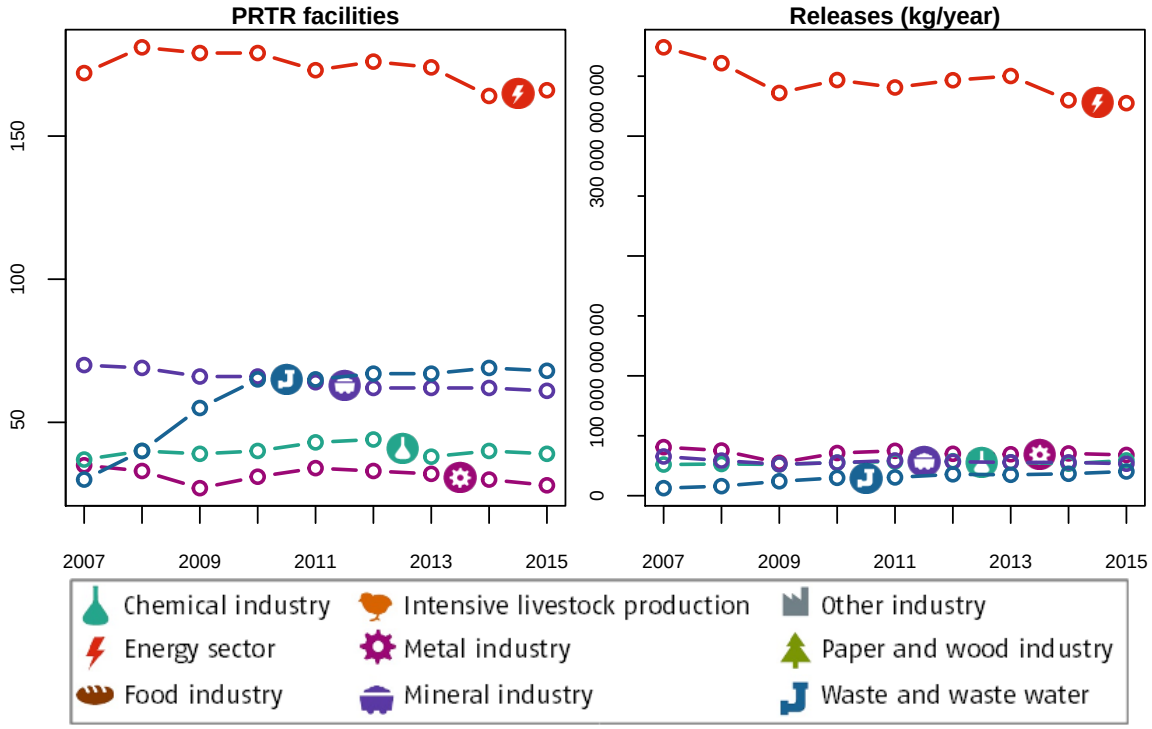

Figure 11: Annual number of facilities (left) and their releases (right) of the pollutant **"Carbon dioxide (CO2)"** to **Air**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.9 Carbon monoxide (CO)

2.9.1 Releases to Air

The threshold is **500 000 kg "Carbon monoxide (CO)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Metal industry	26	29.9	641 825 000	78.2
Mineral industry	35	40.2	102 189 000	12.4
Energy sector	15	17.2	52 177 000	6.35
Chemical industry	8	9.2	22 337 000	2.72
Other industry	1	1.15	1 420 000	0.173
Paper- and wood industry	2	2.3	1 135 000	0.138
TOTAL	87	100	821 083 000	100

Table 12: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Carbon monoxide (CO)"** to **Air** of the different industrial sectors including the corresponding shares.

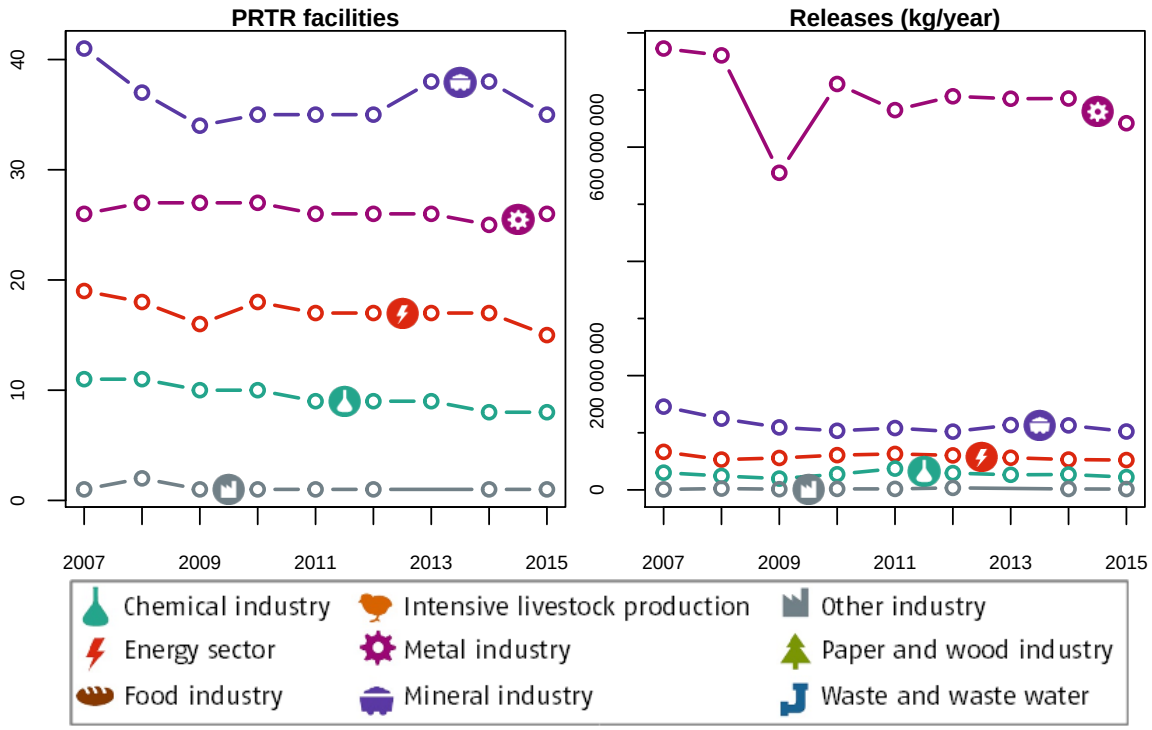

Figure 12: Annual number of facilities (left) and their releases (right) of the pollutant **"Carbon monoxide (CO)"** to **Air**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.10 Chlorides (as total Cl)

2.10.1 Releases to Water

The threshold is **2 000 000 kg "Chlorides (as total Cl)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	25	20.5	3 170 120 000	49.7
Mineral industry	19	15.6	1 624 170 000	25.4
Waste and waste water management	71	58.2	1 420 260 000	22.2
Energy sector	5	4.1	163 700 000	2.56
Metal industry	1	0.82	3 370 000	0.0528
Paper- and wood industry	1	0.82	2 100 000	0.0329
TOTAL	122	100	6 383 720 000	100

Table 13: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Chlorides (as total Cl)"** to **Water** of the different industrial sectors including the corresponding shares.

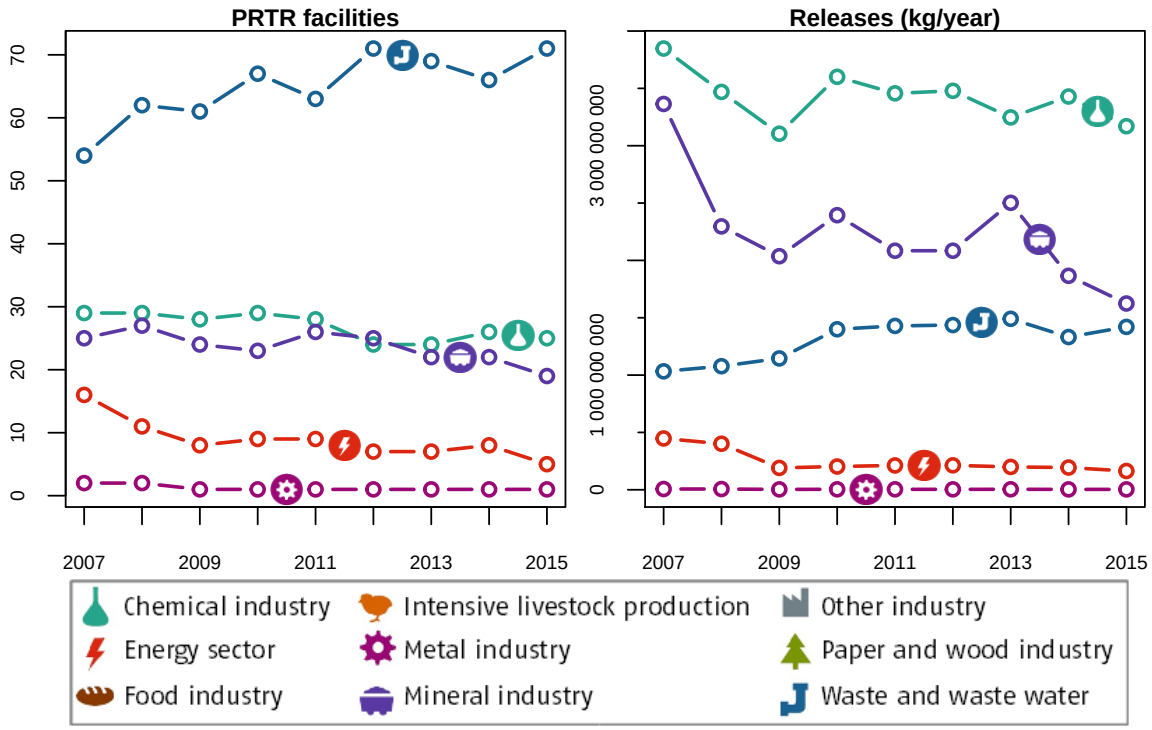

Figure 13: Annual number of facilities (left) and their releases (right) of the pollutant **"Chlorides (as total Cl)"** to **Water**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.10.2 Releases to Land

The threshold is **2 000 000 kg "Chlorides (as total Cl)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Mineral industry	2	100	651 000 000	100
TOTAL	2	100	651 000 000	100

Table 14: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Chlorides (as total Cl)"** to **Land** of the different industrial sectors including the corresponding shares.

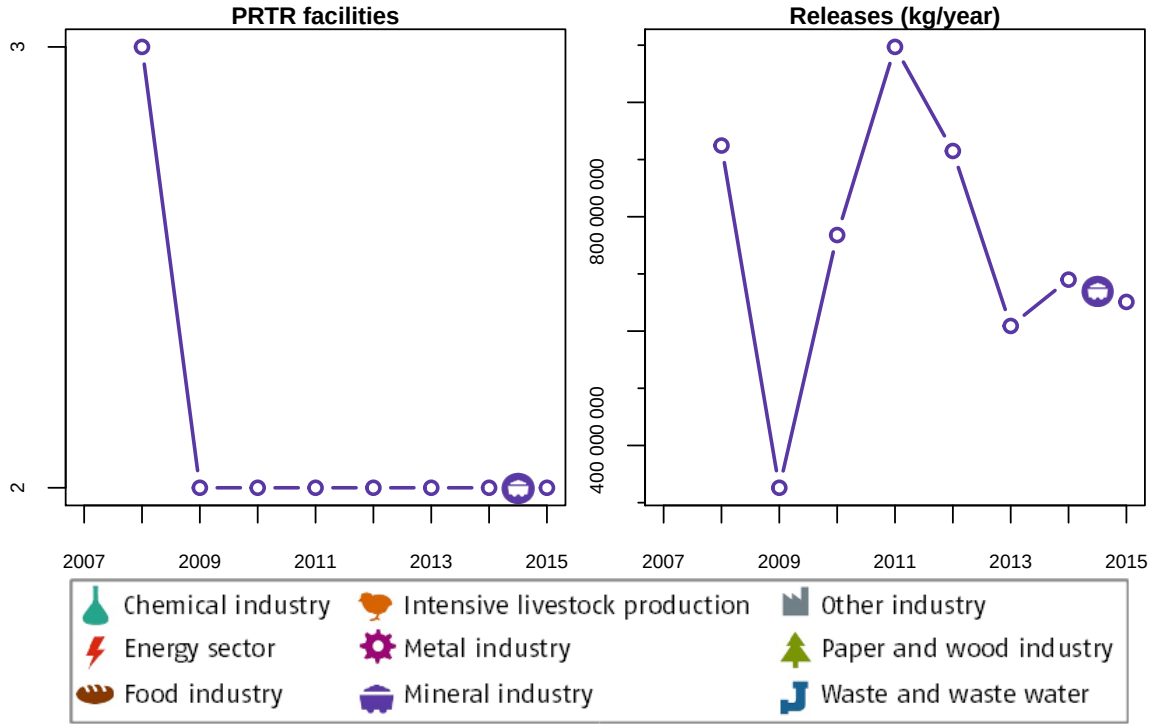

Figure 14: Annual number of facilities (left) and their releases (right) of the pollutant **"Chlorides (as total Cl)"** to **Land**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.11 Chlorine and inorganic compounds (as HCl)

2.11.1 Releases to Air

The threshold is **10 000 kg "Chlorine and inorganic compounds (as HCl)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Energy sector	45	59.2	2 476 400	70.9
Metal industry	7	9.21	532 600	15.2
Waste and waste water management	10	13.2	225 700	6.46
Mineral industry	10	13.2	151 400	4.33
Paper- and wood industry	4	5.26	108 800	3.11
TOTAL	76	100	3 494 900	100

Table 15: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Chlorine and inorganic compounds (as HCl)"** to **Air** of the different industrial sectors including the corresponding shares.

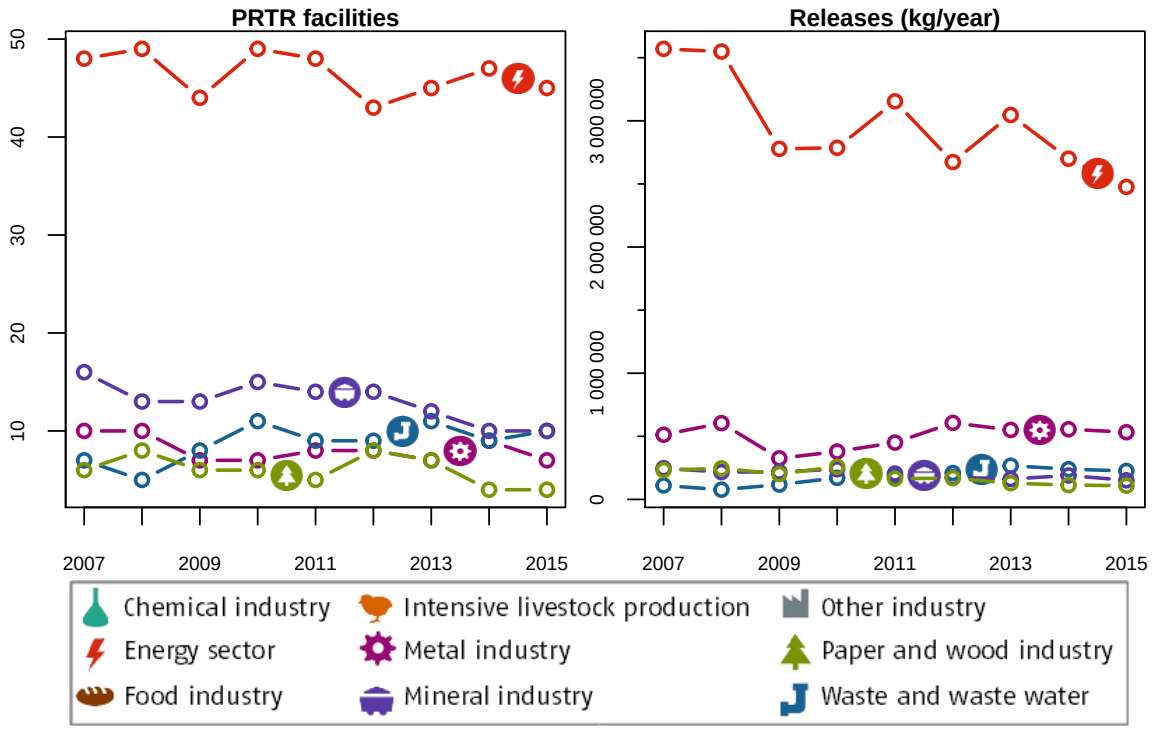

Figure 15: Annual number of facilities (left) and their releases (right) of the pollutant **"Chlorine and inorganic compounds (as HCl)"** to **Air**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.12 Chlorofluorocarbons (CFCs)

2.12.1 Releases to Air

The threshold is **1 kg "Chlorofluorocarbons (CFCs)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	8	100	207	100
TOTAL	8	100	207	100

Table 16: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Chlorofluorocarbons (CFCs)"** to **Air** of the different industrial sectors including the corresponding shares.

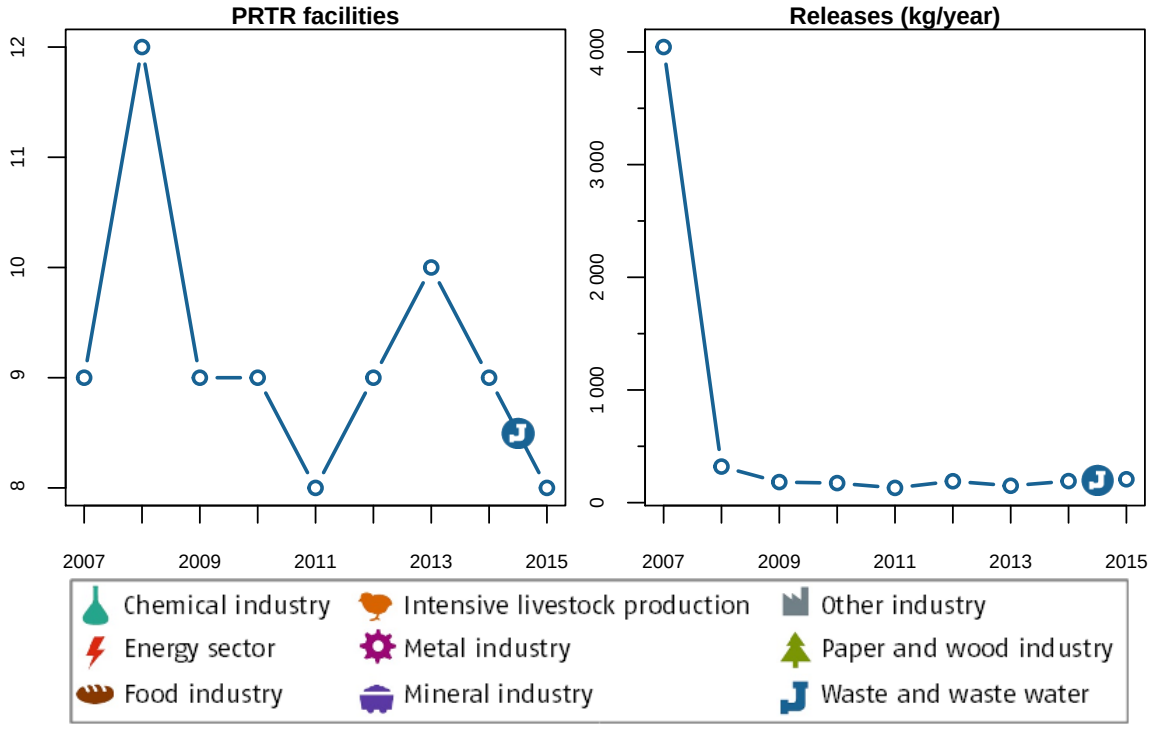

Figure 16: Annual number of facilities (left) and their releases (right) of the pollutant **"Chlorofluorocarbons (CFCs)"** to **Air**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.13 Chromium and compounds (as Cr)

2.13.1 Releases to Air

The threshold is **100 kg "Chromium and compounds (as Cr)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Metal industry	14	77.8	3 045	84.6
Energy sector	4	22.2	556	15.4
TOTAL	18	100	3 601	100

Table 17: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Chromium and compounds (as Cr)"** to **Air** of the different industrial sectors including the corresponding shares.

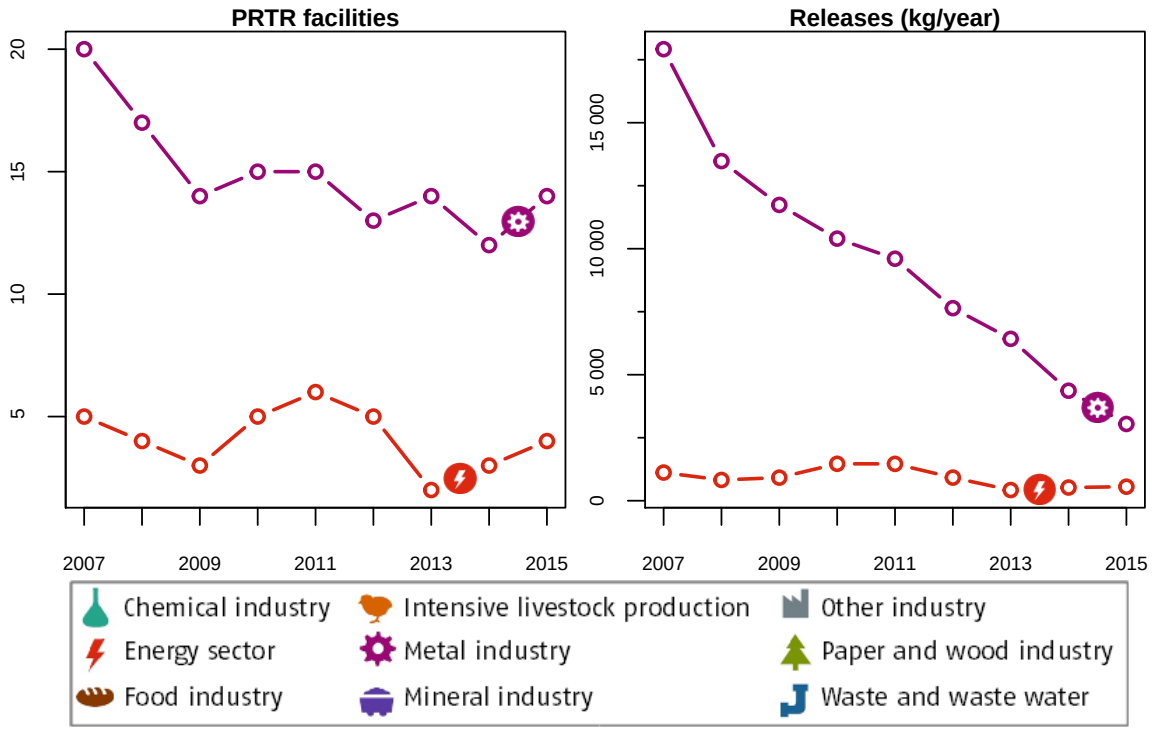

Figure 17: Annual number of facilities (left) and their releases (right) of the pollutant **"Chromium and compounds (as Cr)"** to **Air**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

2.13.2 Releases to Water

The threshold is **50 kg "Chromium and compounds (as Cr)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	6	18.2	8 051	62.1
Waste and waste water management	23	69.7	4 074	31.4
Energy sector	1	3.03	641	4.94
Metal industry	2	6.06	121	0.936
Other industry	1	3.03	86.5	0.667
TOTAL	33	100	12 974	100

Table 18: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Chromium and compounds (as Cr)"** to **Water** of the different industrial sectors including the corresponding shares.

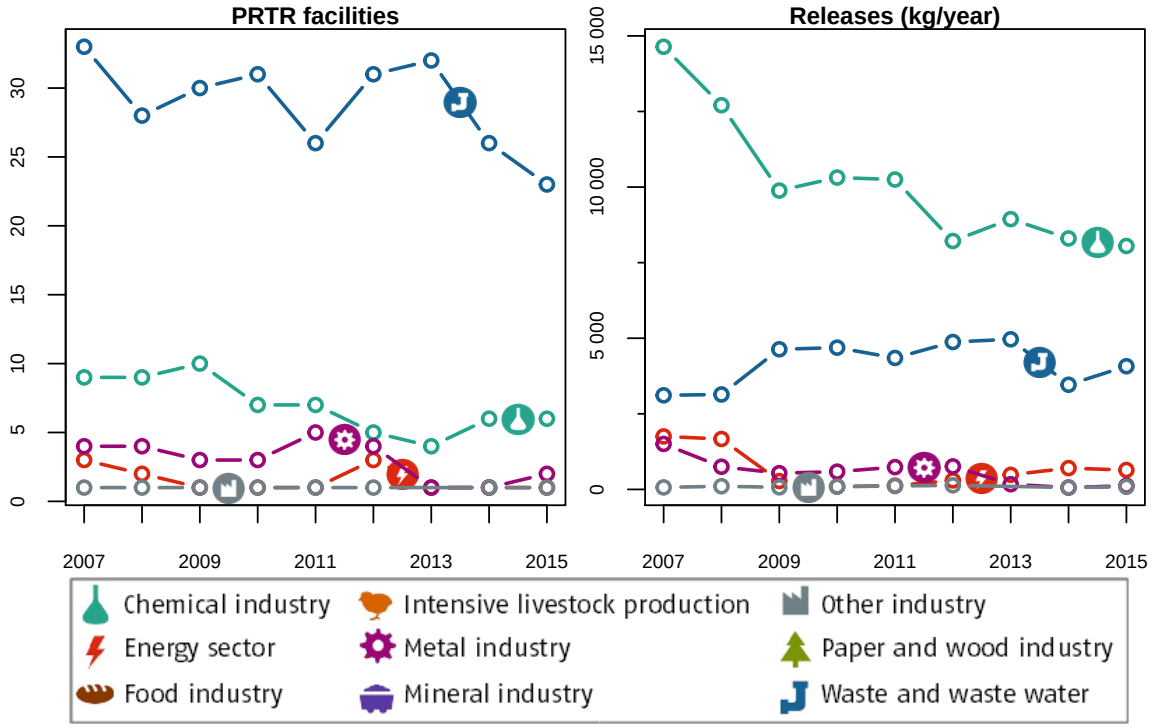

Figure 18: Annual number of facilities (left) and their releases (right) of the pollutant **"Chromium and compounds (as Cr)"** to **Water**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.13.3 Releases to Land

The threshold is **50 kg "Chromium and compounds (as Cr)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Mineral industry	1	100	119	100
TOTAL	1	100	119	100

Table 19: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Chromium and compounds (as Cr)"** to **Land** of the different industrial sectors including the corresponding shares.

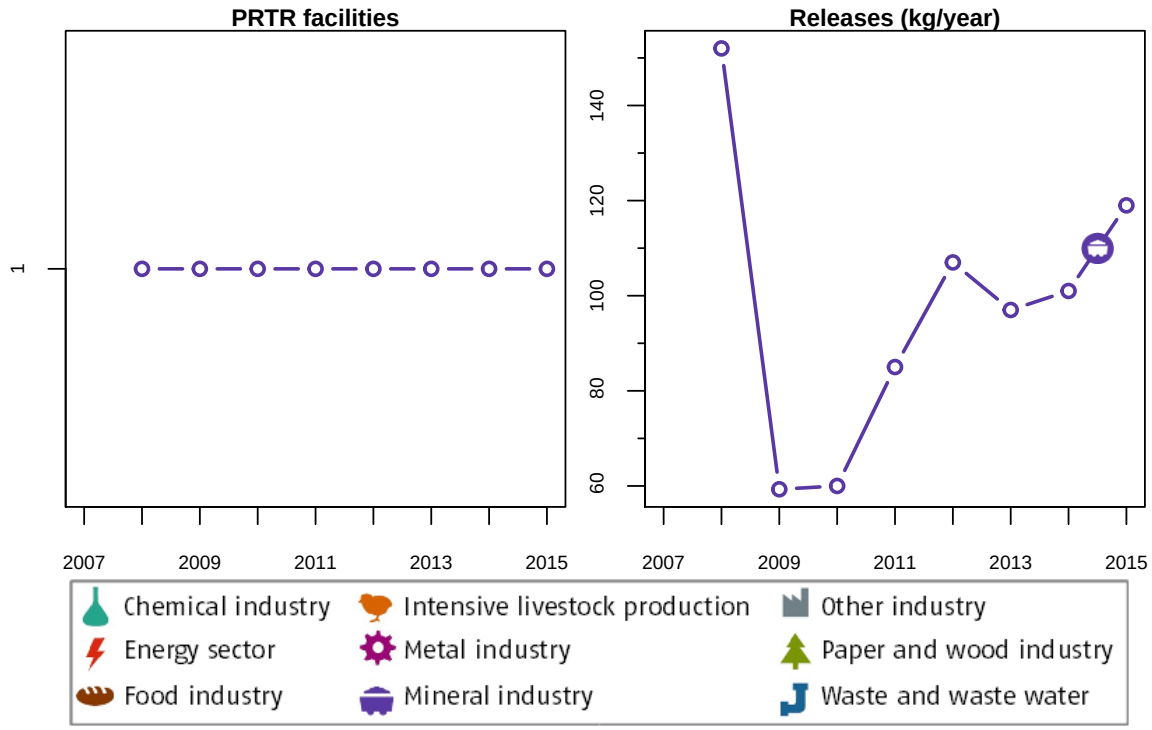

Figure 19: Annual number of facilities (left) and their releases (right) of the pollutant **"Chromium and compounds (as Cr)"** to **Land**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.14 Copper and compounds (as Cu)

2.14.1 Releases to Air

The threshold is **100 kg "Copper and compounds (as Cu)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Metal industry	10	58.8	11 772	81.1
Energy sector	5	29.4	2 449	16.9
Chemical industry	2	11.8	299	2.06
TOTAL	17	100	14 520	100

Table 20: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Copper and compounds (as Cu)"** to **Air** of the different industrial sectors including the corresponding shares.

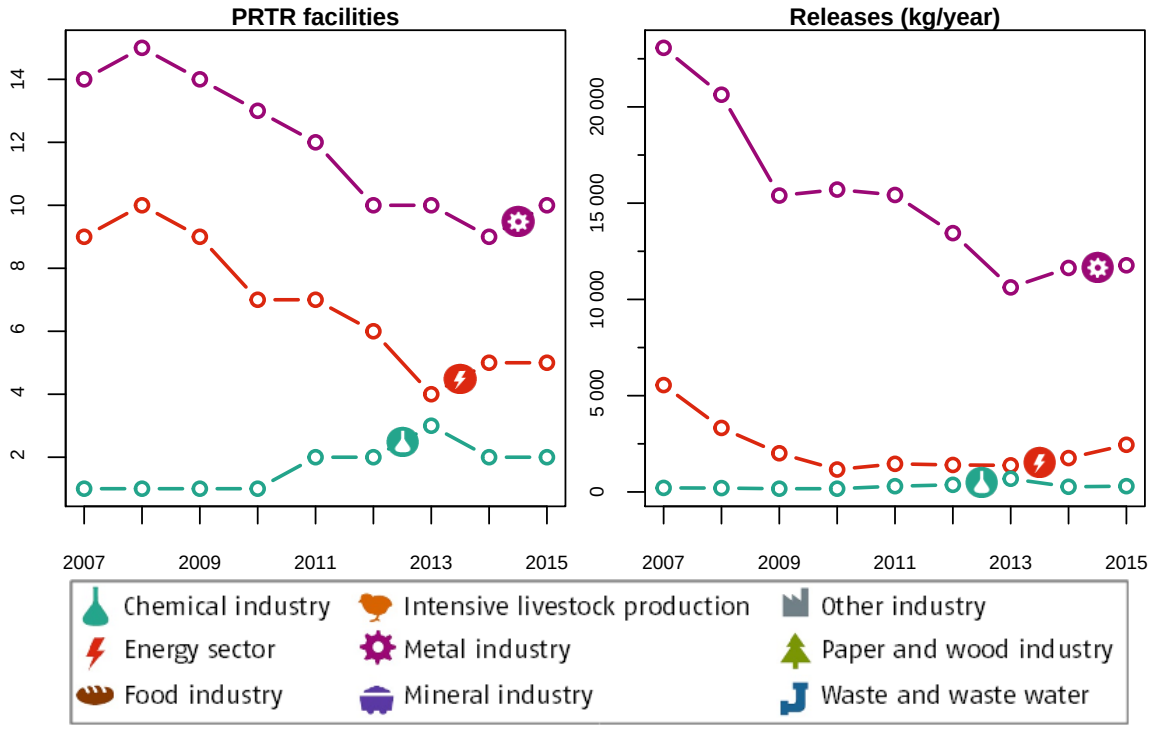

Figure 20: Annual number of facilities (left) and their releases (right) of the pollutant **"Copper and compounds (as Cu)"** to **Air**, each by the 3 industrial sector(s) with the highest emissions in the year 2015.

2.14.2 Releases to Water

The threshold is **50 kg "Copper and compounds (as Cu)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	129	79.1	31 251	69.3
Chemical industry	9	5.52	5 713	12.7
Energy sector	12	7.36	4 054	8.99
Mineral industry	6	3.68	2 868	6.36
Metal industry	5	3.07	1 065	2.36
Paper- and wood industry	2	1.23	173	0.383
TOTAL	163	100	45 124	100

Table 21: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Copper and compounds (as Cu)"** to **Water** of the different industrial sectors including the corresponding shares.

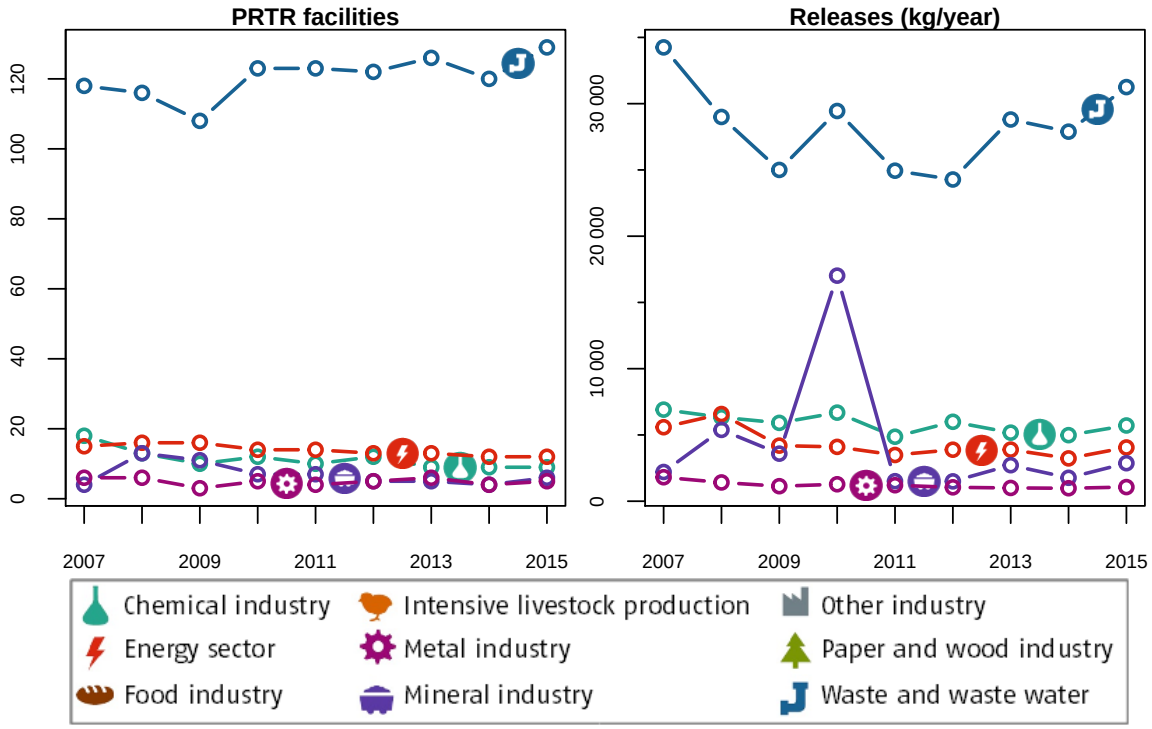

Figure 21: Annual number of facilities (left) and their releases (right) of the pollutant **"Copper and compounds (as Cu)"** to **Water**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.14.3 Releases to Land

The threshold is **50 kg "Copper and compounds (as Cu)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Mineral industry	2	100	2 293	100
TOTAL	2	100	2 293	100

Table 22: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Copper and compounds (as Cu)"** to **Land** of the different industrial sectors including the corresponding shares.

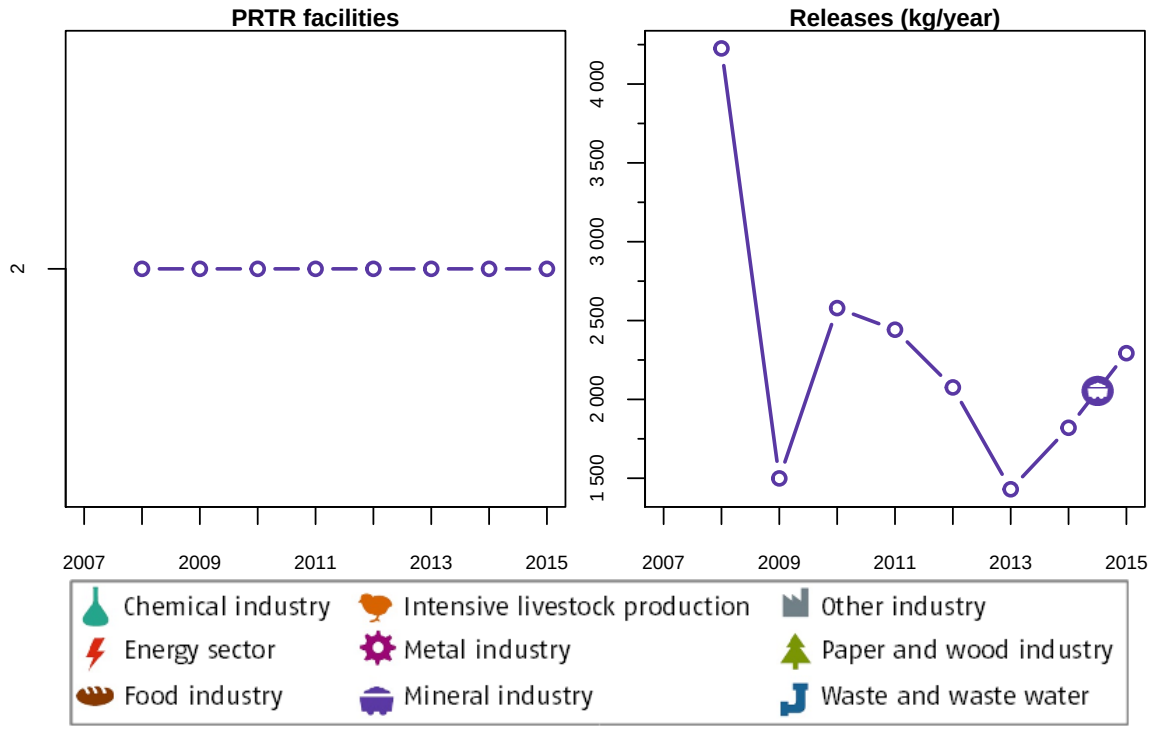

Figure 22: Annual number of facilities (left) and their releases (right) of the pollutant **"Copper and compounds (as Cu)"** to **Land**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.15 Cyanides (as total CN)

2.15.1 Releases to Water

The threshold is **50 kg "Cyanides (as total CN)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Energy sector	3	17.6	5 756	42.6
Waste and waste water management	11	64.7	4 209	31.2
Chemical industry	3	17.6	3 534	26.2
TOTAL	17	100	13 499	100

Table 23: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Cyanides (as total CN)"** to **Water** of the different industrial sectors including the corresponding shares.

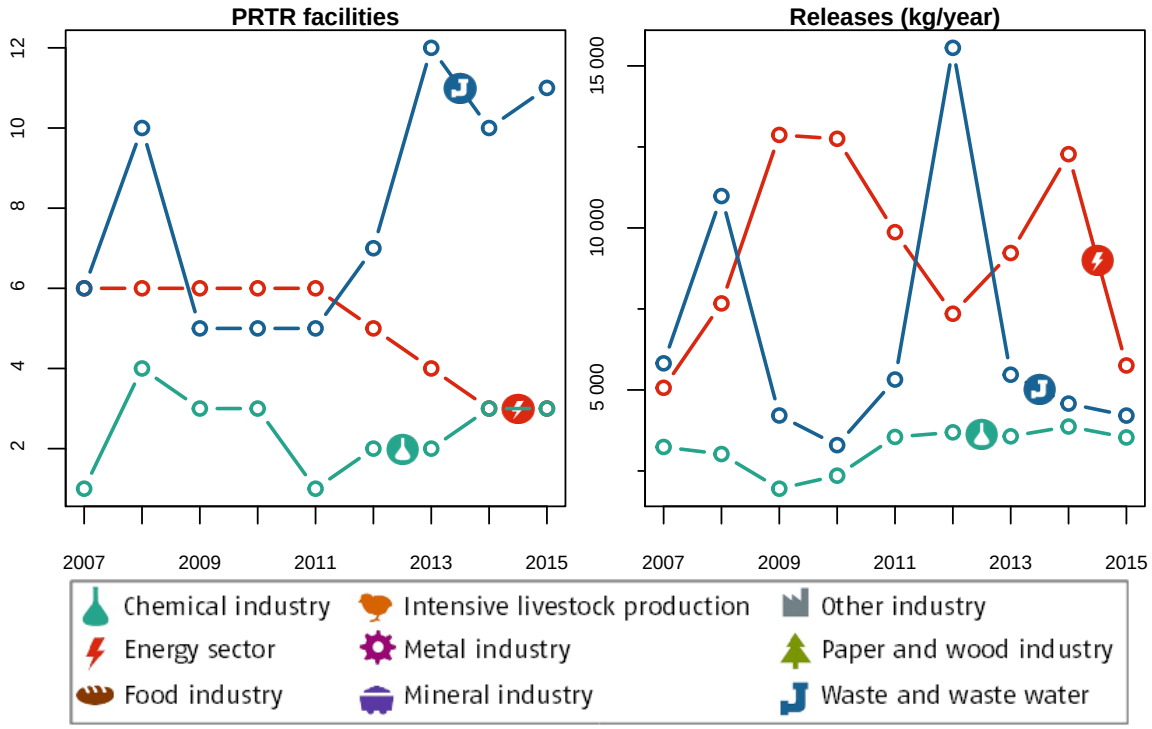

Figure 23: Annual number of facilities (left) and their releases (right) of the pollutant **"Cyanides (as total CN)"** to **Water**, each by the 3 industrial sector(s) with the highest emissions in the year 2015.

2.15.2 Releases to Land

The threshold is **50 kg "Cyanides (as total CN)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Cyanides (as total CN)"** to **Land** in **2015**.

2.16 Di-(2-ethyl hexyl) phthalate (DEHP)

2.16.1 Releases to Air

The threshold is **10 kg "Di-(2-ethyl hexyl) phthalate (DEHP)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Di-(2-ethyl hexyl) phthalate (DEHP)"** to **Air** in **2015**.

2.16.2 Releases to Water

The threshold is **1 kg "Di-(2-ethyl hexyl) phthalate (DEHP)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	115	100	2 143	100
TOTAL	115	100	2 143	100

Table 24: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Di-(2-ethyl hexyl) phthalate (DEHP)"** to **Water** of the different industrial sectors including the corresponding shares.

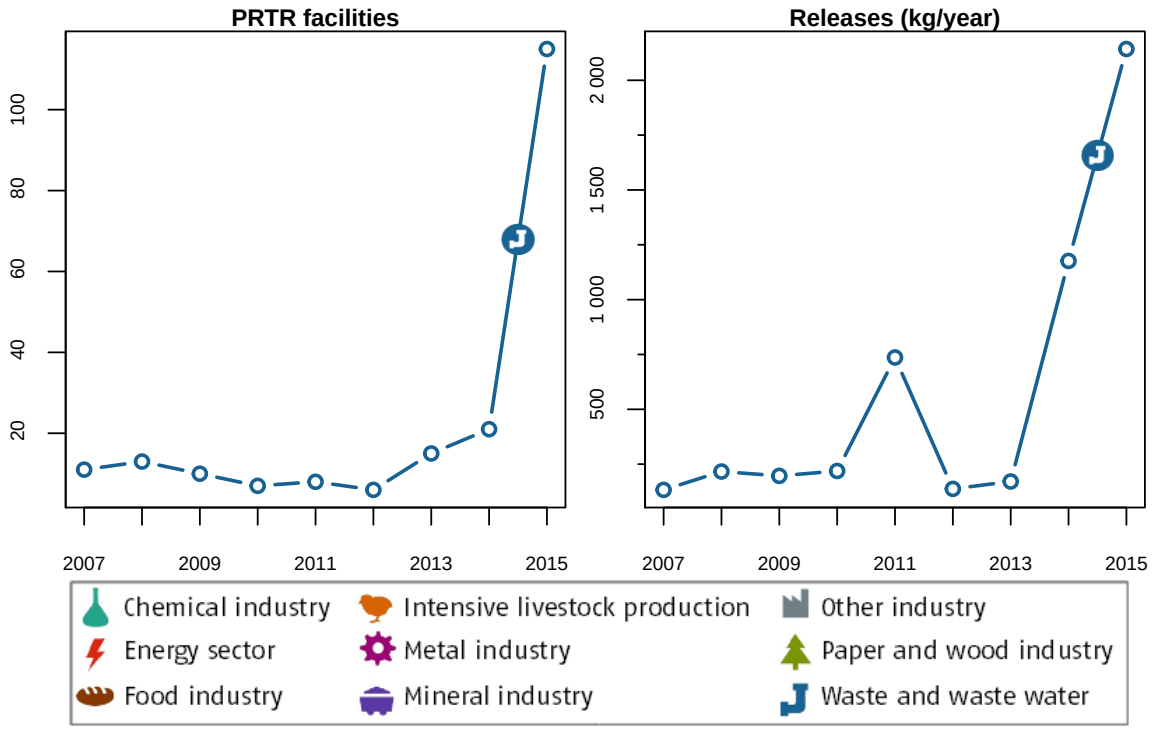

Figure 24: Annual number of facilities (left) and their releases (right) of the pollutant **"Di-(2-ethyl hexyl) phthalate (DEHP)"** to **Water**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.16.3 Releases to Land

The threshold is **1 kg "Di-(2-ethyl hexyl) phthalate (DEHP)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **“Di-(2-ethyl hexyl) phthalate (DEHP)”** to **Land** in **2015**.

2.17 Dichloromethane (DCM)

2.17.1 Releases to Air

The threshold is **1 000 kg "Dichloromethane (DCM)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Energy sector	1	33.3	8 250	71.3
Chemical industry	2	66.7	3 320	28.7
TOTAL	3	100	11 570	100

Table 25: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Dichloromethane (DCM)"** to **Air** of the different industrial sectors including the corresponding shares.

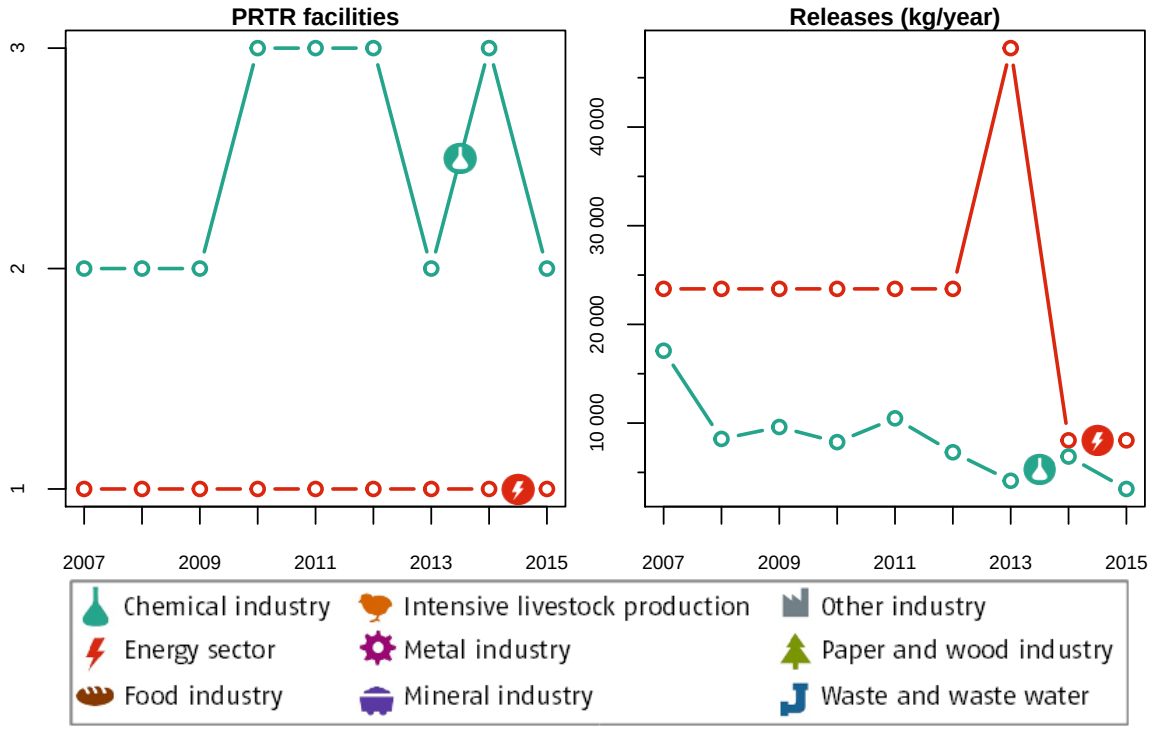

Figure 25: Annual number of facilities (left) and their releases (right) of the pollutant **"Dichloromethane (DCM)"** to **Air**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

2.17.2 Releases to Water

The threshold is **10 kg "Dichloromethane (DCM)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	1	33.3	44	61.5
Waste and waste water management	2	66.7	27.5	38.5
TOTAL	3	100	71.5	100

Table 26: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Dichloromethane (DCM)"** to **Water** of the different industrial sectors including the corresponding shares.

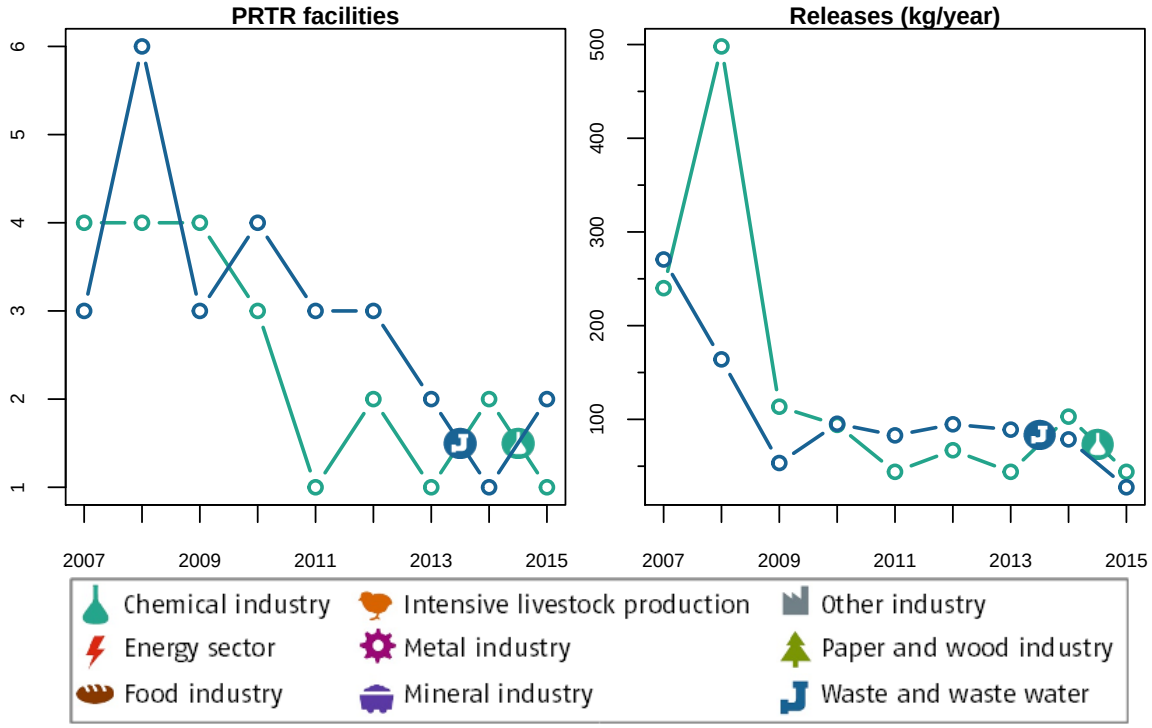

Figure 26: Annual number of facilities (left) and their releases (right) of the pollutant **"Dichloromethane (DCM)"** to **Water**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

2.17.3 Releases to Land

The threshold is **10 kg "Dichloromethane (DCM)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Dichloromethane (DCM)"** to **Land** in **2015**.

2.18 Diuron

2.18.1 Releases to Water

The threshold is **1 kg "Diuron" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	19	100	45.7	100
TOTAL	19	100	45.7	100

Table 27: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Diuron"** to **Water** of the different industrial sectors including the corresponding shares.

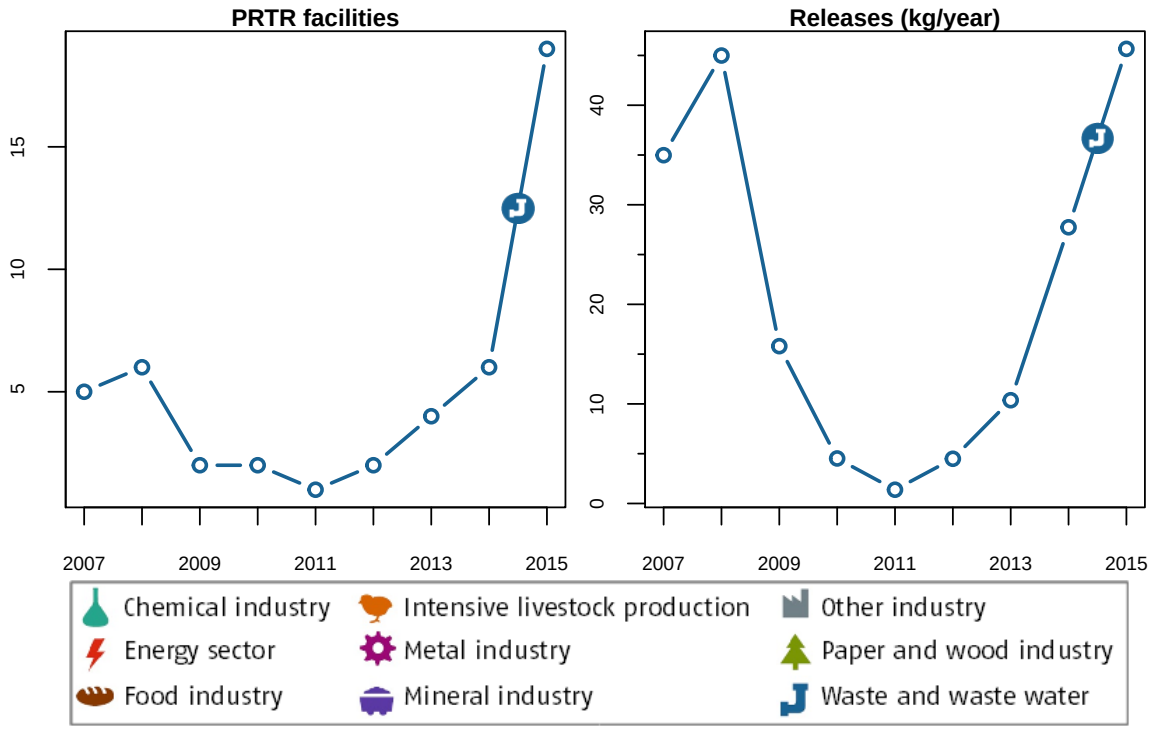

Figure 27: Annual number of facilities (left) and their releases (right) of the pollutant **"Diuron"** to **Water**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.18.2 Releases to Land

The threshold is **1 kg "Diuron" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Diuron"** to **Land** in **2015**.

2.19 Fluoranthene

2.19.1 Releases to Water

The threshold is **1 kg "Fluoranthene" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	1	100	2.53	100
TOTAL	1	100	2.53	100

Table 28: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Fluoranthene"** to **Water** of the different industrial sectors including the corresponding shares.

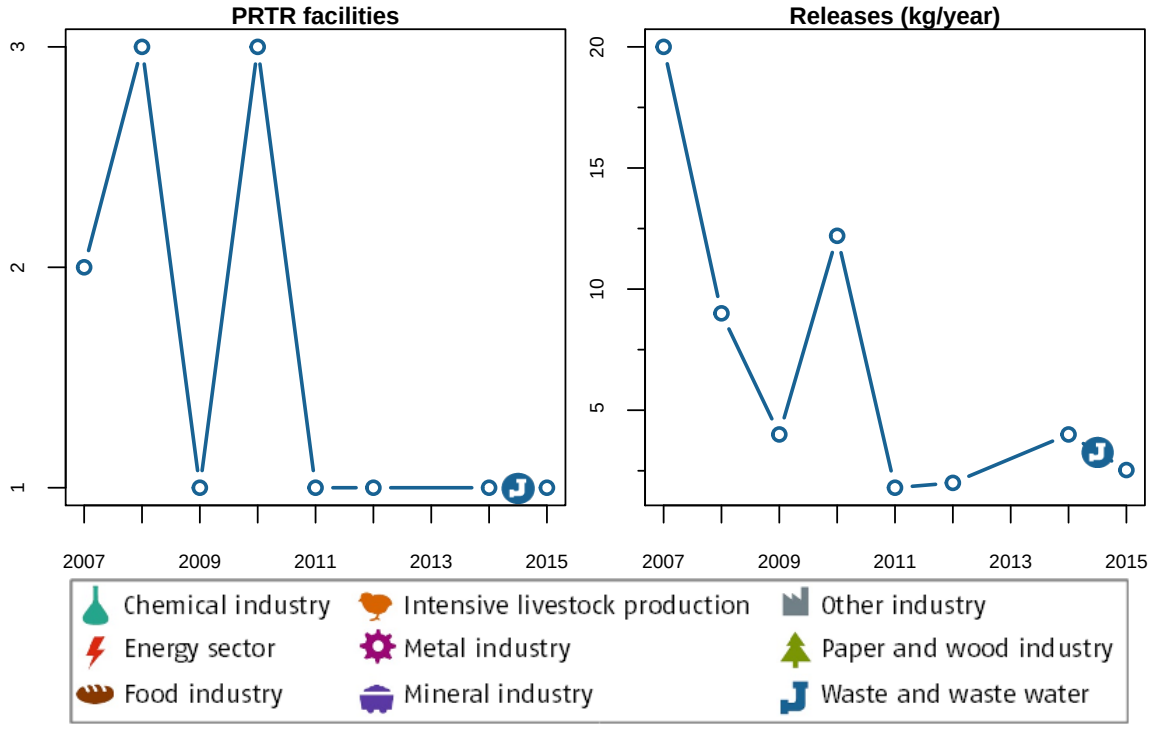

Figure 28: Annual number of facilities (left) and their releases (right) of the pollutant **"Fluoranthene"** to **Water**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.20 Fluorides (as total F)

2.20.1 Releases to Water

The threshold is **2 000 kg "Fluorides (as total F)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	37	53.6	437 540	38.1
Metal industry	5	7.25	372 860	32.4
Chemical industry	13	18.8	189 260	16.5
Energy sector	10	14.5	128 480	11.2
Mineral industry	3	4.35	19 190	1.67
Paper- and wood industry	1	1.45	2 150	0.187
TOTAL	69	100	1 149 480	100

Table 29: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Fluorides (as total F)"** to **Water** of the different industrial sectors including the corresponding shares.

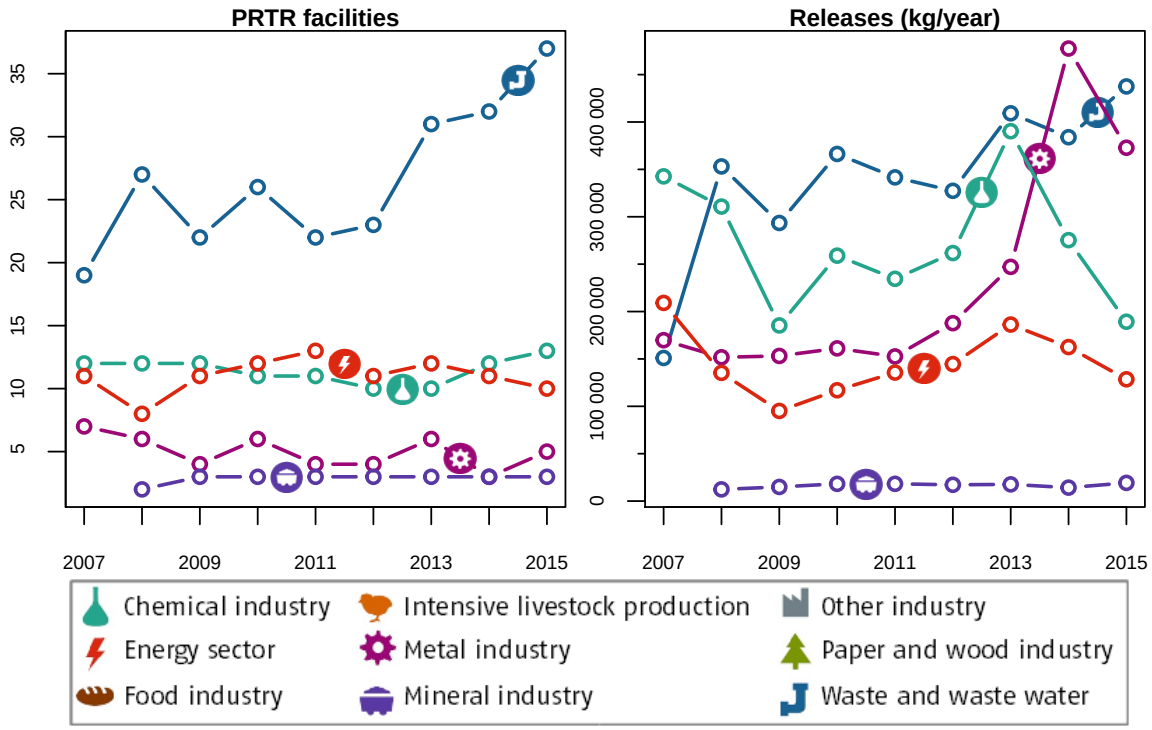

Figure 29: Annual number of facilities (left) and their releases (right) of the pollutant **"Fluorides (as total F)"** to **Water**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.20.2 Releases to Land

The threshold is **2 000 kg "Fluorides (as total F)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Fluorides (as total F)"** to **Land** in **2015**.

2.21 Fluorine and inorganic compounds (as HF)

2.21.1 Releases to Air

The threshold is **5 000 kg "Fluorine and inorganic compounds (as HF)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Energy sector	25	83.3	394 900	73.4
Metal industry	5	16.7	142 870	26.6
TOTAL	30	100	537 770	100

Table 30: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Fluorine and inorganic compounds (as HF)"** to **Air** of the different industrial sectors including the corresponding shares.

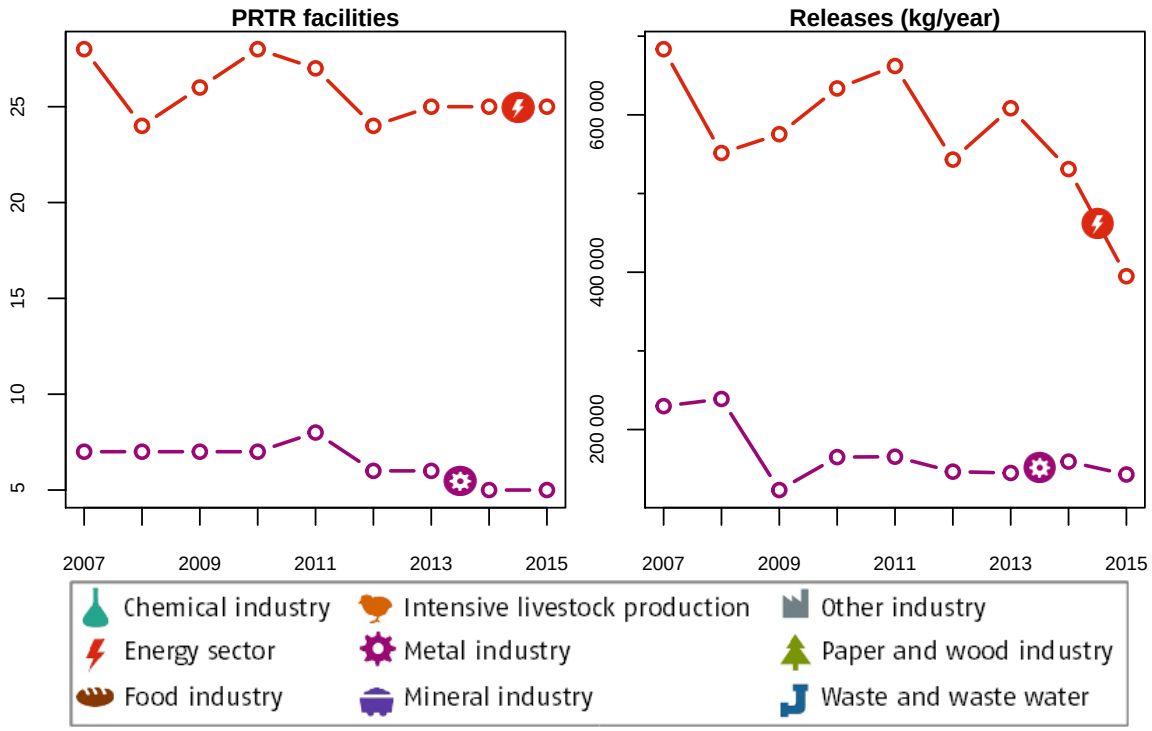

Figure 30: Annual number of facilities (left) and their releases (right) of the pollutant **"Fluorine and inorganic compounds (as HF)"** to **Air**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

2.22 Halogenated organic compounds (as AOX)

2.22.1 Releases to Water

The threshold is **1 000 kg "Halogenated organic compounds (as AOX)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	35	81.4	128 110	59
Chemical industry	5	11.6	52 750	24.3
Paper- and wood industry	2	4.65	34 900	16.1
Metal industry	1	2.33	1 300	0.599
TOTAL	43	100	217 060	100

Table 31: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Halogenated organic compounds (as AOX)"** to **Water** of the different industrial sectors including the corresponding shares.

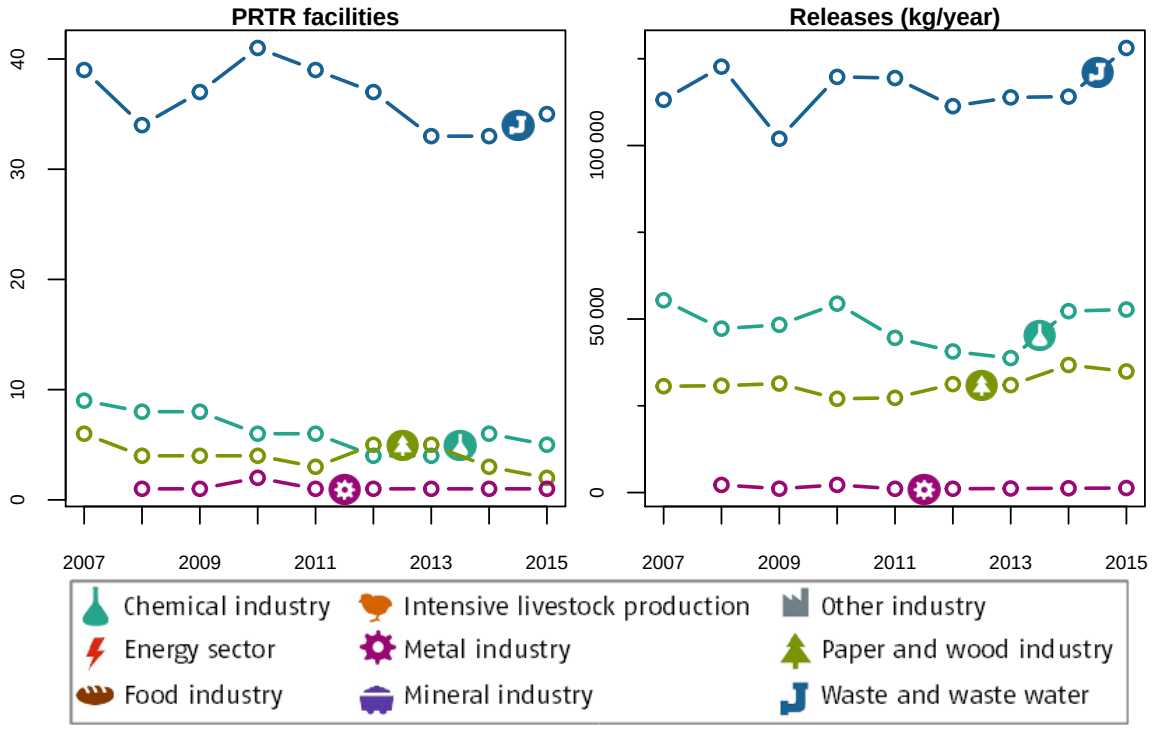

Figure 31: Annual number of facilities (left) and their releases (right) of the pollutant **"Halogenated organic compounds (as AOX)"** to **Water**, each by the 4 industrial sector(s) with the highest emissions in the year 2015.

2.22.2 Releases to Land

The threshold is **1 000 kg "Halogenated organic compounds (as AOX)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Halogenated organic compounds (as AOX)"** to **Land** in **2015**.

2.23 Hexachlorobenzene (HCB)

2.23.1 Releases to Air

The threshold is **10 kg "Hexachlorobenzene (HCB)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	1	100	32	100
TOTAL	1	100	32	100

Table 32: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Hexachlorobenzene (HCB)"** to **Air** of the different industrial sectors including the corresponding shares.

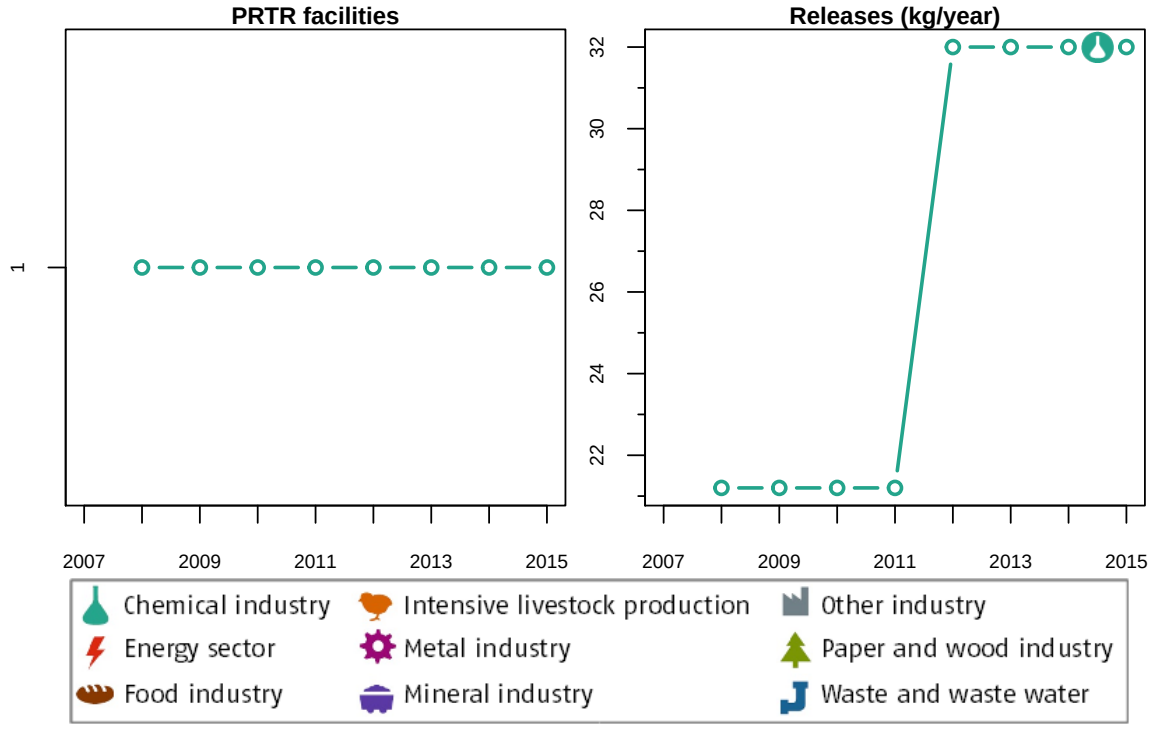

Figure 32: Annual number of facilities (left) and their releases (right) of the pollutant **"Hexachlorobenzene (HCB)"** to **Air**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.23.2 Releases to Water

The threshold is **1 kg "Hexachlorobenzene (HCB)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Hexachlorobenzene (HCB)"** to **Water** in **2015**.

2.23.3 Releases to Land

The threshold is **1 kg "Hexachlorobenzene (HCB)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Hexachlorobenzene (HCB)"** to **Land** in **2015**.

2.24 Hydro-fluorocarbons (HFCs)

2.24.1 Releases to Air

The threshold is **100 kg "Hydro-fluorocarbons (HFCs)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	13	61.9	423 904	99.1
Energy sector	4	19	2 418	0.566
Metal industry	2	9.52	941	0.22
Food industry	1	4.76	147	0.0344
Other industry	1	4.76	129	0.0302
TOTAL	21	100	427 539	100

Table 33: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Hydro-fluorocarbons (HFCs)"** to **Air** of the different industrial sectors including the corresponding shares.

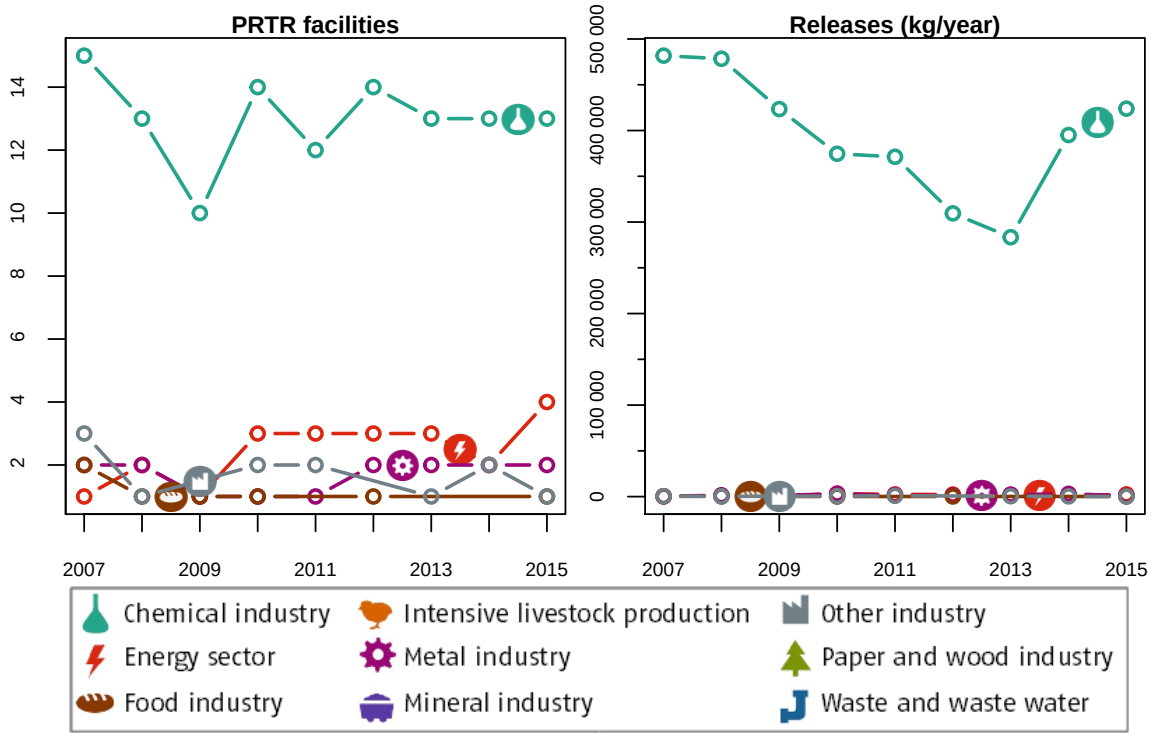

Figure 33: Annual number of facilities (left) and their releases (right) of the pollutant **"Hydro-fluorocarbons (HFCs)"** to **Air**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.25 Hydrochlorofluorocarbons(HCFCs)

2.25.1 Releases to Air

The threshold is **1 kg "Hydrochlorofluorocarbons(HCFCs)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	5	50	691	59.9
Energy sector	3	30	434	37.6
Waste and waste water management	2	20	28.5	2.47
TOTAL	10	100	1 153	100

Table 34: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Hydrochlorofluorocarbons(HCFCs)"** to **Air** of the different industrial sectors including the corresponding shares.

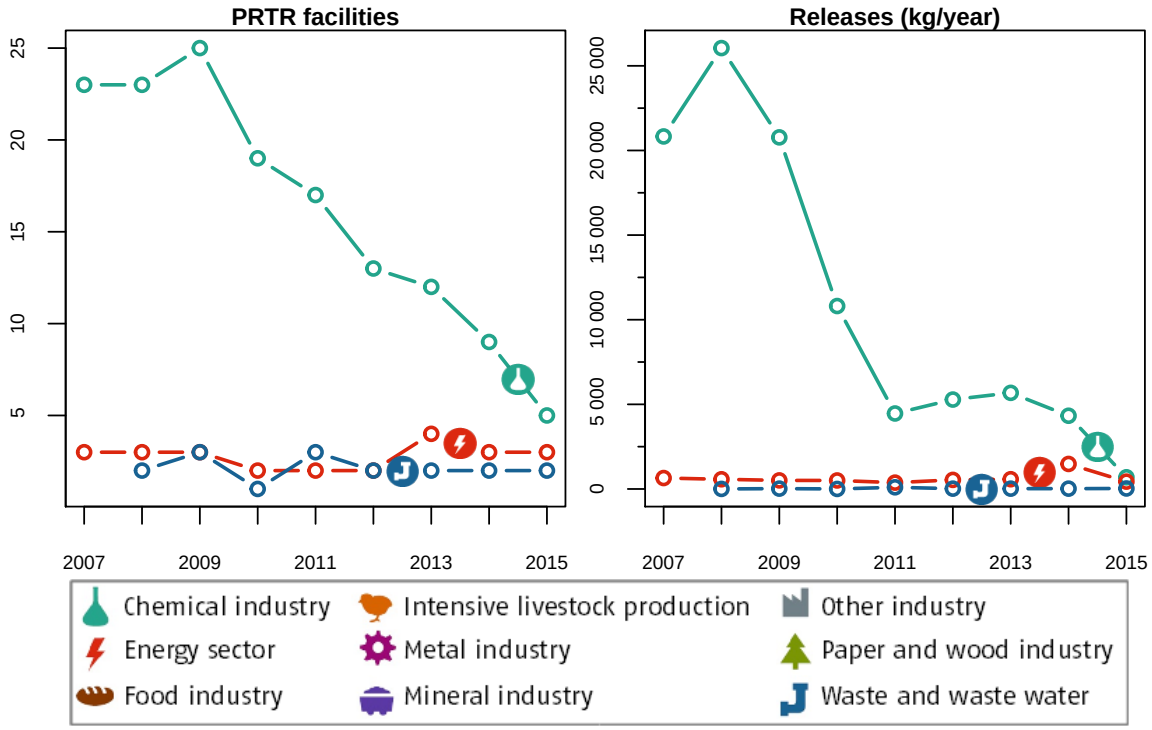

Figure 34: Annual number of facilities (left) and their releases (right) of the pollutant **"Hydrochlorofluorocarbons(HCFCs)"** to **Air**, each by the 3 industrial sector(s) with the highest emissions in the year 2015.

2.26 Hydrogen cyanide (HCN)

2.26.1 Releases to Air

The threshold is **200 kg "Hydrogen cyanide (HCN)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Metal industry	5	62.5	1 458	54.6
Chemical industry	2	25	811	30.4
Mineral industry	1	12.5	403	15.1
TOTAL	8	100	2 672	100

Table 35: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Hydrogen cyanide (HCN)"** to **Air** of the different industrial sectors including the corresponding shares.

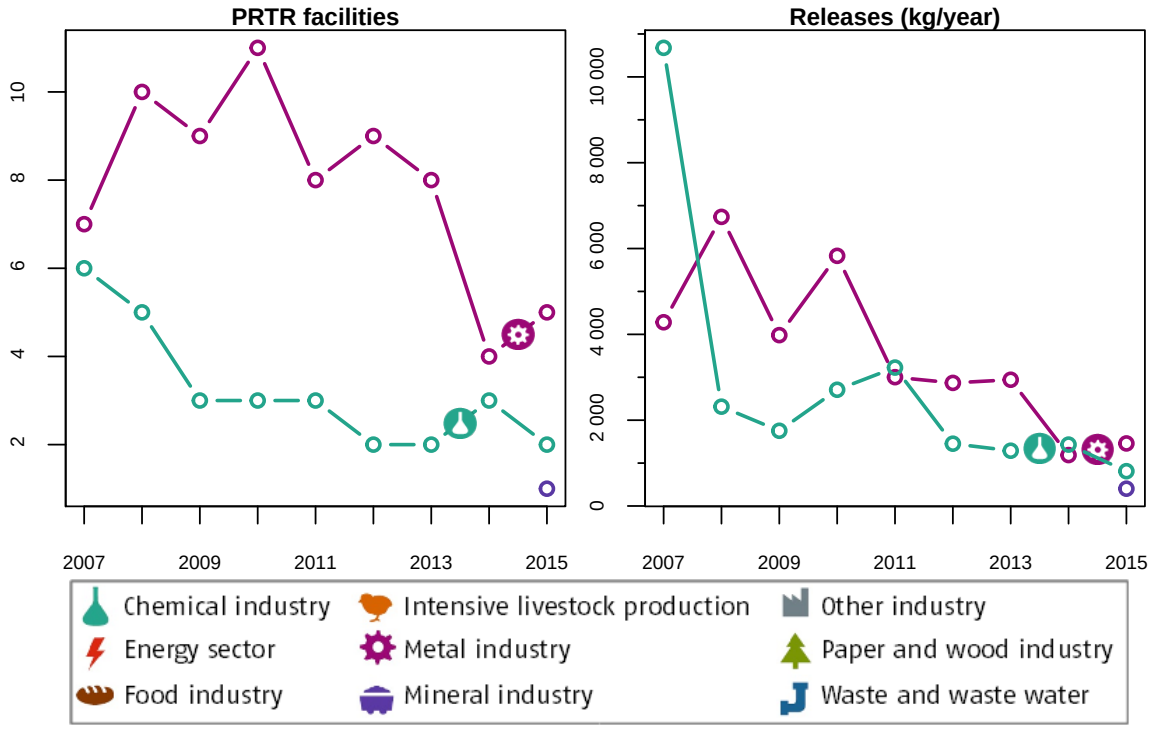

Figure 35: Annual number of facilities (left) and their releases (right) of the pollutant **"Hydrogen cyanide (HCN)"** to **Air**, each by the 3 industrial sector(s) with the highest emissions in the year 2015.

2.27 Isoproturon

2.27.1 Releases to Water

The threshold is **1 kg "Isoproturon" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	12	100	30.9	100
TOTAL	12	100	30.9	100

Table 36: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Isoproturon"** to **Water** of the different industrial sectors including the corresponding shares.

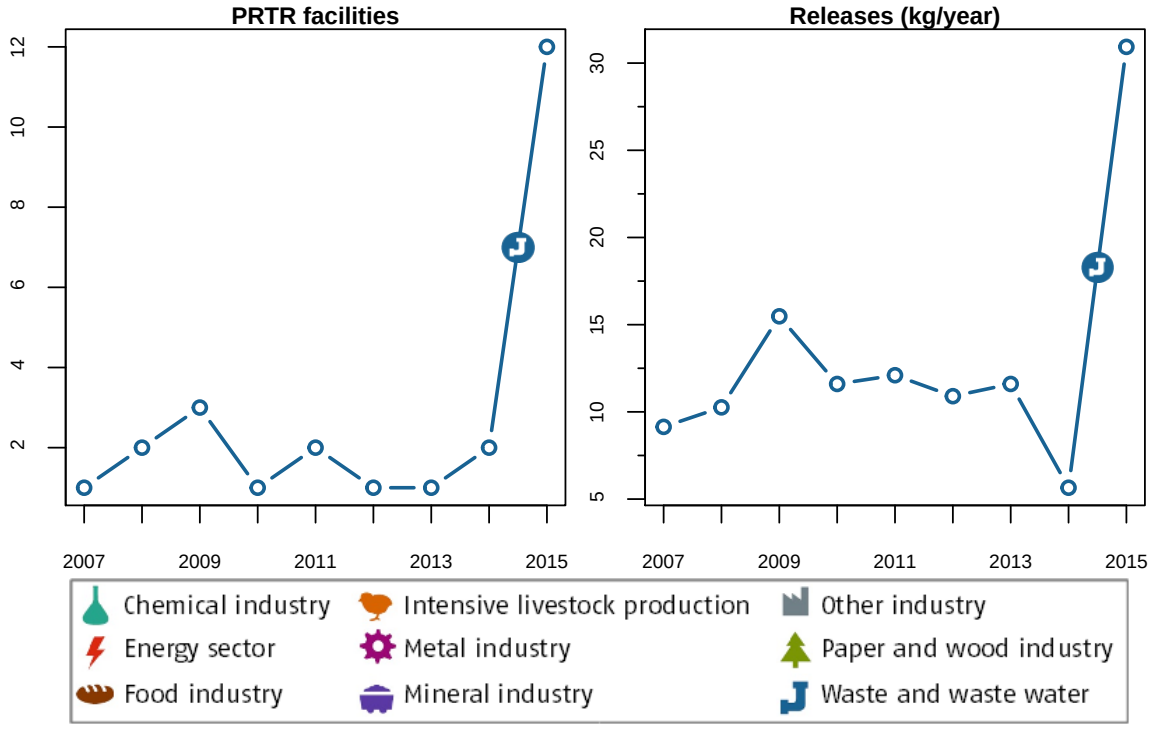

Figure 36: Annual number of facilities (left) and their releases (right) of the pollutant **"Isoproturon"** to **Water**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.27.2 Releases to Land

The threshold is **1 kg "Isoproturon" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Isoproturon"** to **Land** in **2015**.

2.28 Lead and compounds (as Pb)

2.28.1 Releases to Air

The threshold is **200 kg "Lead and compounds (as Pb)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Metal industry	14	87.5	33 255	95.5
Energy sector	2	12.5	1 556	4.47
TOTAL	16	100	34 811	100

Table 37: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Lead and compounds (as Pb)"** to **Air** of the different industrial sectors including the corresponding shares.

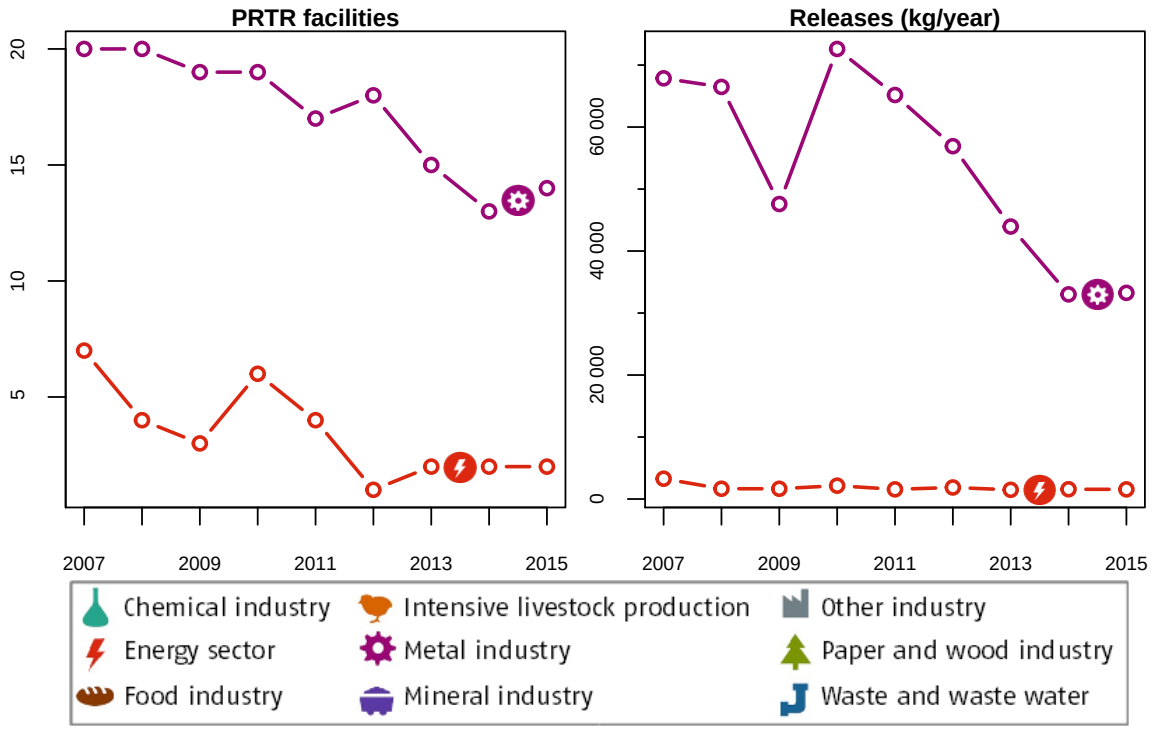

Figure 37: Annual number of facilities (left) and their releases (right) of the pollutant **"Lead and compounds (as Pb)"** to **Air**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

2.28.2 Releases to Water

The threshold is **20 kg "Lead and compounds (as Pb)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	40	64.5	3 323	64
Chemical industry	9	14.5	867	16.7
Metal industry	6	9.68	460	8.85
Mineral industry	5	8.06	392	7.55
Energy sector	2	3.23	152	2.93
TOTAL	62	100	5 194	100

Table 38: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Lead and compounds (as Pb)"** to **Water** of the different industrial sectors including the corresponding shares.

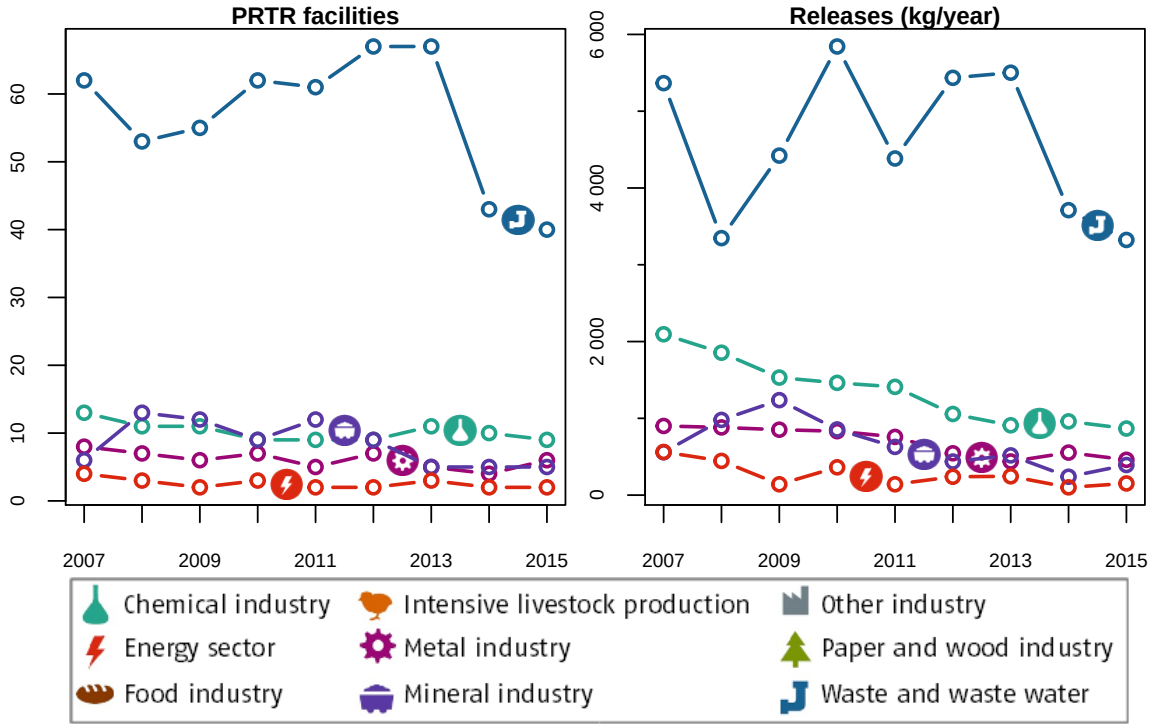

Figure 38: Annual number of facilities (left) and their releases (right) of the pollutant **"Lead and compounds (as Pb)"** to **Water**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.28.3 Releases to Land

The threshold is **20 kg "Lead and compounds (as Pb)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Lead and compounds (as Pb)"** to **Land** in **2015**.

2.29 Mercury and compounds (as Hg)

2.29.1 Releases to Air

The threshold is **10 kg "Mercury and compounds (as Hg)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Energy sector	55	55	5 050	73.9
Metal industry	11	11	841	12.3
Mineral industry	25	25	659	9.64
Chemical industry	6	6	246	3.6
Waste and waste water management	3	3	40.9	0.598
TOTAL	100	100	6 837	100

Table 39: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Mercury and compounds (as Hg)"** to **Air** of the different industrial sectors including the corresponding shares.

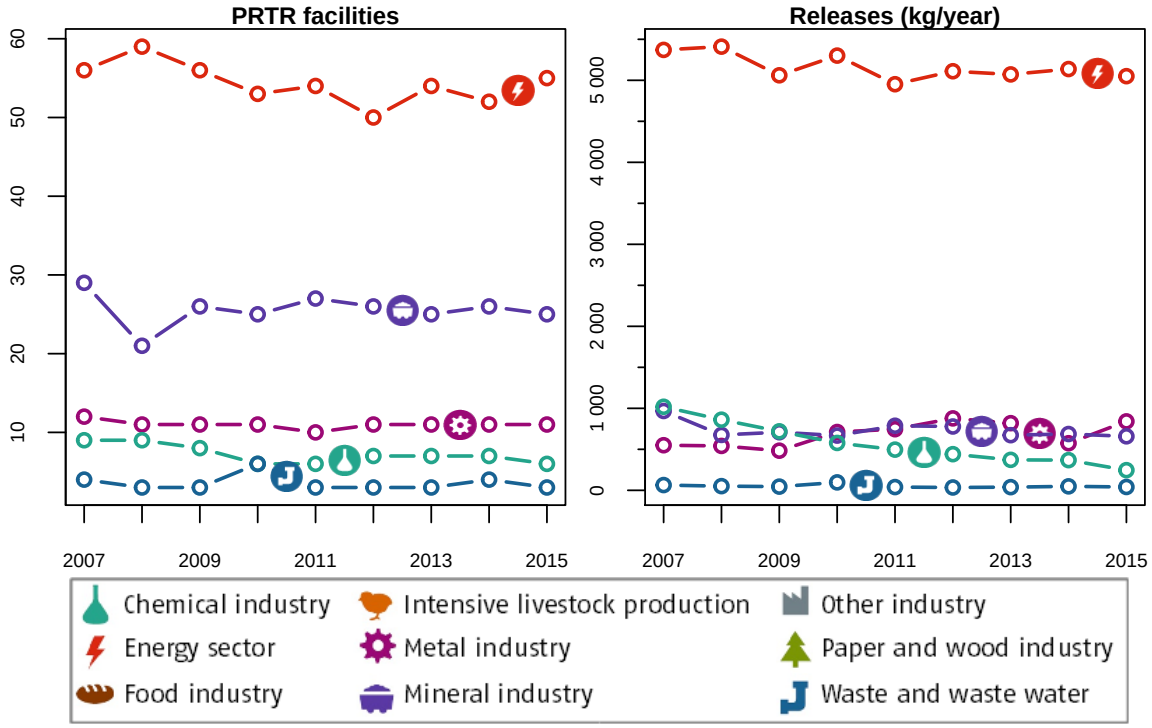

Figure 39: Annual number of facilities (left) and their releases (right) of the pollutant **"Mercury and compounds (as Hg)"** to **Air**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.29.2 Releases to Water

The threshold is **1 kg "Mercury and compounds (as Hg)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	27	84.4	281	95.9
Chemical industry	4	12.5	10.7	3.64
Energy sector	1	3.12	1.47	0.502
TOTAL	32	100	293	100

Table 40: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Mercury and compounds (as Hg)"** to **Water** of the different industrial sectors including the corresponding shares.

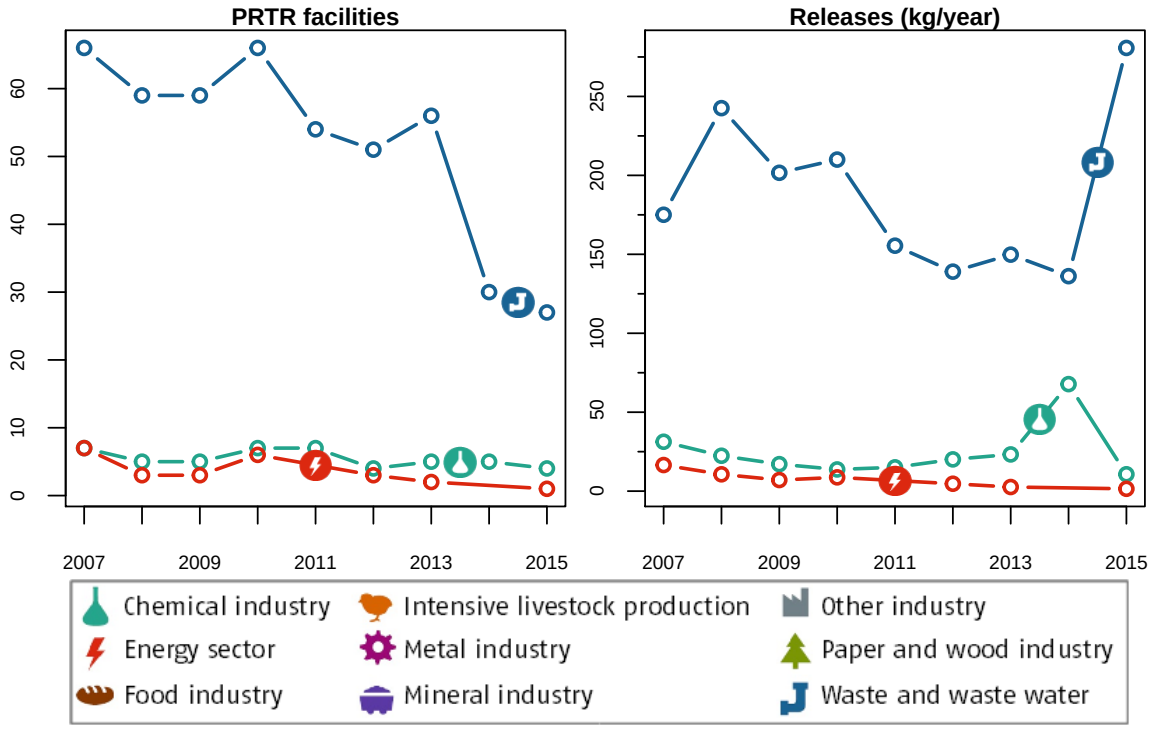

Figure 40: Annual number of facilities (left) and their releases (right) of the pollutant **"Mercury and compounds (as Hg)"** to **Water**, each by the 3 industrial sector(s) with the highest emissions in the year 2015.

2.29.3 Releases to Land

The threshold is **1 kg "Mercury and compounds (as Hg)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Mercury and compounds (as Hg)"** to **Land** in **2015**.

2.30 Methane (CH4)

2.30.1 Releases to Air

The threshold is **100 000 kg "Methane (CH4)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Mineral industry	12	10	113 717 000	72.9
Waste and waste water management	94	78.3	39 417 000	25.3
Energy sector	10	8.33	1 975 000	1.27
Chemical industry	3	2.5	699 000	0.448
Intensive livestock production and aquaculture	1	0.833	104 000	0.0667
TOTAL	120	100	155 912 000	100

Table 41: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Methane (CH4)"** to **Air** of the different industrial sectors including the corresponding shares.

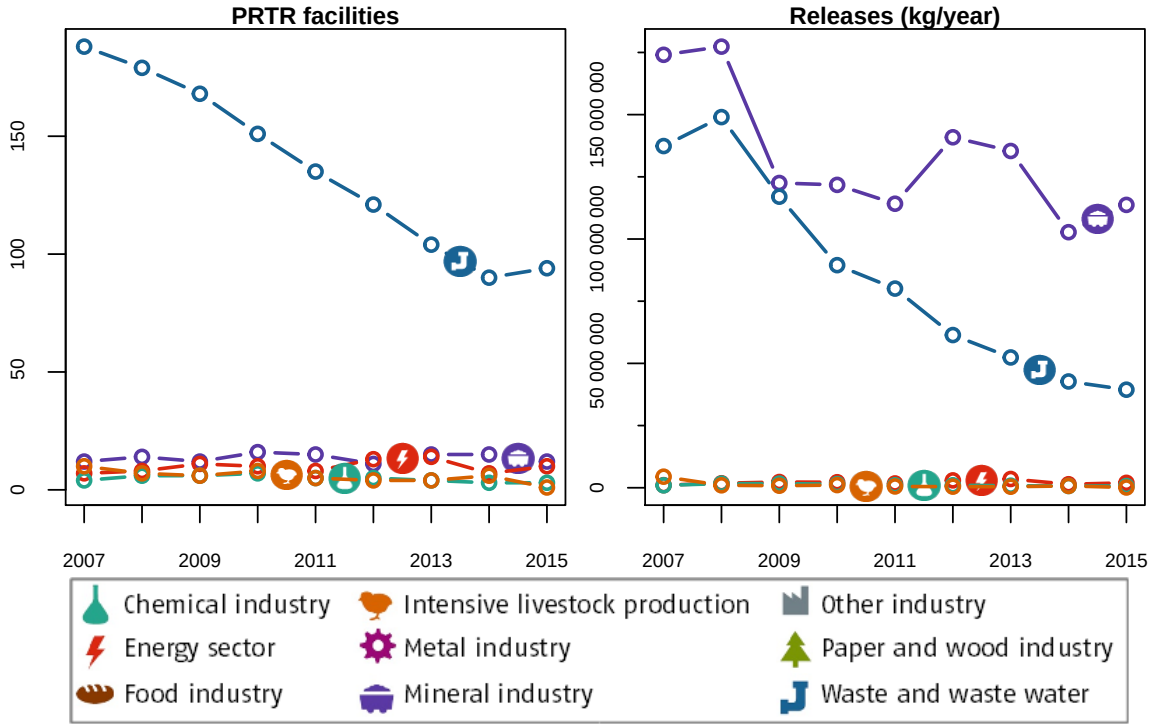

Figure 41: Annual number of facilities (left) and their releases (right) of the pollutant **"Methane (CH4)"** to **Air**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.31 Naphthalene

2.31.1 Releases to Air

The threshold is **100 kg "Naphthalene" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Metal industry	1	12.5	5 330	75
Chemical industry	2	25	929	13.1
Mineral industry	4	50	635	8.93
Energy sector	1	12.5	216	3.04
TOTAL	8	100	7 110	100

Table 42: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Naphthalene"** to **Air** of the different industrial sectors including the corresponding shares.

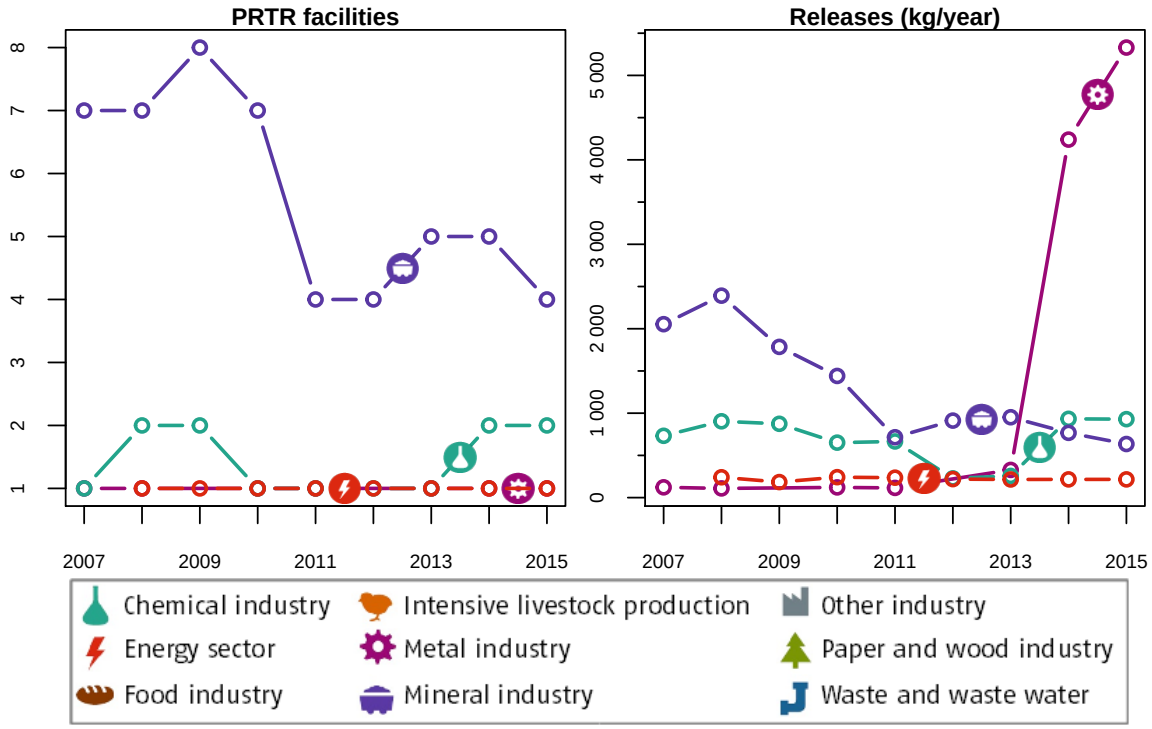

Figure 42: Annual number of facilities (left) and their releases (right) of the pollutant **"Naphthalene"** to **Air**, each by the 4 industrial sector(s) with the highest emissions in the year 2015.

2.31.2 Releases to Water

The threshold is **10 kg "Naphthalene" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Naphthalene"** to **Water** in **2015**.

2.31.3 Releases to Land

The threshold is **10 kg "Naphthalene" per year.** Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Naphthalene"** to **Land** in **2015.**

2.32 Nickel and compounds (as Ni)

2.32.1 Releases to Air

The threshold is **50 kg "Nickel and compounds (as Ni)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Energy sector	15	46.9	3 122	58.5
Metal industry	14	43.8	1 904	35.7
Mineral industry	1	3.12	145	2.72
Food industry	1	3.12	105	1.97
Chemical industry	1	3.12	61.8	1.16
TOTAL	32	100	5 337	100

Table 43: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Nickel and compounds (as Ni)"** to **Air** of the different industrial sectors including the corresponding shares.

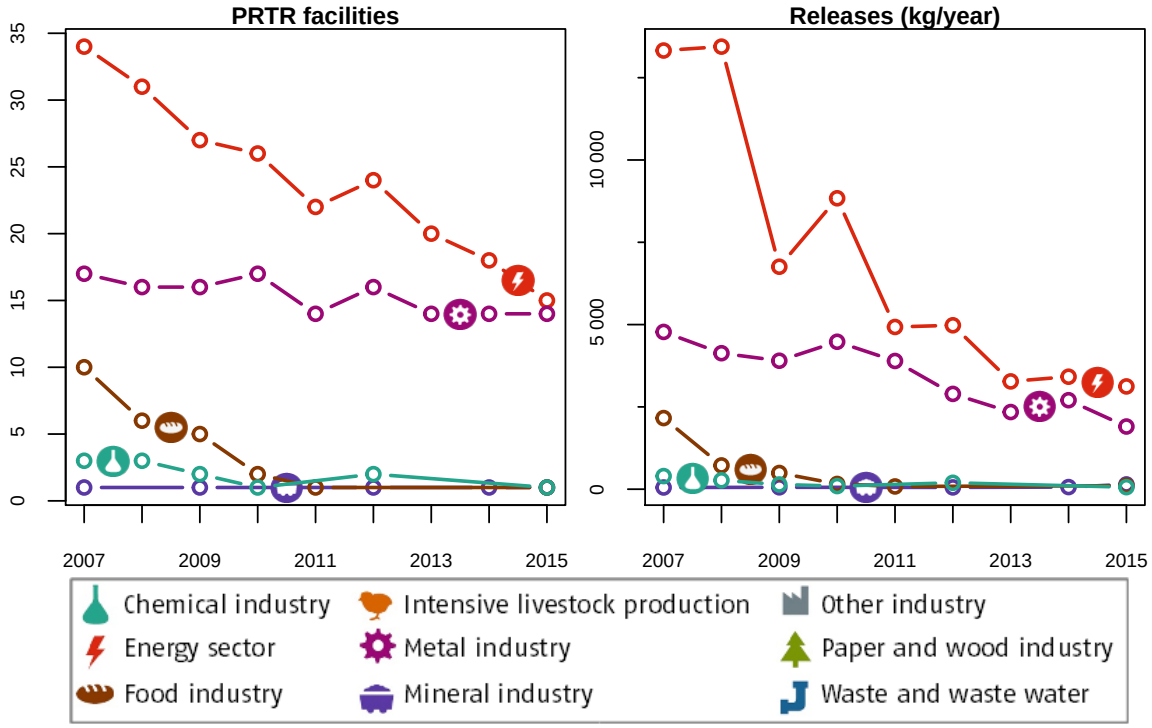

Figure 43: Annual number of facilities (left) and their releases (right) of the pollutant **"Nickel and compounds (as Ni)"** to **Air**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.32.2 Releases to Water

The threshold is **20 kg "Nickel and compounds (as Ni)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	173	77.9	20 853	74.8
Chemical industry	19	8.56	3 833	13.7
Mineral industry	8	3.6	1 209	4.34
Energy sector	6	2.7	1 097	3.93
Metal industry	10	4.5	670	2.4
Paper- and wood industry	3	1.35	122	0.436
Other industry	3	1.35	100	0.36
TOTAL	222	100	27 885	100

Table 44: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Nickel and compounds (as Ni)"** to **Water** of the different industrial sectors including the corresponding shares.

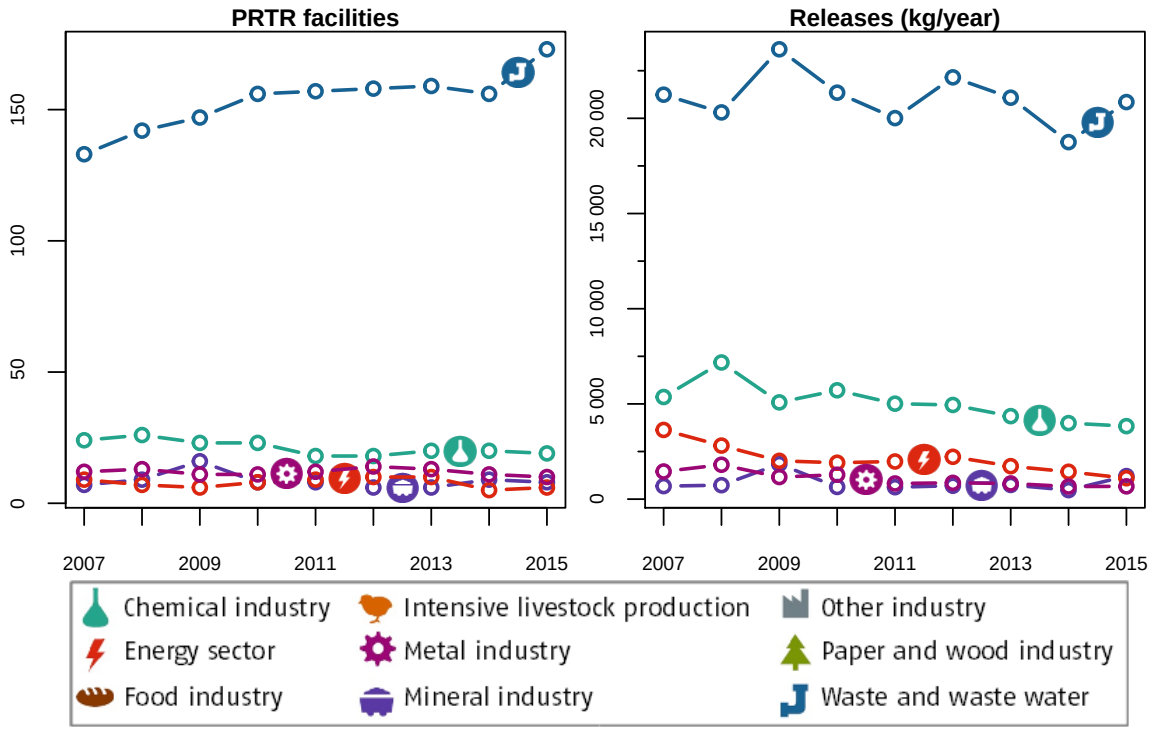

Figure 44: Annual number of facilities (left) and their releases (right) of the pollutant **"Nickel and compounds (as Ni)"** to **Water**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.32.3 Releases to Land

The threshold is **20 kg "Nickel and compounds (as Ni)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Mineral industry	2	100	186	100
TOTAL	2	100	186	100

Table 45: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Nickel and compounds (as Ni)"** to **Land** of the different industrial sectors including the corresponding shares.

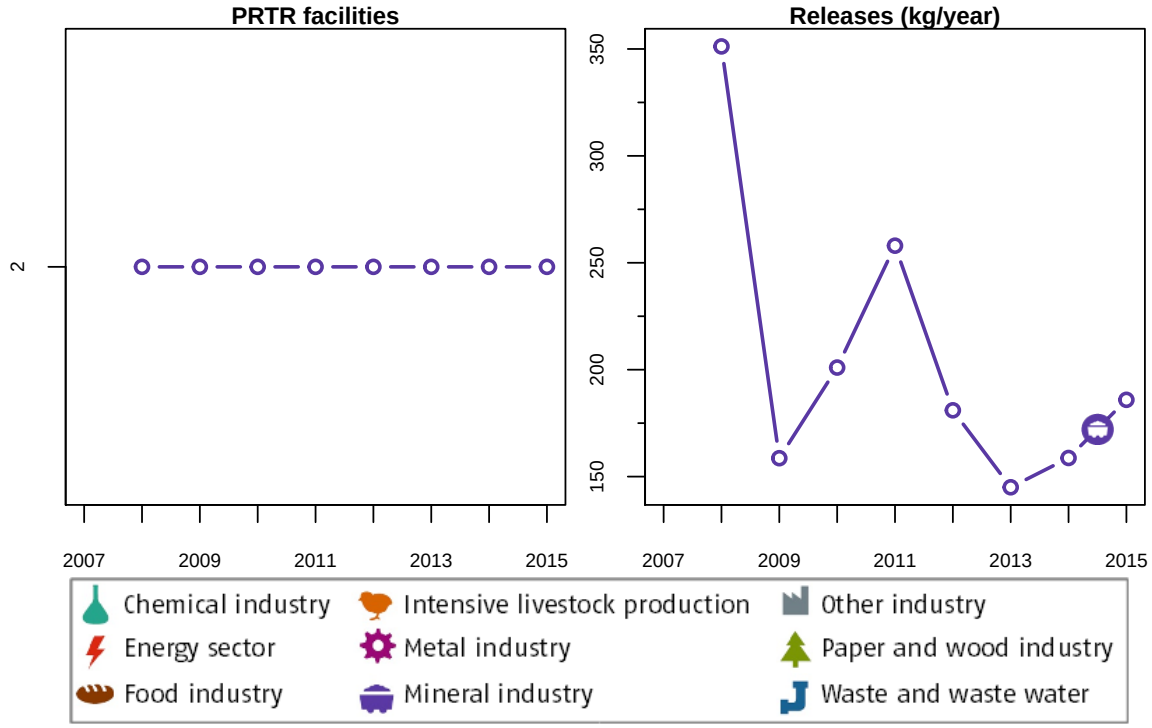

Figure 45: Annual number of facilities (left) and their releases (right) of the pollutant **"Nickel and compounds (as Ni)"** to **Land**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.33 Nitrogen oxides (NOx/NO2)

2.33.1 Releases to Air

The threshold is **100 000 kg "Nitrogen oxides (NOx/NO2)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Energy sector	150	35.6	208 111 000	66.5
Mineral industry	84	20	33 335 000	10.7
Metal industry	35	8.31	24 024 000	7.68
Chemical industry	34	8.08	18 379 000	5.87
Waste and waste water management	72	17.1	17 223 000	5.51
Paper- and wood industry	37	8.79	10 555 000	3.37
Food industry	6	1.43	863 000	0.276
Other industry	3	0.713	347 000	0.111
TOTAL	421	100	312 837 000	100

Table 46: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Nitrogen oxides (NOx/NO2)"** to **Air** of the different industrial sectors including the corresponding shares.

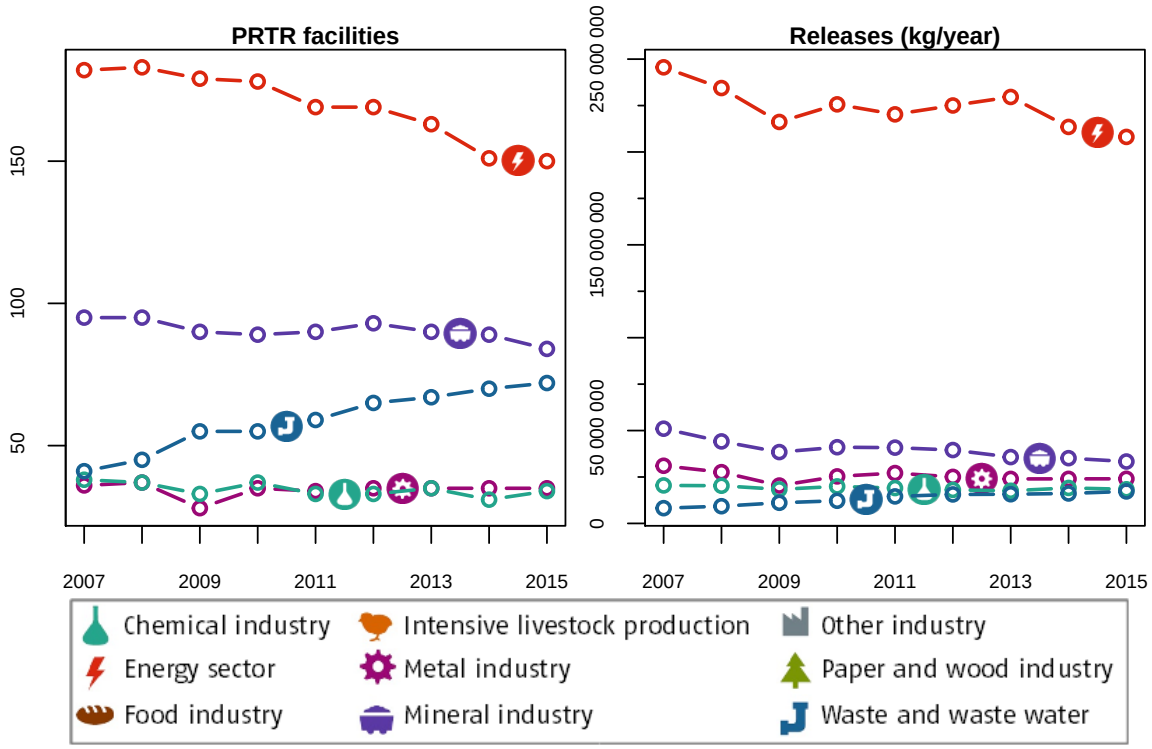

Figure 46: Annual number of facilities (left) and their releases (right) of the pollutant **"Nitrogen oxides (NOx/NO2)"** to **Air**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.34 Nitrous oxide (N2O)

2.34.1 Releases to Air

The threshold is **10 000 kg "Nitrous oxide (N2O)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	13	10.7	2 910 800	36.4
Energy sector	41	33.6	2 695 600	33.7
Waste and waste water management	62	50.8	2 282 900	28.5
Intensive livestock production and aquaculture	5	4.1	87 400	1.09
Paper- and wood industry	1	0.82	22 500	0.281
TOTAL	122	100	7 999 200	100

Table 47: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Nitrous oxide (N2O)"** to **Air** of the different industrial sectors including the corresponding shares.

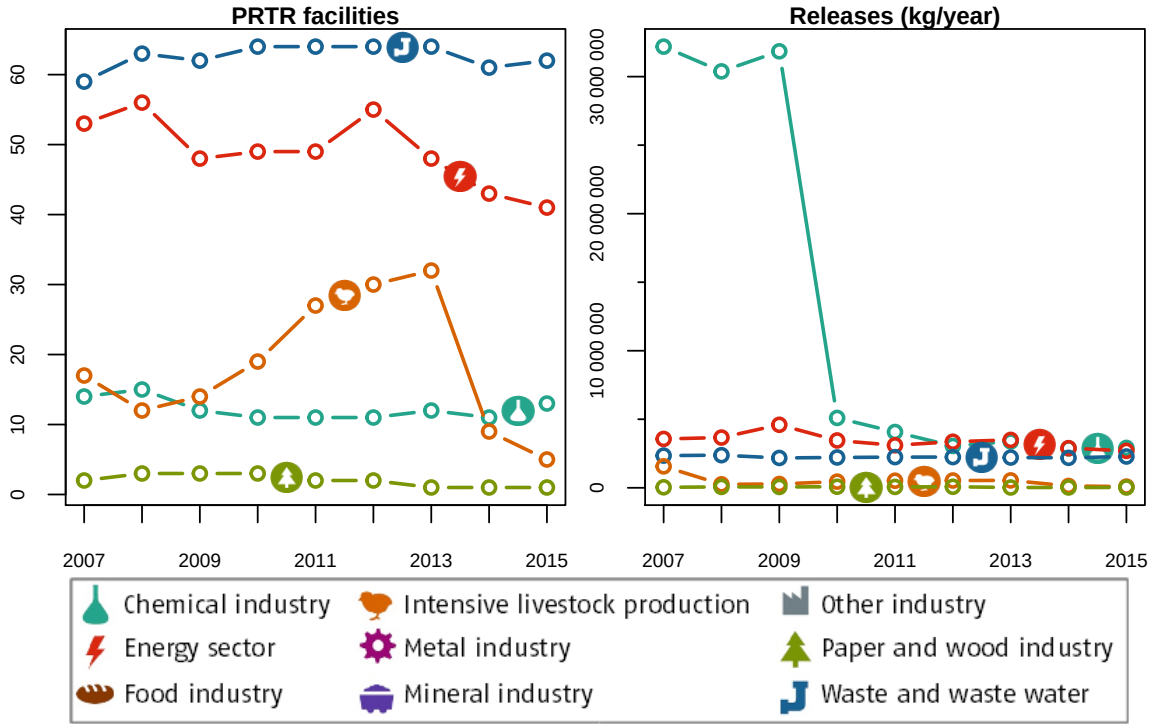

Figure 47: Annual number of facilities (left) and their releases (right) of the pollutant **"Nitrous oxide (N2O)"** to **Air**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.35 Non-methane volatile organic compounds (NMVOC)

2.35.1 Releases to Air

The threshold is **100 000 kg "Non-methane volatile organic compounds (NMVOC)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Other industry	45	43.7	17 006 000	40.4
Chemical industry	14	13.6	9 629 000	22.9
Energy sector	15	14.6	5 915 000	14
Paper- and wood industry	12	11.7	5 444 000	12.9
Food industry	10	9.71	2 719 000	6.46
Metal industry	5	4.85	1 160 000	2.75
Mineral industry	2	1.94	247 000	0.586
TOTAL	103	100	42 120 000	100

Table 48: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Non-methane volatile organic compounds (NMVOC)"** to **Air** of the different industrial sectors including the corresponding shares.

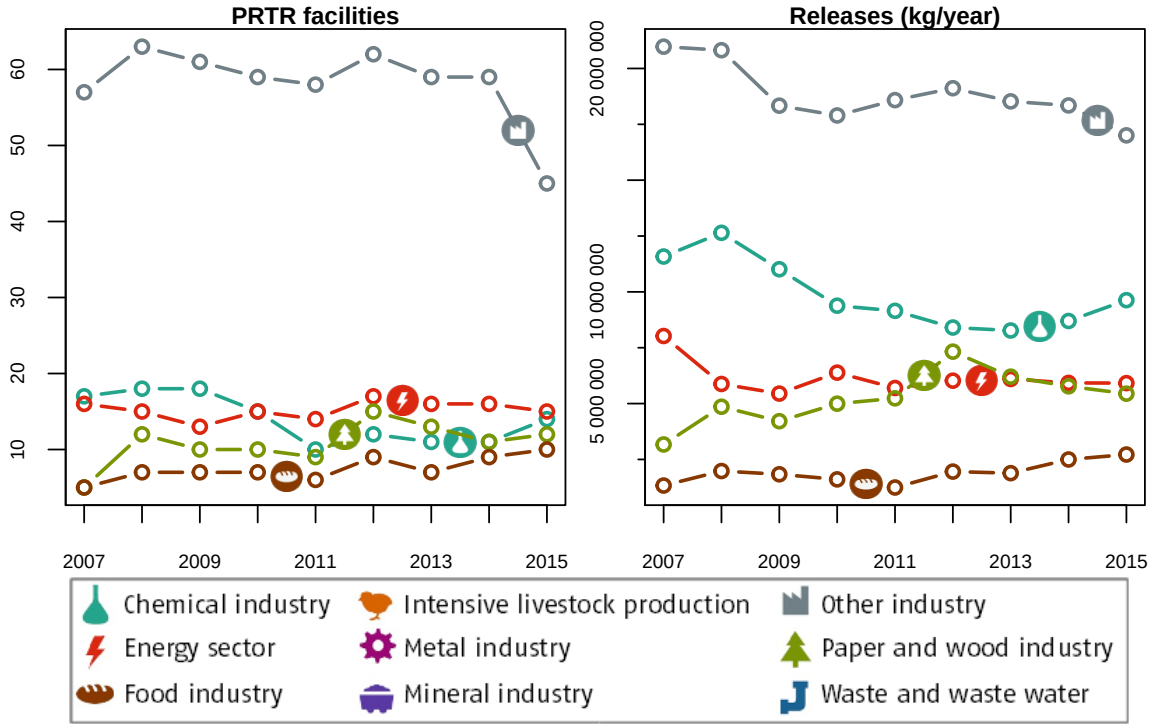

Figure 48: Annual number of facilities (left) and their releases (right) of the pollutant **"Non-methane volatile organic compounds (NMVOC)"** to **Air**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.36 Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)

2.36.1 Releases to Water

The threshold is **1 kg "Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	20	100	974	100
TOTAL	20	100	974	100

Table 49: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)"** to **Water** of the different industrial sectors including the corresponding shares.

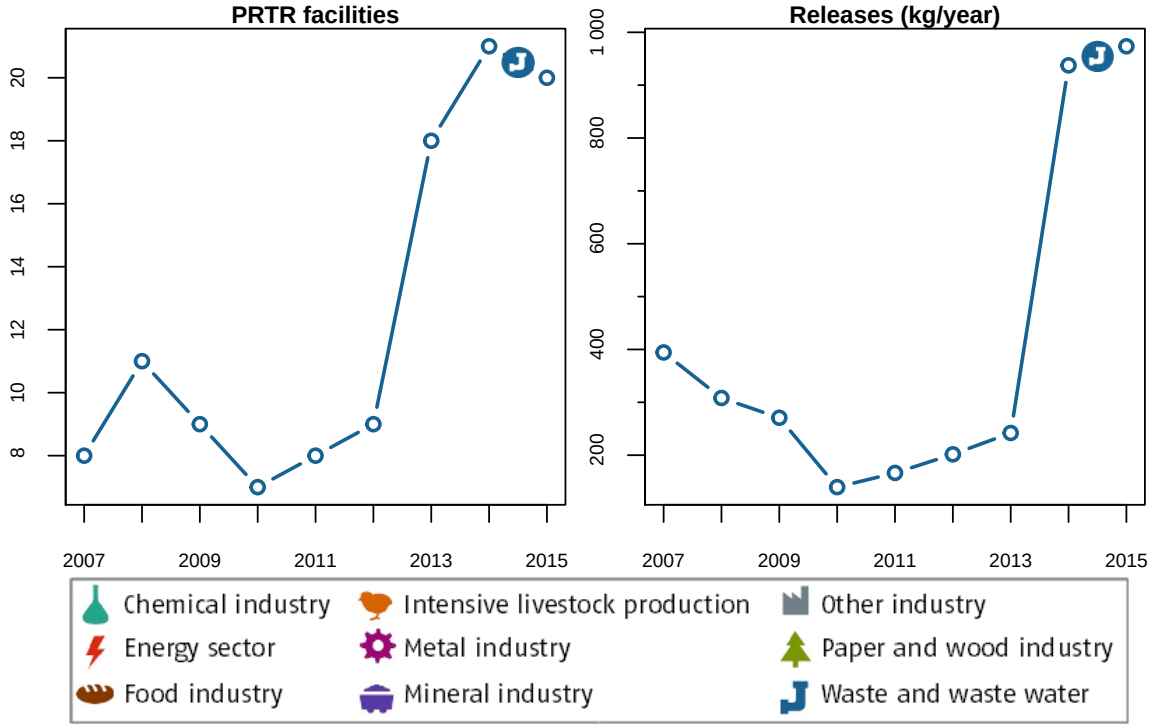

Figure 49: Annual number of facilities (left) and their releases (right) of the pollutant **"Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)"** to **Water**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.36.2 Releases to Land

The threshold is **1 kg "Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)"** to **Land** in **2015**.

2.37 Octylphenols and Octylphenol ethoxylates

2.37.1 Releases to Water

The threshold is **1 kg "Octylphenols and Octylphenol ethoxylates" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	1	100	40.3	100
TOTAL	1	100	40.3	100

Table 50: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Octylphenols and Octylphenol ethoxylates"** to **Water** of the different industrial sectors including the corresponding shares.

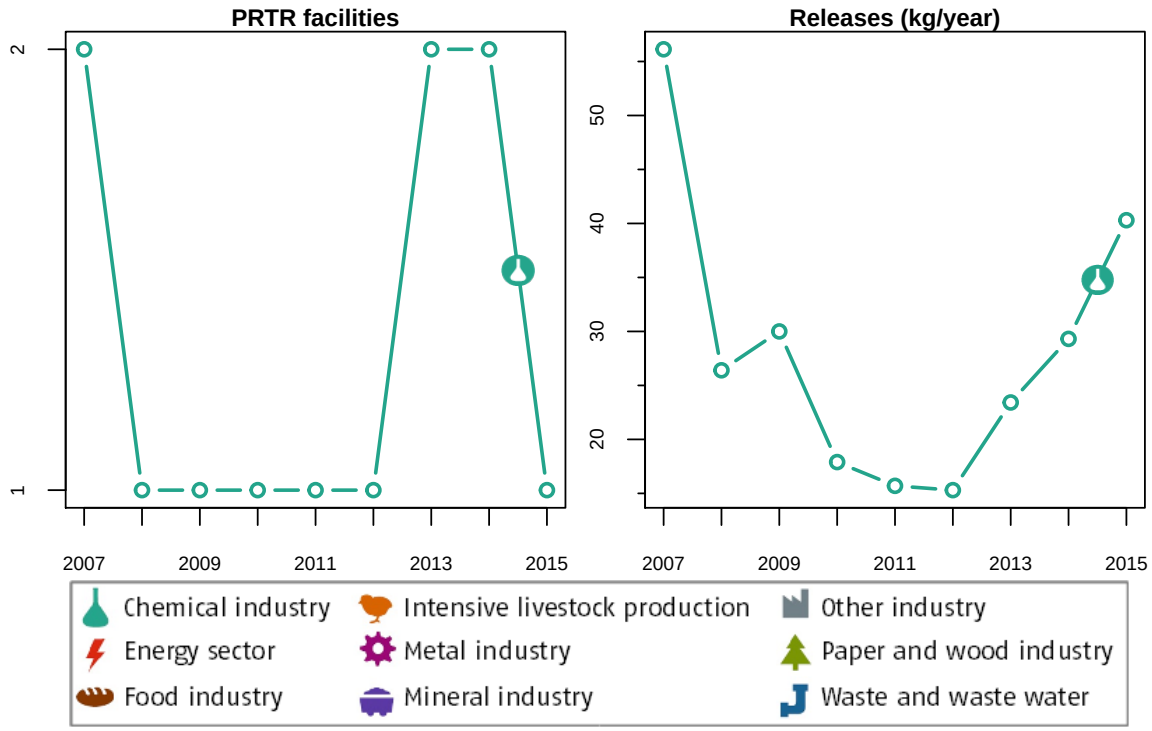

Figure 50: Annual number of facilities (left) and their releases (right) of the pollutant **"Octylphenols and Octylphenol ethoxylates"** to **Water**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.38 Organotin compounds(as total Sn)

2.38.1 Releases to Water

The threshold is **50 kg "Organotin compounds(as total Sn)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Energy sector	1	100	177	100
TOTAL	1	100	177	100

Table 51: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Organotin compounds(as total Sn)"** to **Water** of the different industrial sectors including the corresponding shares.

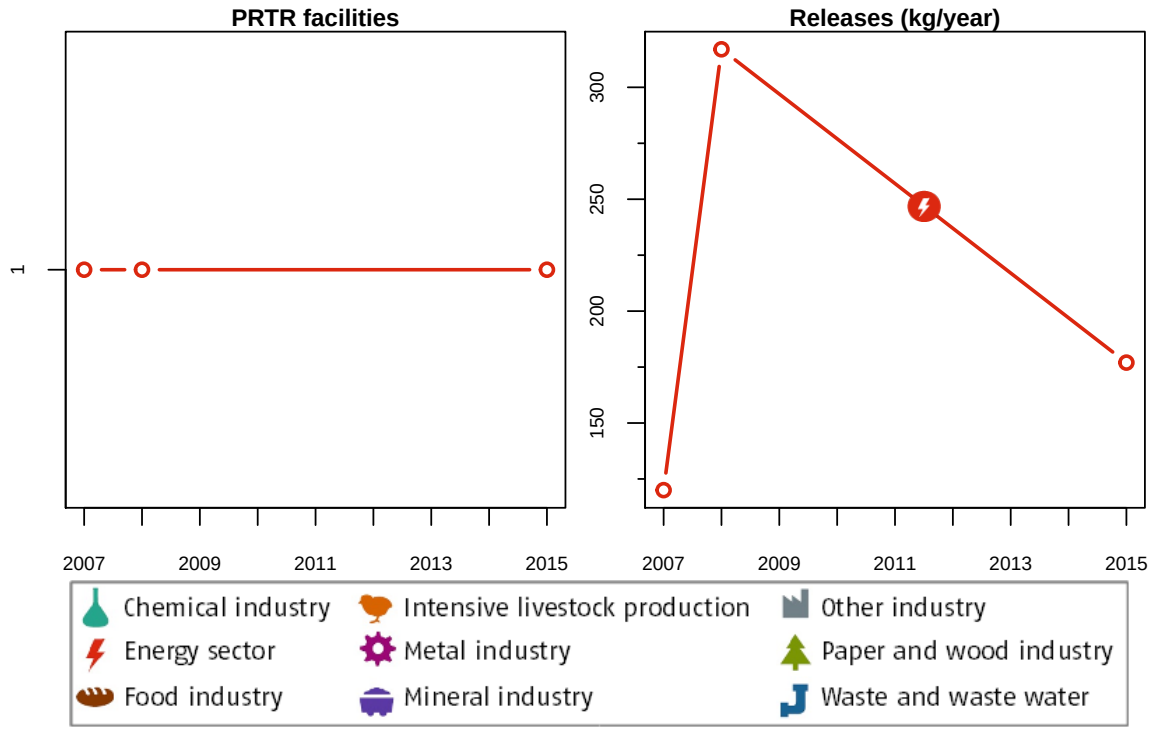

Figure 51: Annual number of facilities (left) and their releases (right) of the pollutant **"Organotin compounds(as total Sn)"** to **Water**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.38.2 Releases to Land

The threshold is **50 kg "Organotin compounds(as total Sn)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Organotin compounds(as total Sn)"** to **Land** in **2015**.

2.39 Particulate matter (PM10)

2.39.1 Releases to Air

The threshold is **50 000 kg "Particulate matter (PM10)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Metal industry	13	26	4 357 200	41.7
Energy sector	19	38	3 609 000	34.5
Paper- and wood industry	7	14	1 367 000	13.1
Mineral industry	4	8	378 300	3.62
Food industry	1	2	284 000	2.72
Intensive livestock production and aquaculture	4	8	259 100	2.48
Chemical industry	2	4	201 900	1.93
TOTAL	50	100	10 456 500	100

Table 52: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Particulate matter (PM10)"** to **Air** of the different industrial sectors including the corresponding shares.

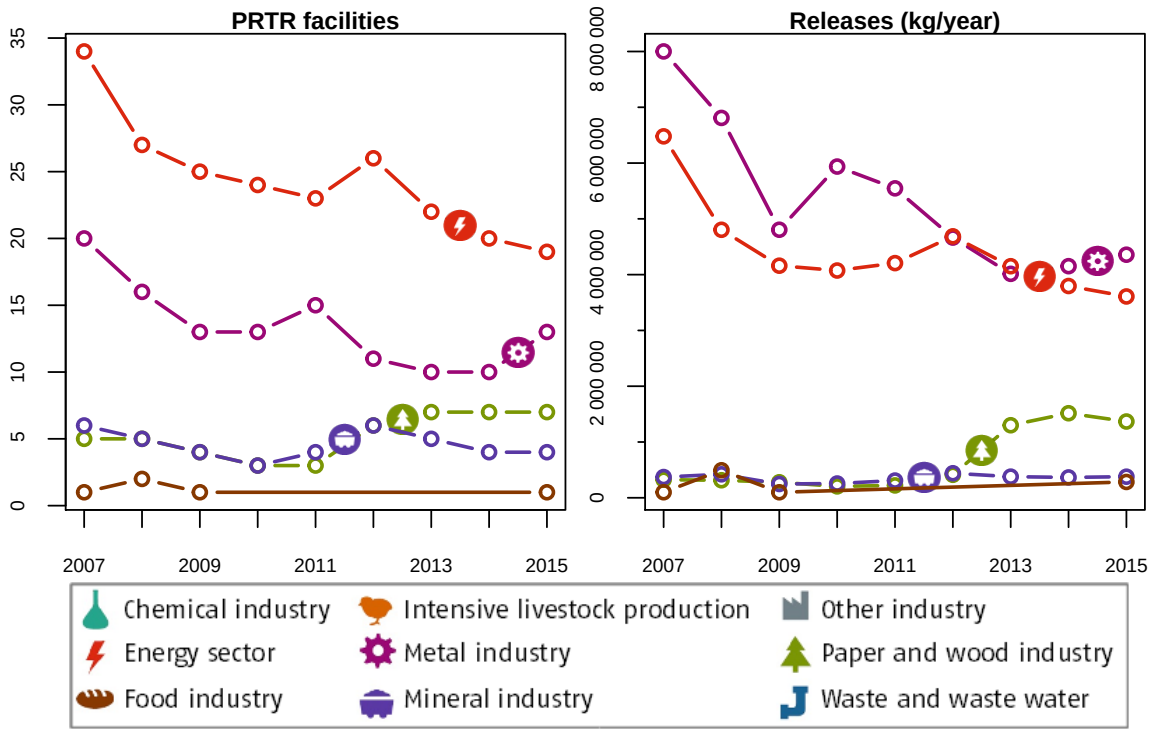

Figure 52: Annual number of facilities (left) and their releases (right) of the pollutant **"Particulate matter (PM10)"** to **Air**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.40 PCDD + PCDF (dioxins + furans) (as Teq)

2.40.1 Releases to Air

The threshold is **0.0001 kg "PCDD + PCDF (dioxins + furans) (as Teq)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Metal industry	17	81	0.011	62
Energy sector	2	9.52	0.00647	36.3
Chemical industry	2	9.52	0.000297	1.67
TOTAL	21	100	0.0178	100

Table 53: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"PCDD + PCDF (dioxins + furans) (as Teq)"** to **Air** of the different industrial sectors including the corresponding shares.

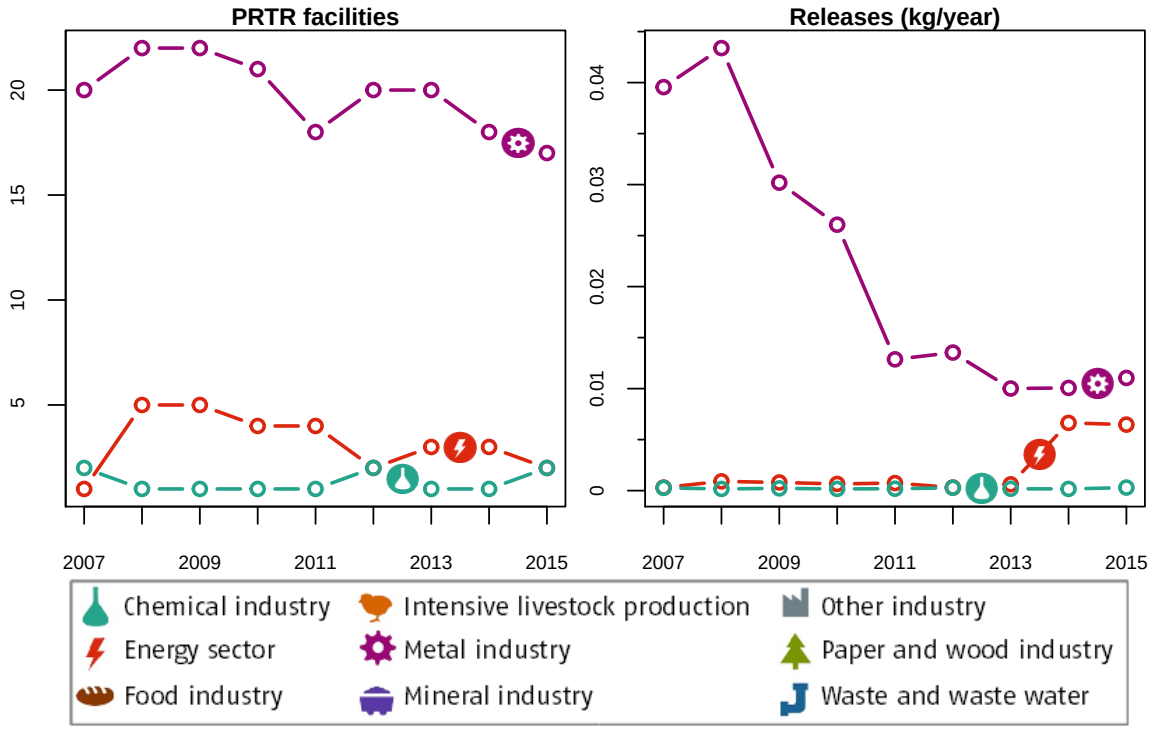

Figure 53: Annual number of facilities (left) and their releases (right) of the pollutant **"PCDD + PCDF (dioxins + furans) (as Teq)"** to **Air**, each by the 3 industrial sector(s) with the highest emissions in the year 2015.

2.40.2 Releases to Water

The threshold is **0.0001 kg "PCDD + PCDF (dioxins + furans) (as Teq)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	1	100	0.000131	100
TOTAL	1	100	0.000131	100

Table 54: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"PCDD + PCDF (dioxins + furans) (as Teq)"** to **Water** of the different industrial sectors including the corresponding shares.

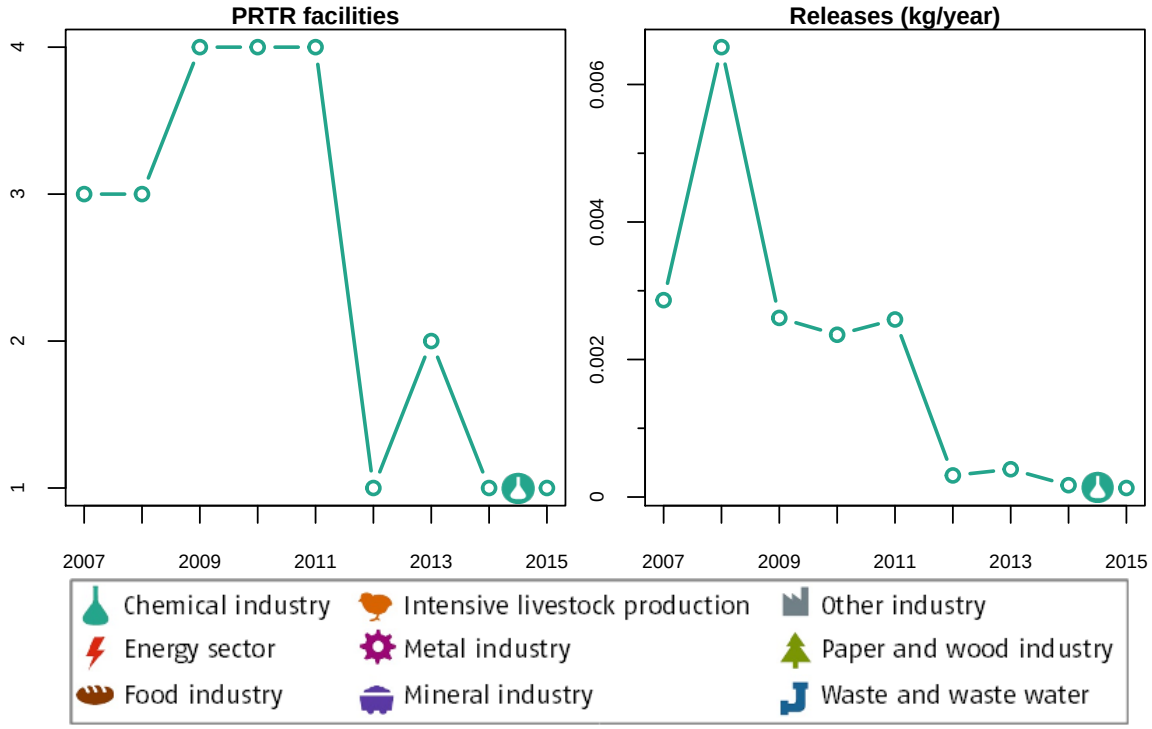

Figure 54: Annual number of facilities (left) and their releases (right) of the pollutant **"PCDD + PCDF (dioxins + furans) (as Teq)"** to **Water**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.40.3 Releases to Land

The threshold is **0.0001 kg "PCDD + PCDF (dioxins + furans) (as Teq)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"PCDD + PCDF (dioxins + furans) (as Teq)"** to **Land** in **2015**.

2.41 Pentachlorophenol (PCP)

2.41.1 Releases to Air

The threshold is **10 kg "Pentachlorophenol (PCP)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Pentachlorophenol (PCP)"** to **Air** in **2015**.

2.41.2 Releases to Water

The threshold is **1 kg "Pentachlorophenol (PCP)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	1	100	2.29	100
TOTAL	1	100	2.29	100

Table 55: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Pentachlorophenol (PCP)"** to **Water** of the different industrial sectors including the corresponding shares.

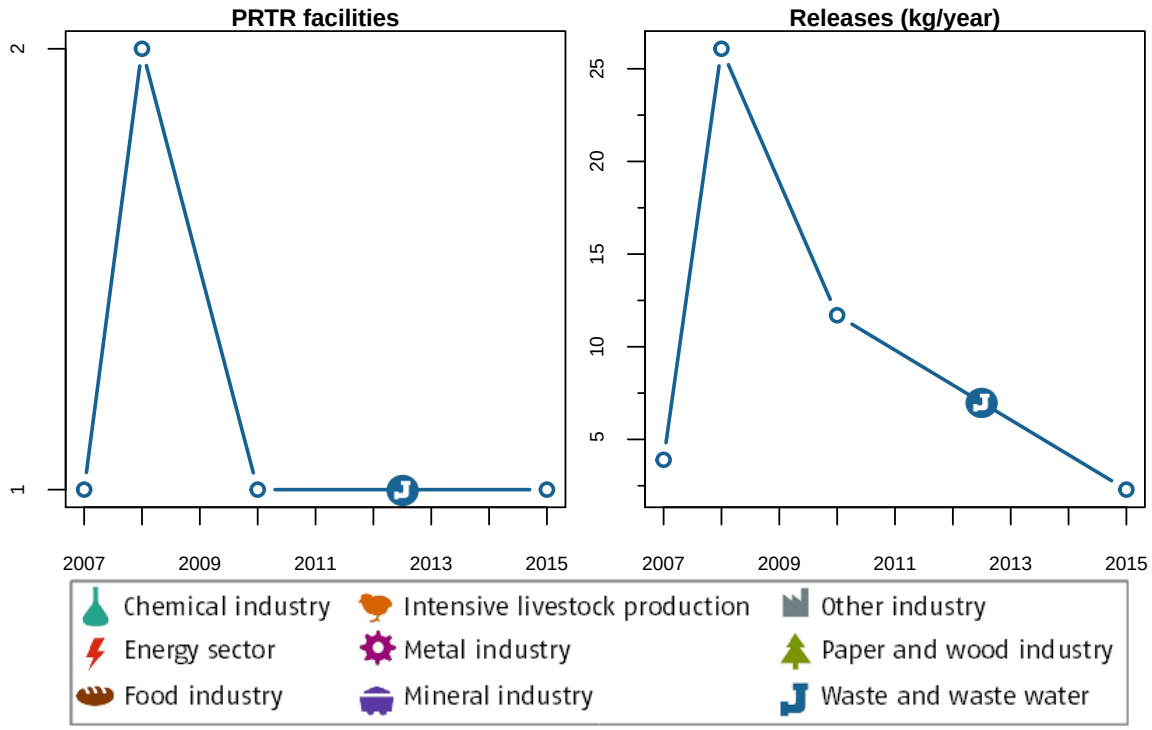

Figure 55: Annual number of facilities (left) and their releases (right) of the pollutant **"Pentachlorophenol (PCP)"** to **Water**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.41.3 Releases to Land

The threshold is **1 kg "Pentachlorophenol (PCP)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Pentachlorophenol (PCP)"** to **Land** in **2015**.

2.42 Perfluorocarbons (PFCs)

2.42.1 Releases to Air

The threshold is **100 kg "Perfluorocarbons (PFCs)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Metal industry	4	100	12 010	100
TOTAL	4	100	12 010	100

Table 56: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Perfluorocarbons (PFCs)"** to **Air** of the different industrial sectors including the corresponding shares.

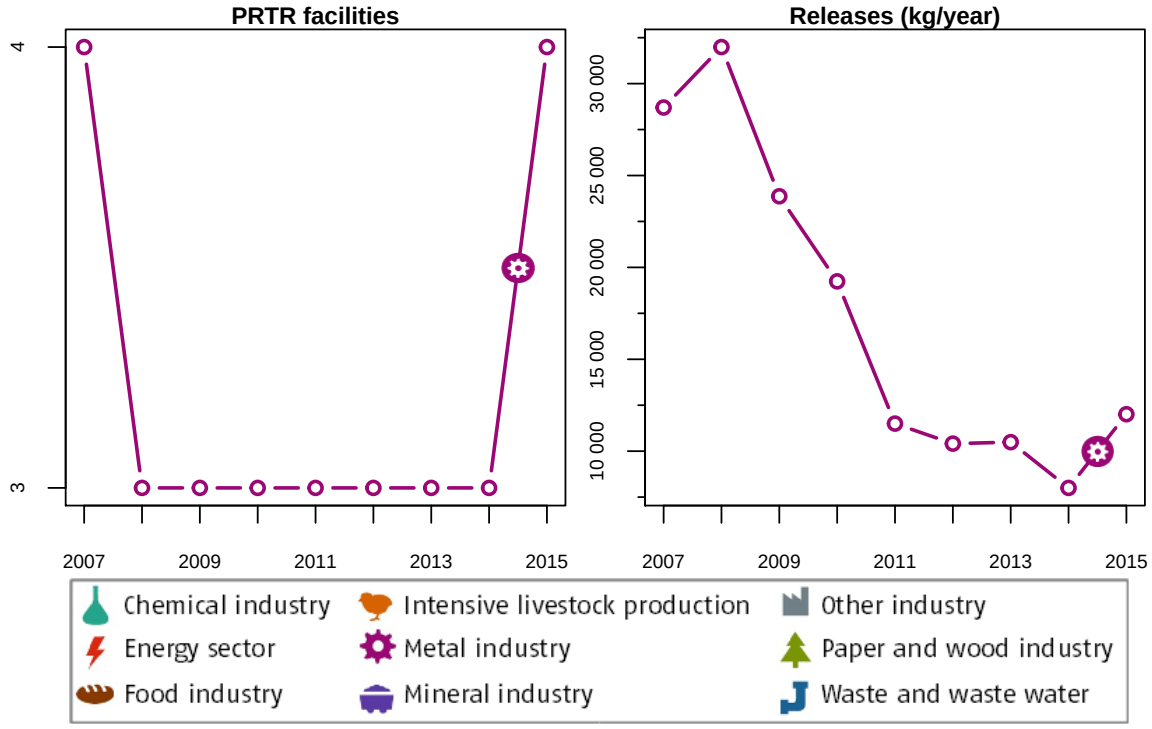

Figure 56: Annual number of facilities (left) and their releases (right) of the pollutant **"Perfluorocarbons (PFCs)"** to **Air**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.43 Phenols (as total C)

2.43.1 Releases to Water

The threshold is **20 kg "Phenols (as total C)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	1	7.69	4 250	69
Waste and waste water management	6	46.2	1 689	27.4
Energy sector	4	30.8	152	2.46
Metal industry	2	15.4	70	1.14
TOTAL	13	100	6 161	100

Table 57: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Phenols (as total C)"** to **Water** of the different industrial sectors including the corresponding shares.

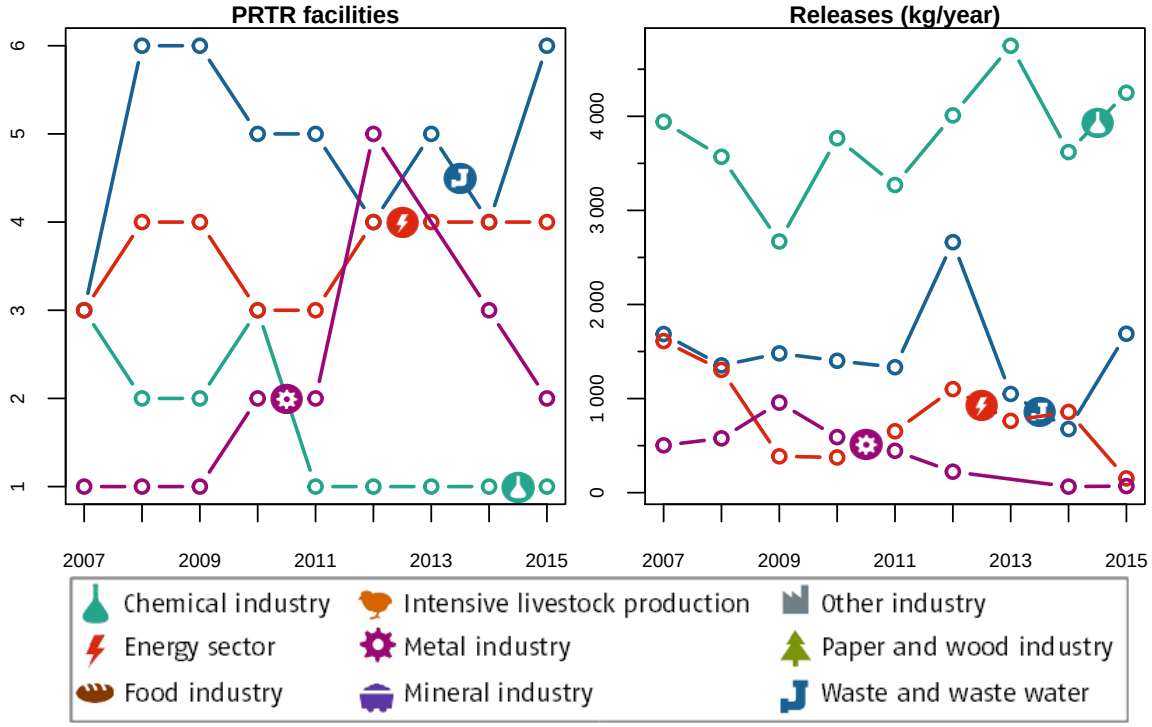

Figure 57: Annual number of facilities (left) and their releases (right) of the pollutant **"Phenols (as total C)"** to **Water**, each by the 4 industrial sector(s) with the highest emissions in the year 2015.

2.43.2 Releases to Land

The threshold is **20 kg "Phenols (as total C)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Phenols (as total C)"** to **Land** in **2015**.

2.44 Polychlorinated biphenyls (PCBs)

2.44.1 Releases to Air

The threshold is **0.1 kg "Polychlorinated biphenyls (PCBs)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Metal industry	2	66.7	2.87	79.2
Waste and waste water management	1	33.3	0.753	20.8
TOTAL	3	100	3.62	100

Table 58: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Polychlorinated biphenyls (PCBs)"** to **Air** of the different industrial sectors including the corresponding shares.

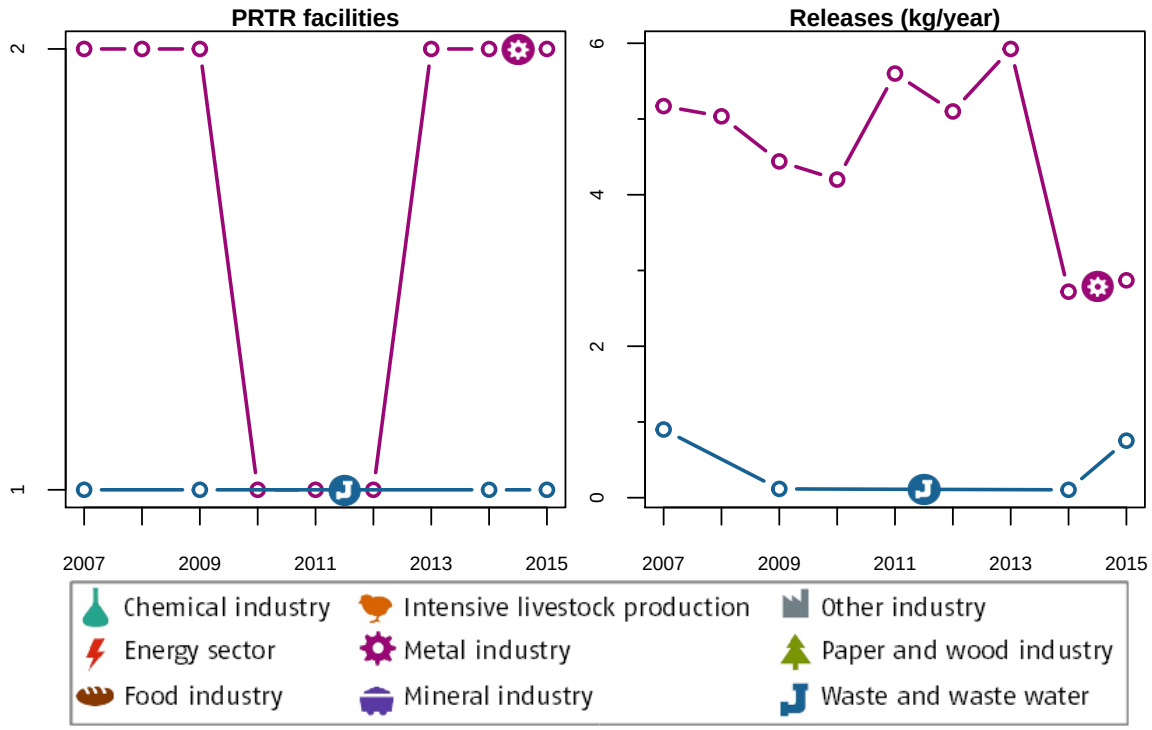

Figure 58: Annual number of facilities (left) and their releases (right) of the pollutant **"Polychlorinated biphenyls (PCBs)"** to **Air**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

2.44.2 Releases to Water

The threshold is **0.1 kg "Polychlorinated biphenyls (PCBs)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Polychlorinated biphenyls (PCBs)"** to **Water** in **2015**.

2.44.3 Releases to Land

The threshold is **0.1 kg "Polychlorinated biphenyls (PCBs)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **“Polychlorinated biphenyls (PCBs)”** to **Land** in **2015**.

2.45 Polycyclic aromatic hydrocarbons (PAHs)

2.45.1 Releases to Air

The threshold is **50 kg "Polycyclic aromatic hydrocarbons (PAHs)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Energy sector	1	33.3	460	55.8
Other industry	1	33.3	292	35.4
Mineral industry	1	33.3	72.7	8.82
TOTAL	3	100	825	100

Table 59: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Polycyclic aromatic hydrocarbons (PAHs)"** to **Air** of the different industrial sectors including the corresponding shares.

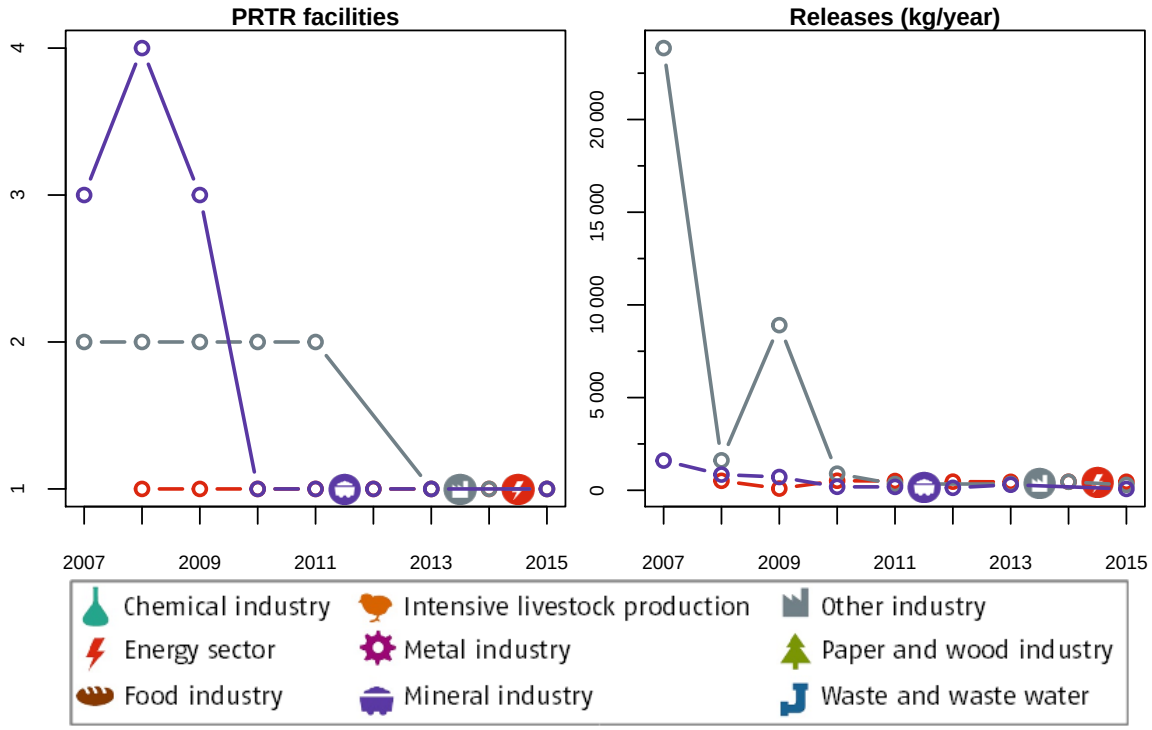

Figure 59: Annual number of facilities (left) and their releases (right) of the pollutant **"Polycyclic aromatic hydrocarbons (PAHs)"** to **Air**, each by the 3 industrial sector(s) with the highest emissions in the year 2015.

2.45.2 Releases to Water

The threshold is **5 kg "Polycyclic aromatic hydrocarbons (PAHs)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	5	100	36.6	100
TOTAL	5	100	36.6	100

Table 60: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Polycyclic aromatic hydrocarbons (PAHs)"** to **Water** of the different industrial sectors including the corresponding shares.

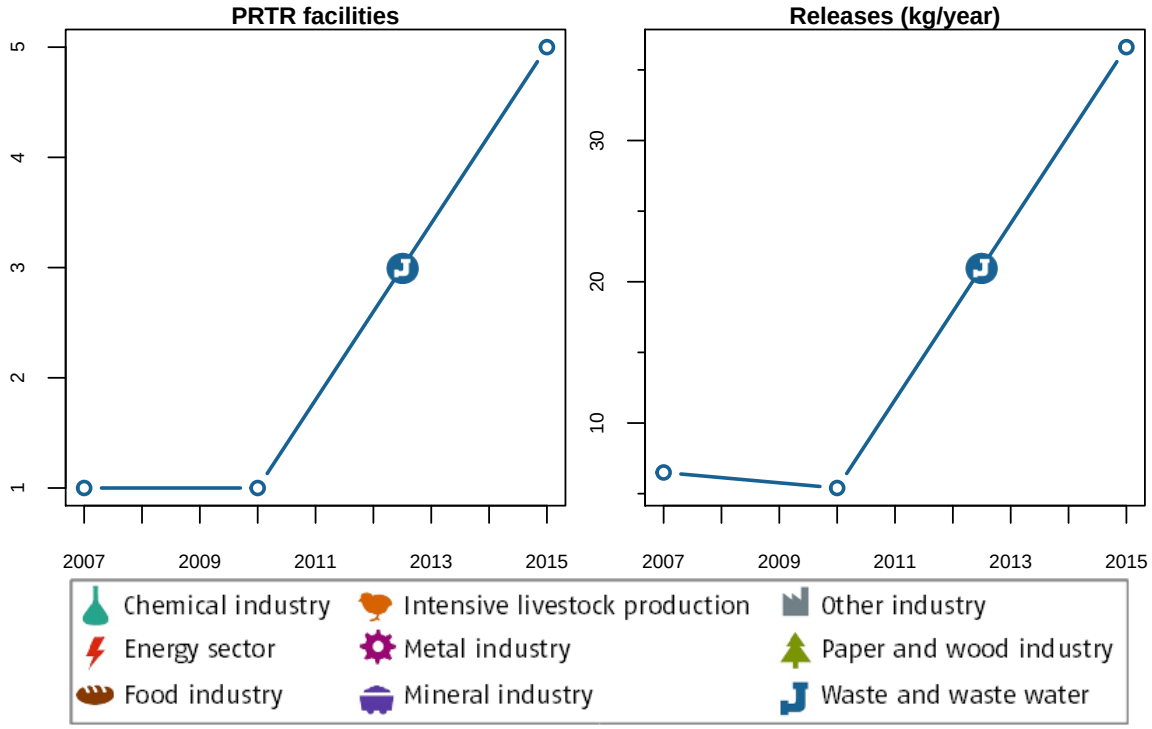

Figure 60: Annual number of facilities (left) and their releases (right) of the pollutant **"Polycyclic aromatic hydrocarbons (PAHs)"** to **Water**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.45.3 Releases to Land

The threshold is **5 kg "Polycyclic aromatic hydrocarbons (PAHs)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Polycyclic aromatic hydrocarbons (PAHs)"** to **Land** in **2015**.

2.46 Simazine

2.46.1 Releases to Water

The threshold is **1 kg "Simazine" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	1	100	1.15	100
TOTAL	1	100	1.15	100

Table 61: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Simazine"** to **Water** of the different industrial sectors including the corresponding shares.

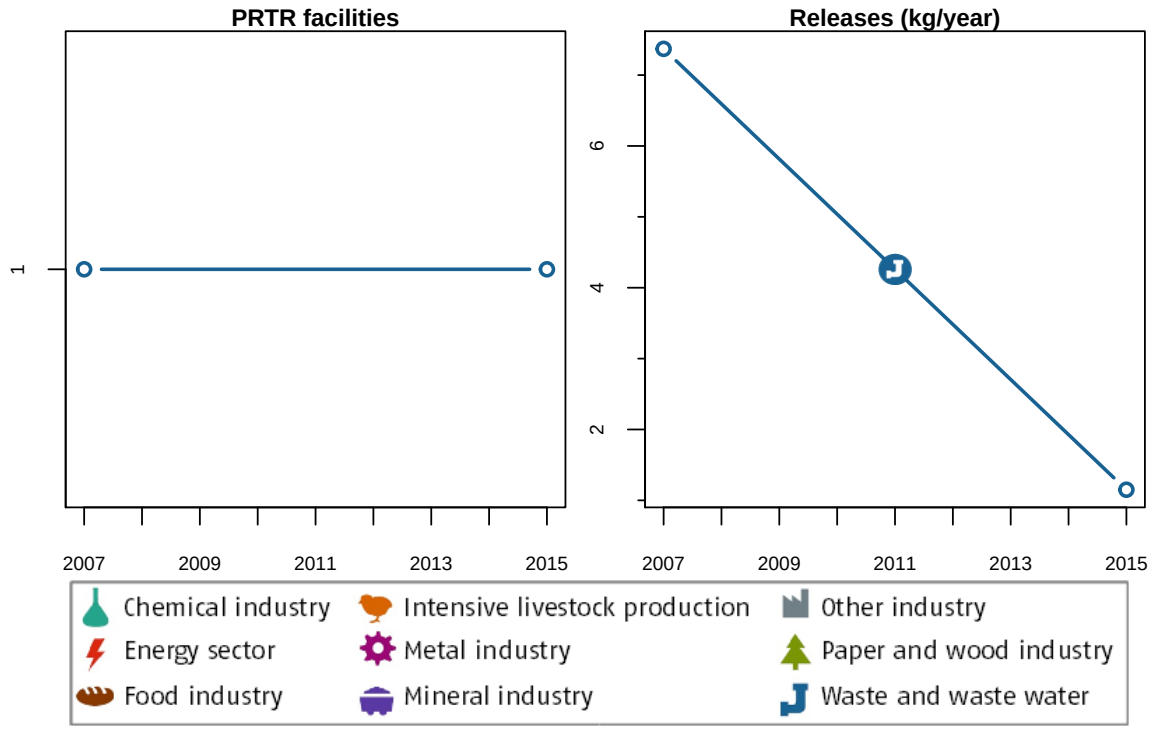

Figure 61: Annual number of facilities (left) and their releases (right) of the pollutant **"Simazine"** to **Water**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.46.2 Releases to Land

The threshold is **1 kg "Simazine" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Simazine"** to **Land** in **2015**.

2.47 Sulphur oxides (SOx/SO2)

2.47.1 Releases to Air

The threshold is **150 000 kg "Sulphur oxides (SOx/SO2)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Energy sector	93	49.7	161 982 000	71.2
Metal industry	25	13.4	40 337 000	17.7
Mineral industry	37	19.8	11 861 000	5.21
Chemical industry	17	9.09	9 452 000	4.15
Paper- and wood industry	9	4.81	2 626 000	1.15
Food industry	5	2.67	1 083 000	0.476
Waste and waste water management	1	0.535	214 000	0.094
TOTAL	187	100	227 555 000	100

Table 62: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Sulphur oxides (SOx/SO2)"** to **Air** of the different industrial sectors including the corresponding shares.

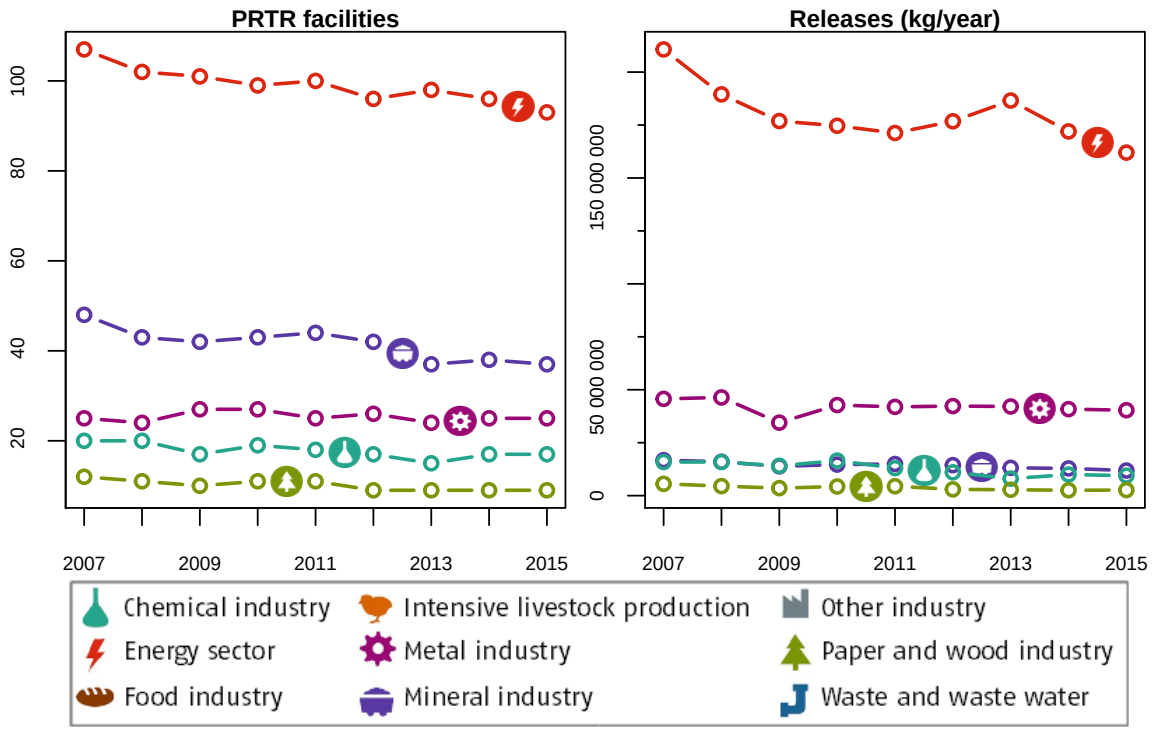

Figure 62: Annual number of facilities (left) and their releases (right) of the pollutant **"Sulphur oxides (SOx/SO2)"** to **Air**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.48 Tetrachloroethylene (PER)

2.48.1 Releases to Air

The threshold is **2 000 kg "Tetrachloroethylene (PER)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Tetrachloroethylene (PER)"** to **Air** in **2015**.

2.48.2 Releases to Water

The threshold is **10 kg "Tetrachloroethylene (PER)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	1	50	29.6	66.8
Chemical industry	1	50	14.7	33.2
TOTAL	2	100	44.3	100

Table 63: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Tetrachloroethylene (PER)"** to **Water** of the different industrial sectors including the corresponding shares.

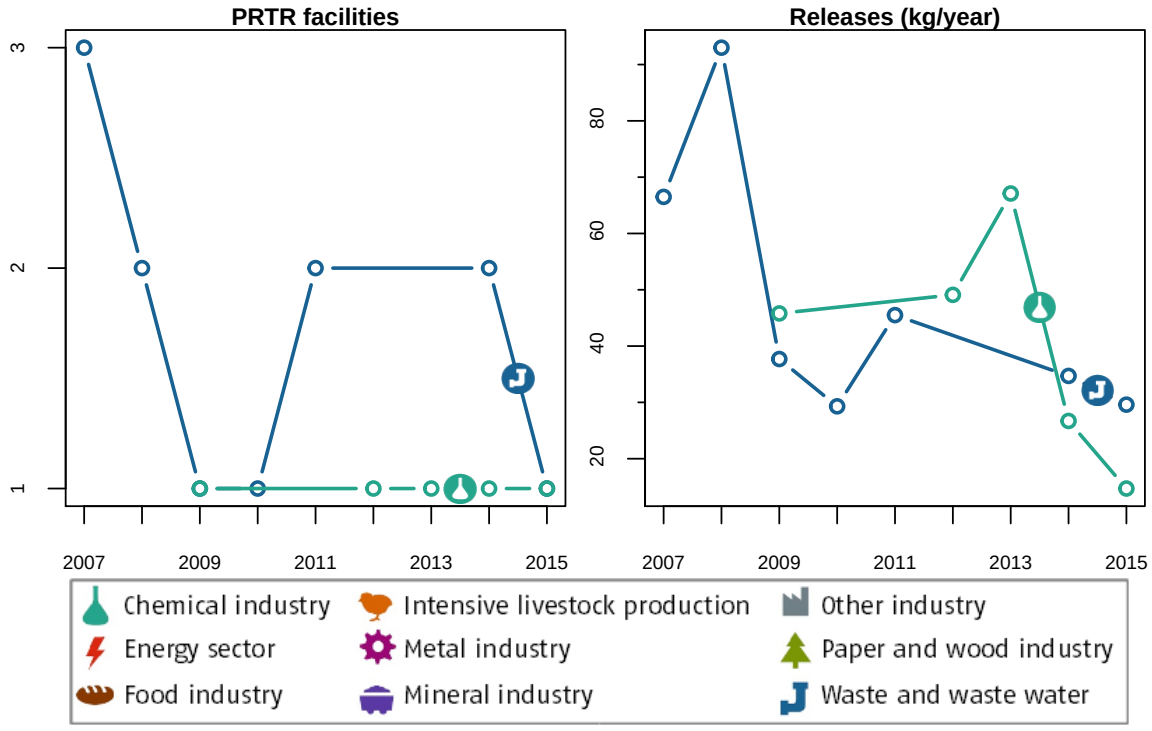

Figure 63: Annual number of facilities (left) and their releases (right) of the pollutant **"Tetrachloroethylene (PER)"** to **Water**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

2.49 Tetrachloromethane (TCM)

2.49.1 Releases to Air

The threshold is **100 kg "Tetrachloromethane (TCM)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	2	100	1 184	100
TOTAL	2	100	1 184	100

Table 64: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Tetrachloromethane (TCM)"** to **Air** of the different industrial sectors including the corresponding shares.

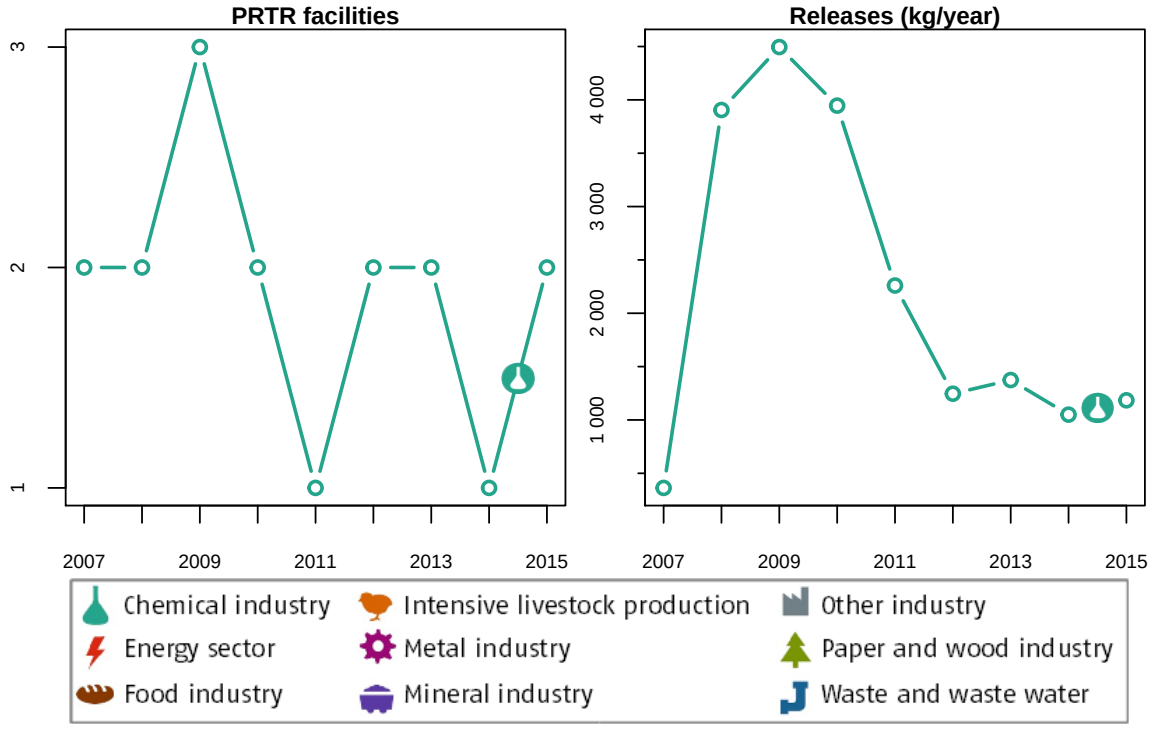

Figure 64: Annual number of facilities (left) and their releases (right) of the pollutant **"Tetrachloromethane (TCM)"** to **Air**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.49.2 Releases to Water

The threshold is **1 kg "Tetrachloromethane (TCM)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Tetrachloromethane (TCM)"** to **Water** in **2015**.

2.50 Total nitrogen

2.50.1 Releases to Water

The threshold is **50 000 kg "Total nitrogen" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	161	87	37 091 500	91.2
Chemical industry	13	7.03	2 640 400	6.5
Energy sector	7	3.78	528 300	1.3
Metal industry	3	1.62	313 900	0.772
Mineral industry	1	0.541	78 600	0.193
TOTAL	185	100	40 652 700	100

Table 65: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Total nitrogen"** to **Water** of the different industrial sectors including the corresponding shares.

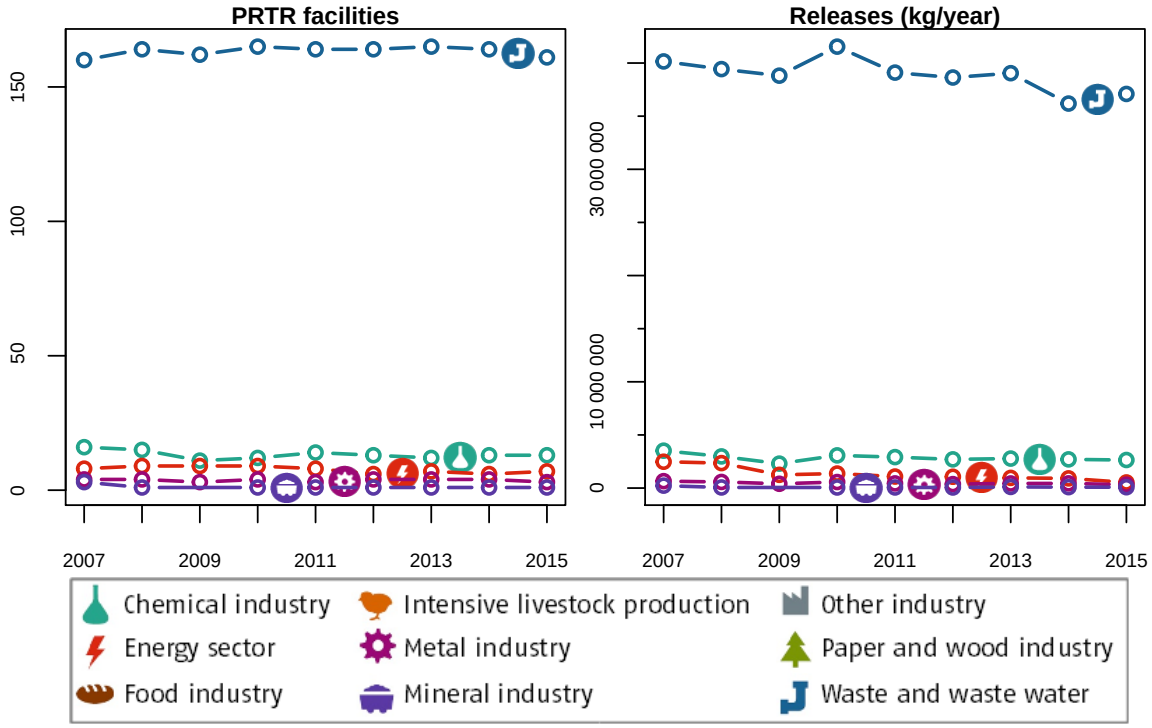

Figure 65: Annual number of facilities (left) and their releases (right) of the pollutant **"Total nitrogen"** to **Water**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.50.2 Releases to Land

The threshold is **50 000 kg "Total nitrogen" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Mineral industry	1	100	95 400	100
TOTAL	1	100	95 400	100

Table 66: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Total nitrogen"** to **Land** of the different industrial sectors including the corresponding shares.

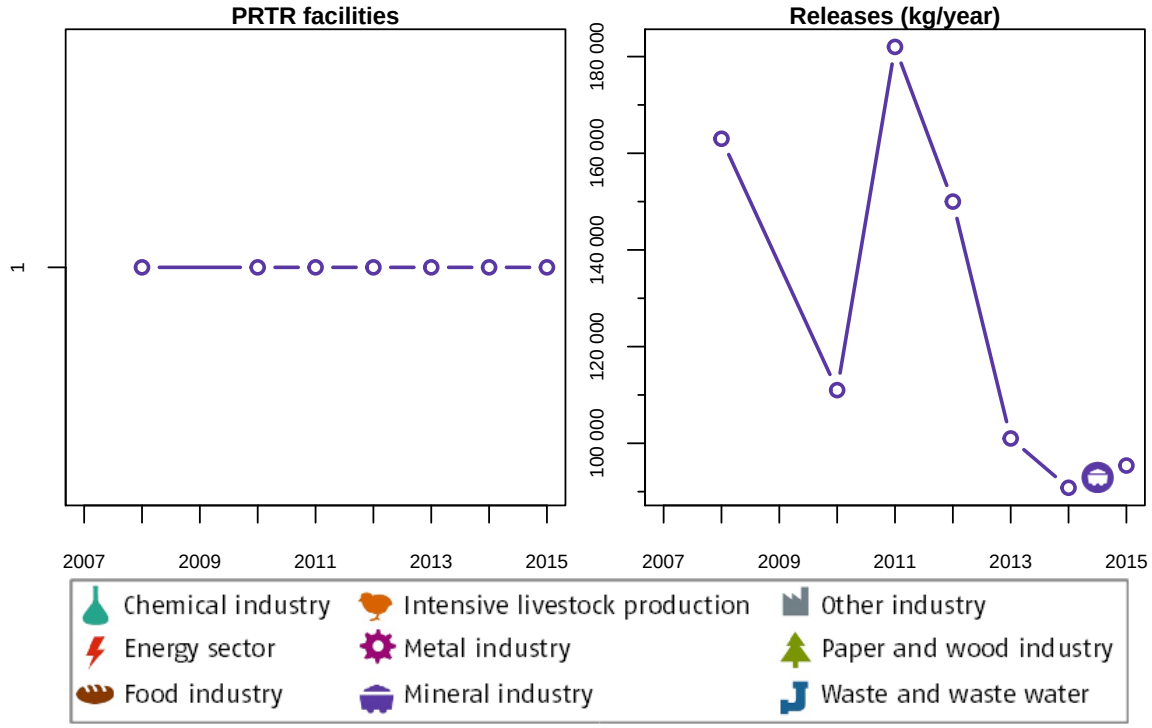

Figure 66: Annual number of facilities (left) and their releases (right) of the pollutant **"Total nitrogen"** to **Land**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.51 Total organic carbon (TOC) (as total C or COD/3)

2.51.1 Releases to Water

The threshold is **50 000 kg "Total organic carbon (TOC) (as total C or COD/3)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	166	73.5	42 411 900	66.8
Paper- and wood industry	30	13.3	13 286 500	20.9
Chemical industry	20	8.85	5 667 300	8.93
Energy sector	6	2.65	1 255 900	1.98
Metal industry	1	0.442	417 000	0.657
Food industry	2	0.885	328 000	0.517
Mineral industry	1	0.442	78 500	0.124
TOTAL	226	100	63 445 100	100

Table 67: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Total organic carbon (TOC) (as total C or COD/3)"** to **Water** of the different industrial sectors including the corresponding shares.

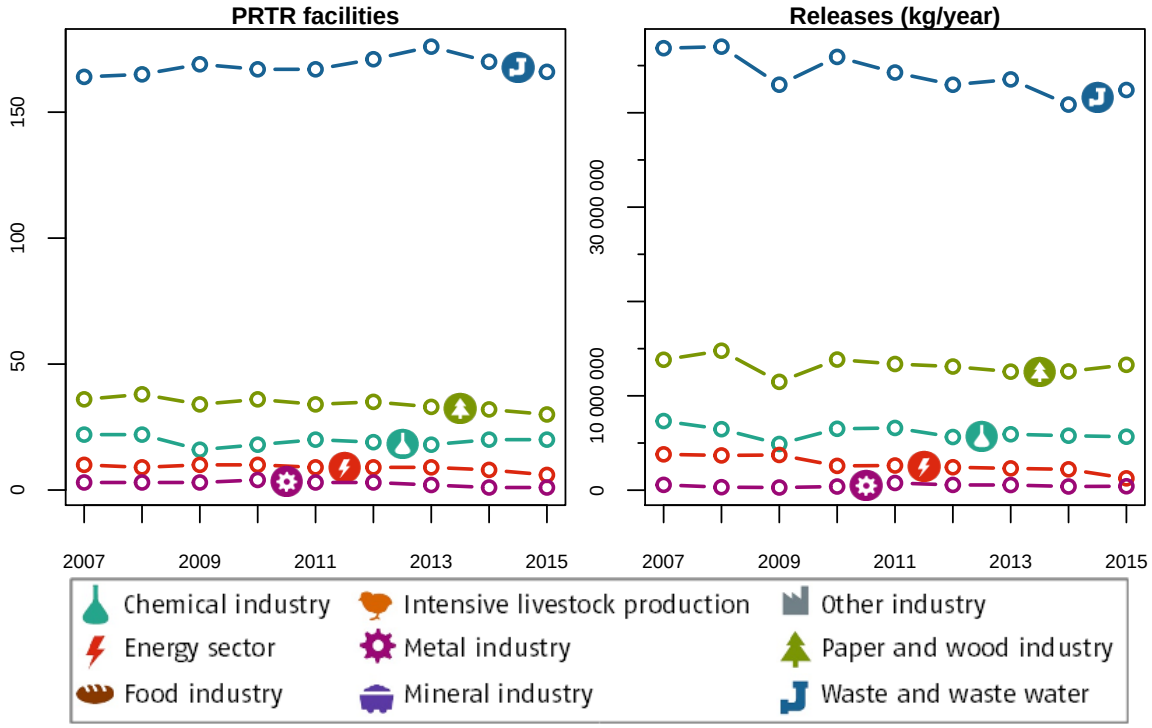

Figure 67: Annual number of facilities (left) and their releases (right) of the pollutant **"Total organic carbon (TOC) (as total C or COD/3)"** to **Water**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.52 Total phosphorus

2.52.1 Releases to Water

The threshold is **5 000 kg "Total phosphorus" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	83	86.5	1 454 520	88.8
Chemical industry	6	6.25	123 240	7.52
Paper- and wood industry	4	4.17	37 860	2.31
Food industry	2	2.08	16 130	0.985
Metal industry	1	1.04	6 180	0.377
TOTAL	96	100	1 637 930	100

Table 68: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Total phosphorus"** to **Water** of the different industrial sectors including the corresponding shares.

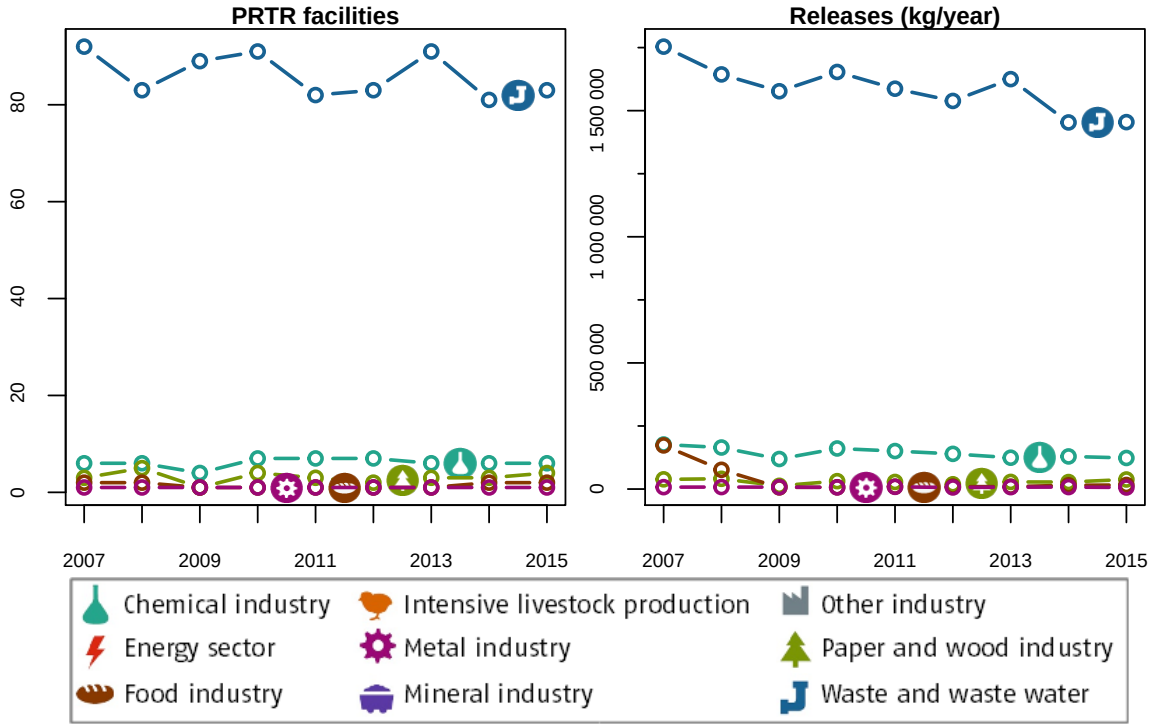

Figure 68: Annual number of facilities (left) and their releases (right) of the pollutant **"Total phosphorus"** to **Water**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.52.2 Releases to Land

The threshold is **5 000 kg "Total phosphorus" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Total phosphorus"** to **Land** in **2015**.

2.53 Trichlorobenzenes (TCBs) (all isomers)

2.53.1 Releases to Air

The threshold is **10 kg "Trichlorobenzenes (TCBs) (all isomers)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Trichlorobenzenes (TCBs) (all isomers)"** to **Air** in **2015**.

2.53.2 Releases to Water

The threshold is **1 kg "Trichlorobenzenes (TCBs) (all isomers)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	1	100	2	100
TOTAL	1	100	2	100

Table 69: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Trichlorobenzenes (TCBs) (all isomers)"** to **Water** of the different industrial sectors including the corresponding shares.

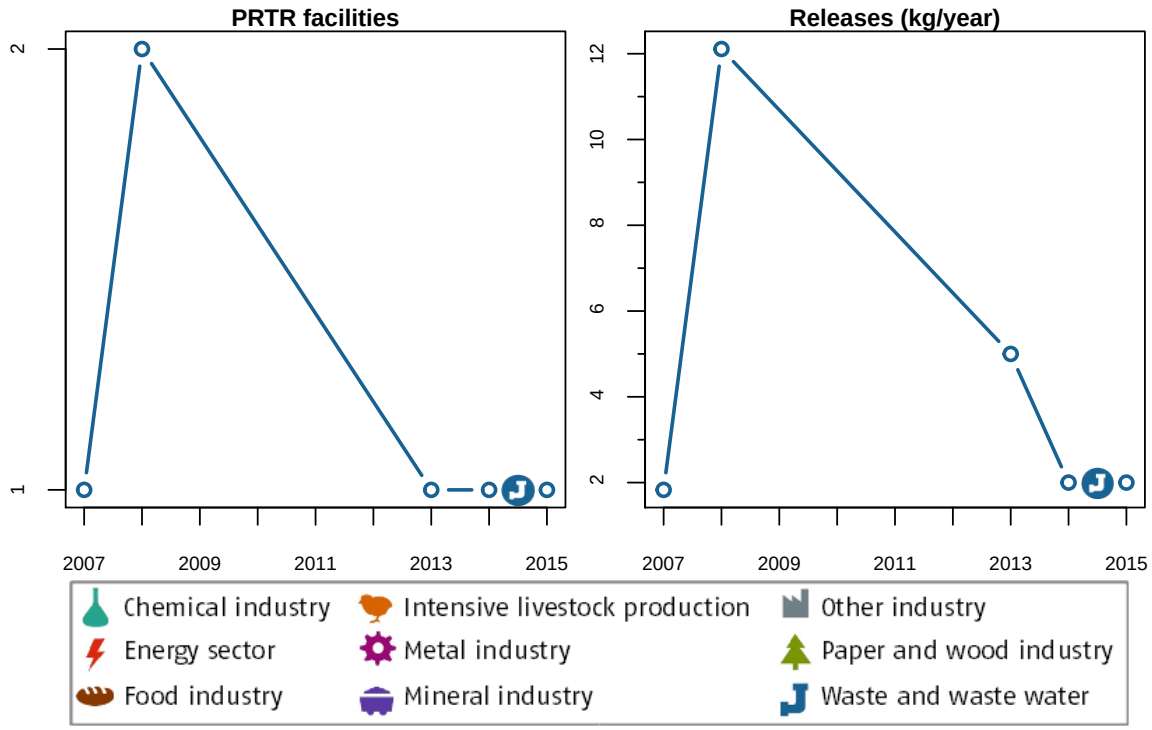

Figure 69: Annual number of facilities (left) and their releases (right) of the pollutant **"Trichlorobenzenes (TCBs) (all isomers)"** to **Water**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.54 Trichloromethane

2.54.1 Releases to Air

The threshold is **500 kg "Trichloromethane" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	2	100	3 457	100
TOTAL	2	100	3 457	100

Table 70: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Trichloromethane"** to **Air** of the different industrial sectors including the corresponding shares.

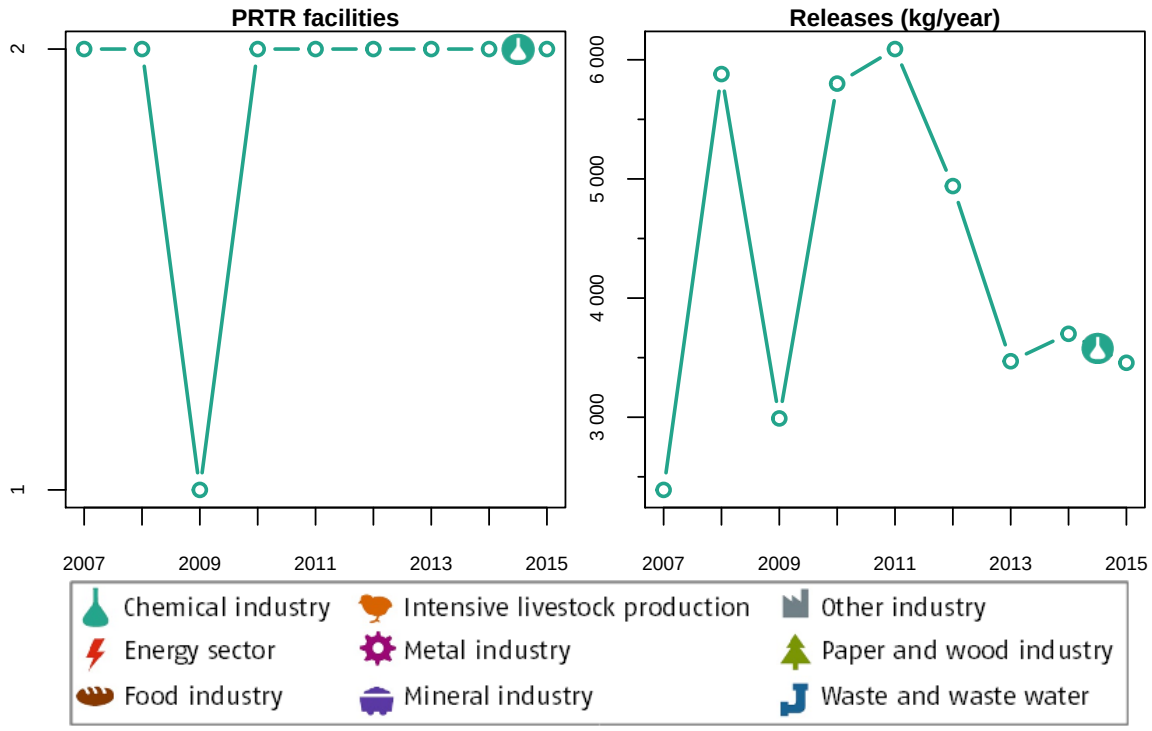

Figure 70: Annual number of facilities (left) and their releases (right) of the pollutant **"Trichloromethane"** to **Air**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.54.2 Releases to Water

The threshold is **10 kg "Trichloromethane" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	3	60	498	92
Waste and waste water management	2	40	43.4	8.02
TOTAL	5	100	541	100

Table 71: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Trichloromethane"** to **Water** of the different industrial sectors including the corresponding shares.

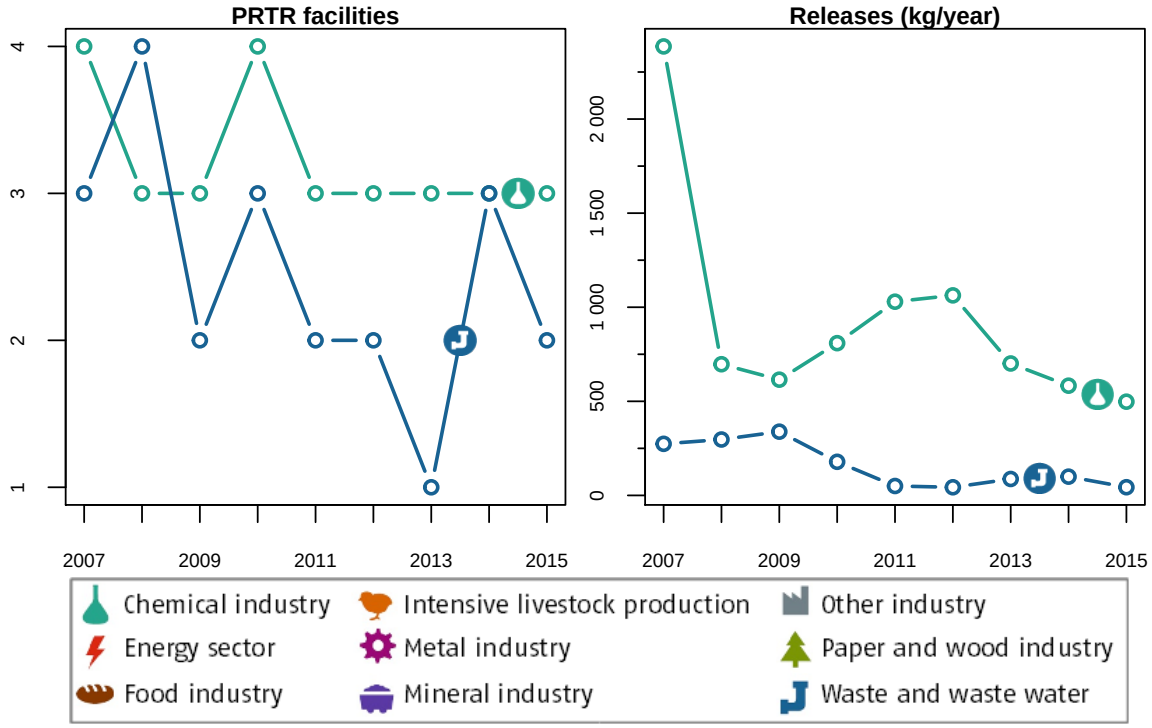

Figure 71: Annual number of facilities (left) and their releases (right) of the pollutant **"Trichloromethane"** to **Water**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

2.55 Vinyl chloride

2.55.1 Releases to Air

The threshold is **1 000 kg "Vinyl chloride" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	7	100	125 220	100
TOTAL	7	100	125 220	100

Table 72: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Vinyl chloride"** to **Air** of the different industrial sectors including the corresponding shares.

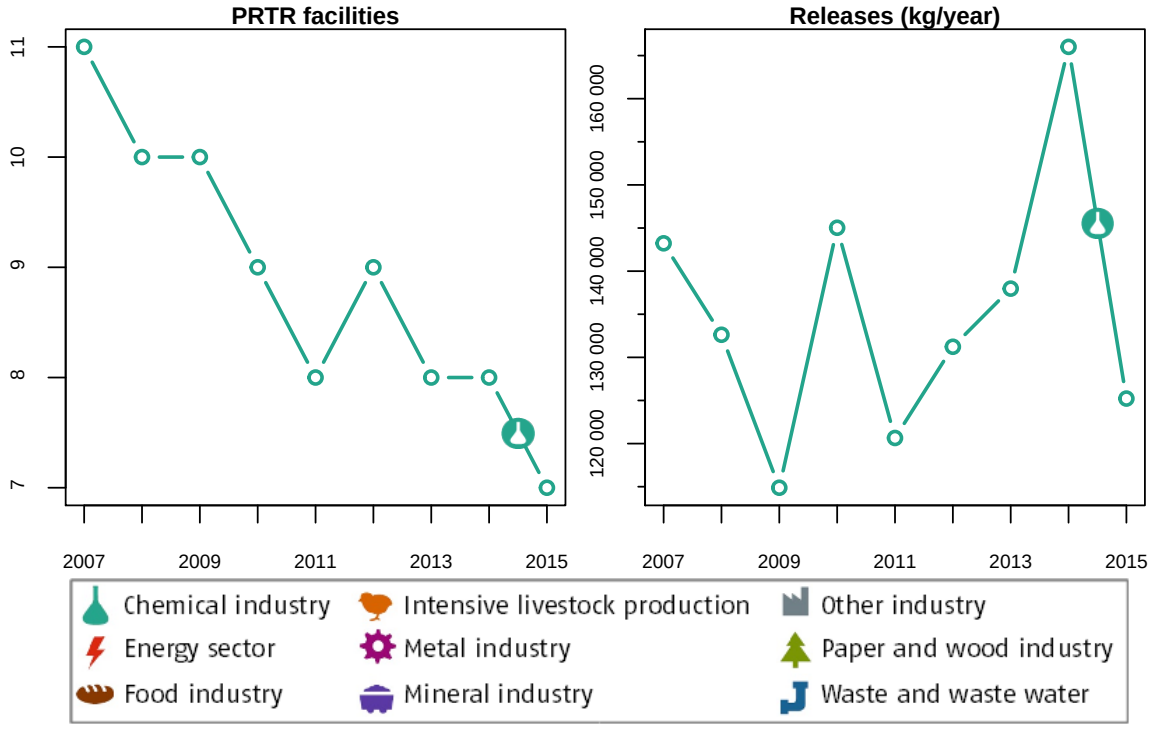

Figure 72: Annual number of facilities (left) and their releases (right) of the pollutant **"Vinyl chloride"** to **Air**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.55.2 Releases to Water

The threshold is **10 kg "Vinyl chloride" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Chemical industry	1	100	40	100
TOTAL	1	100	40	100

Table 73: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Vinyl chloride"** to **Water** of the different industrial sectors including the corresponding shares.

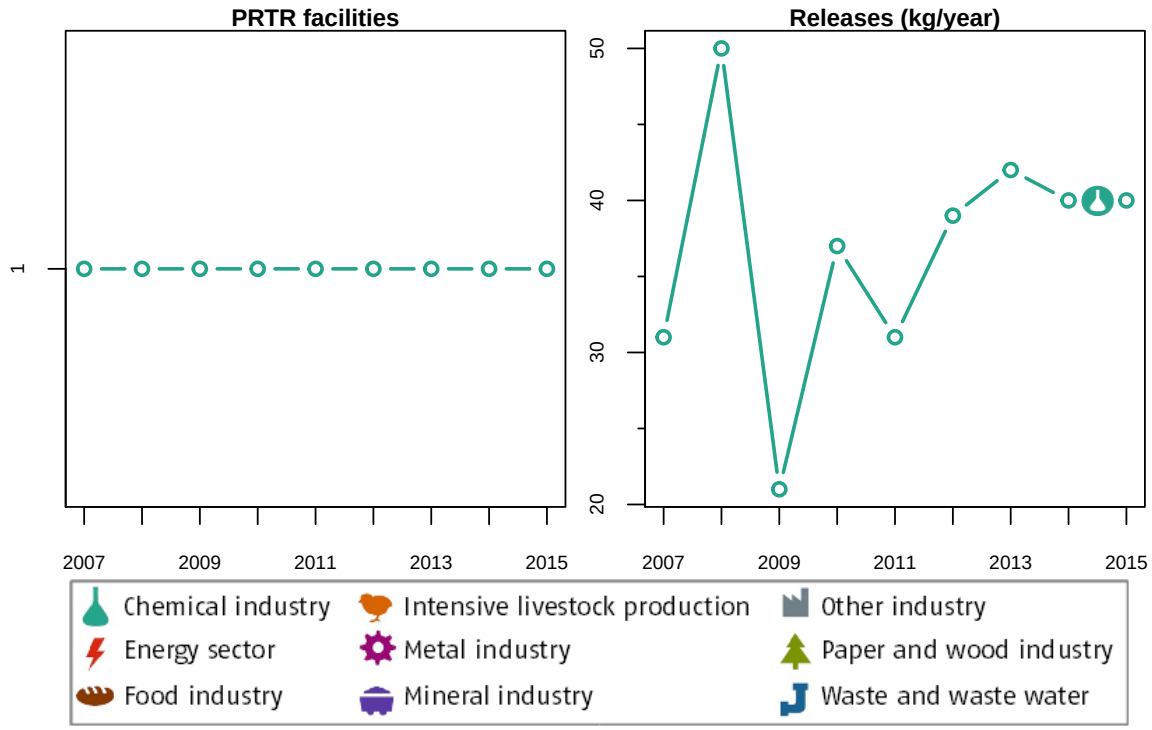

Figure 73: Annual number of facilities (left) and their releases (right) of the pollutant **"Vinyl chloride"** to **Water**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

2.55.3 Releases to Land

The threshold is **10 kg "Vinyl chloride" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

No facility reported the release of **"Vinyl chloride"** to **Land** in **2015**.

2.56 Zinc and compounds (as Zn)

2.56.1 Releases to Air

The threshold is **200 kg "Zinc and compounds (as Zn)" per year**. Releases to **Air** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Metal industry	17	70.8	51 588	80.1
Chemical industry	3	12.5	7 796	12.1
Waste and waste water management	1	4.17	3 340	5.19
Energy sector	3	12.5	1 674	2.6
TOTAL	24	100	64 398	100

Table 74: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Zinc and compounds (as Zn)"** to **Air** of the different industrial sectors including the corresponding shares.

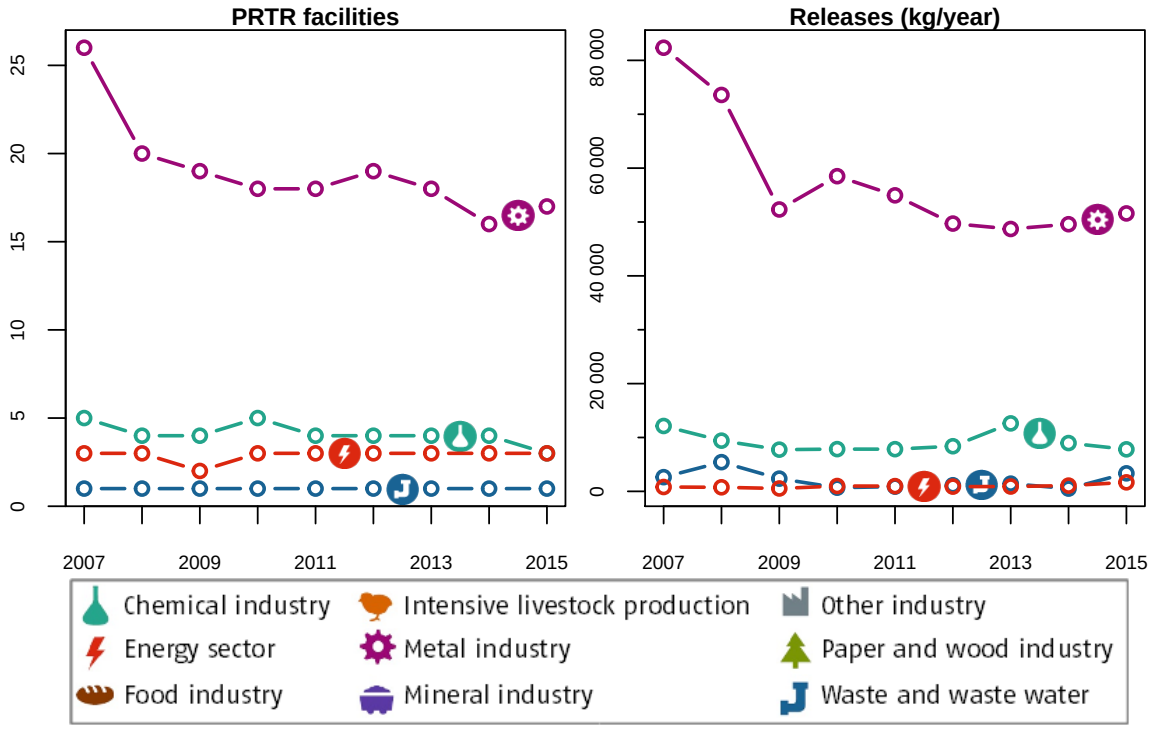

Figure 74: Annual number of facilities (left) and their releases (right) of the pollutant **"Zinc and compounds (as Zn)"** to **Air**, each by the 4 industrial sector(s) with the highest emissions in the year 2015.

2.56.2 Releases to Water

The threshold is **100 kg "Zinc and compounds (as Zn)" per year**. Releases to **Water** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Waste and waste water management	184	75.1	149 214	60.7
Mineral industry	15	6.12	36 882	15
Chemical industry	22	8.98	30 419	12.4
Metal industry	9	3.67	15 873	6.46
Energy sector	11	4.49	12 014	4.89
Paper- and wood industry	4	1.63	1 257	0.512
TOTAL	245	100	245 659	100

Table 75: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Zinc and compounds (as Zn)"** to **Water** of the different industrial sectors including the corresponding shares.

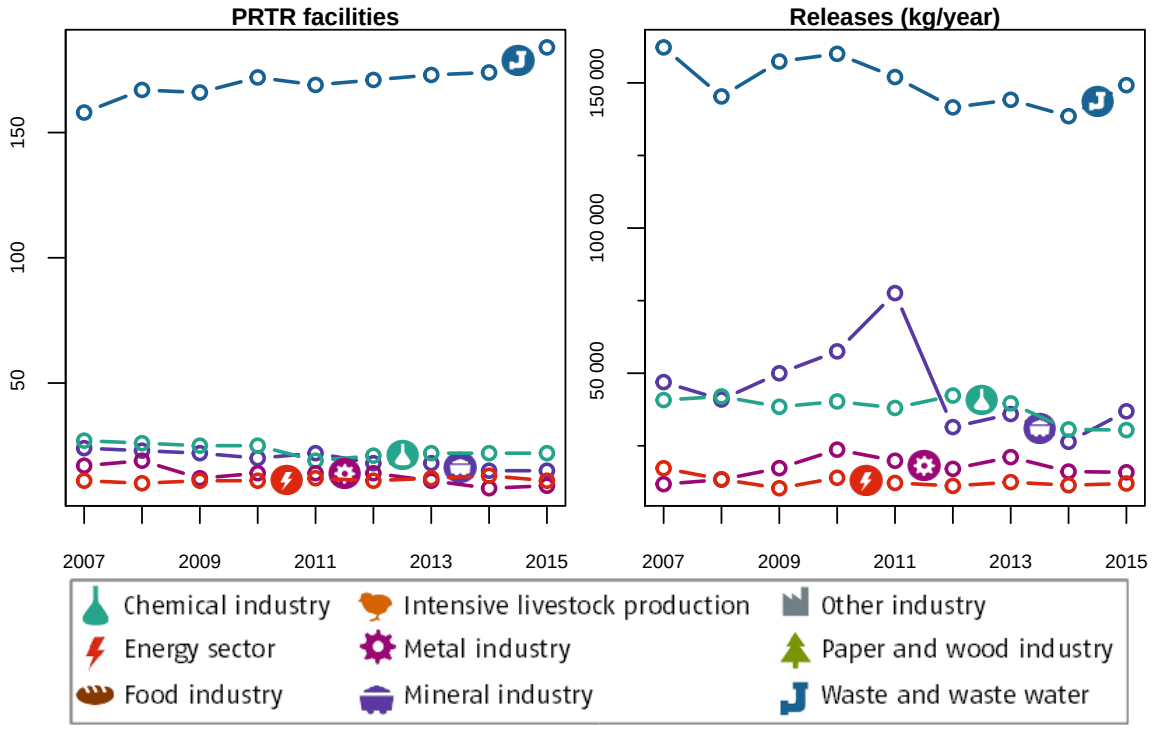

Figure 75: Annual number of facilities (left) and their releases (right) of the pollutant **"Zinc and compounds (as Zn)"** to **Water**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

2.56.3 Releases to Land

The threshold is **100 kg "Zinc and compounds (as Zn)" per year**. Releases to **Land** above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Releases (kg/year)	(%)
Mineral industry	2	100	649	100
TOTAL	2	100	649	100

Table 76: For the reporting year **2015** — Number of facilities and their releases of the pollutant **"Zinc and compounds (as Zn)"** to **Land** of the different industrial sectors including the corresponding shares.

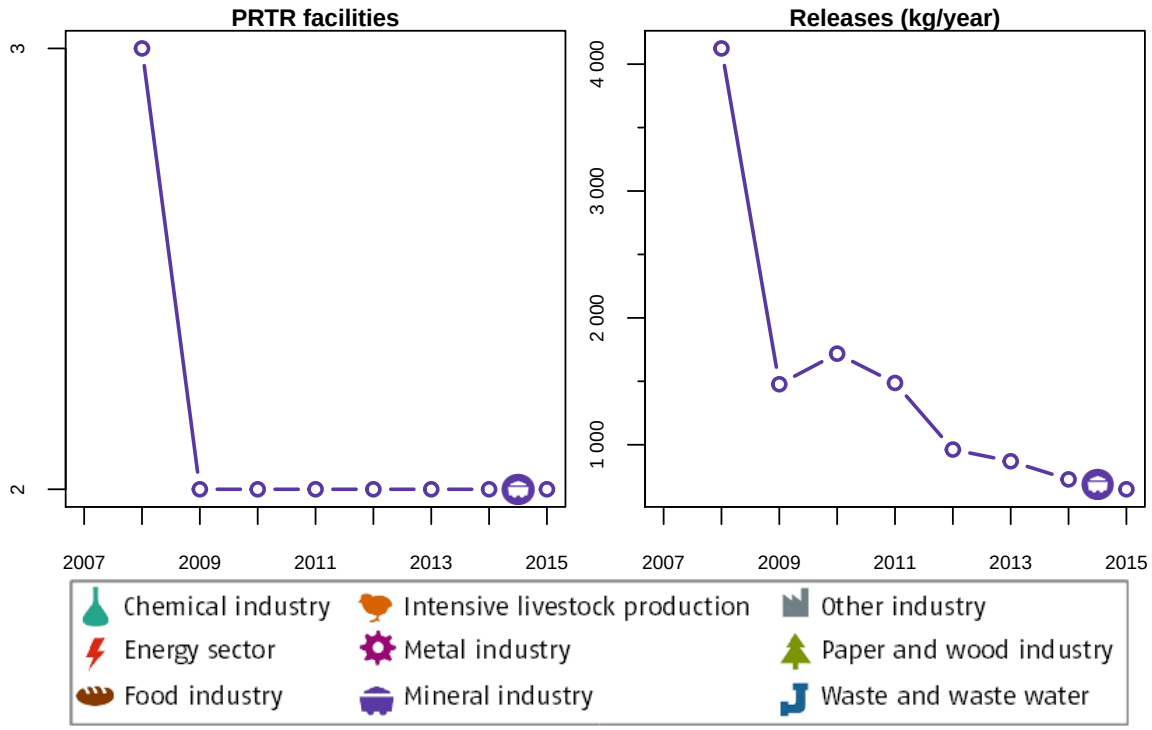

Figure 76: Annual number of facilities (left) and their releases (right) of the pollutant **"Zinc and compounds (as Zn)"** to **Land**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

3 Off-site transfer in waste water

The following chapters cover only off-site transfer of pollutants in waste water.

3.1 Arsenic and compounds (as As)

The threshold is **5 kg "Arsenic and compounds (as As)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	6	40	599	59.6
Metal industry	1	6.67	265	26.4
Energy sector	3	20	104	10.3
Waste and waste water management	4	26.7	28.6	2.84
Paper- and wood industry	1	6.67	9.47	0.942
TOTAL	15	100	1 005	100

Table 77: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Arsenic and compounds (as As)"** of the different industrial sectors including the corresponding shares.

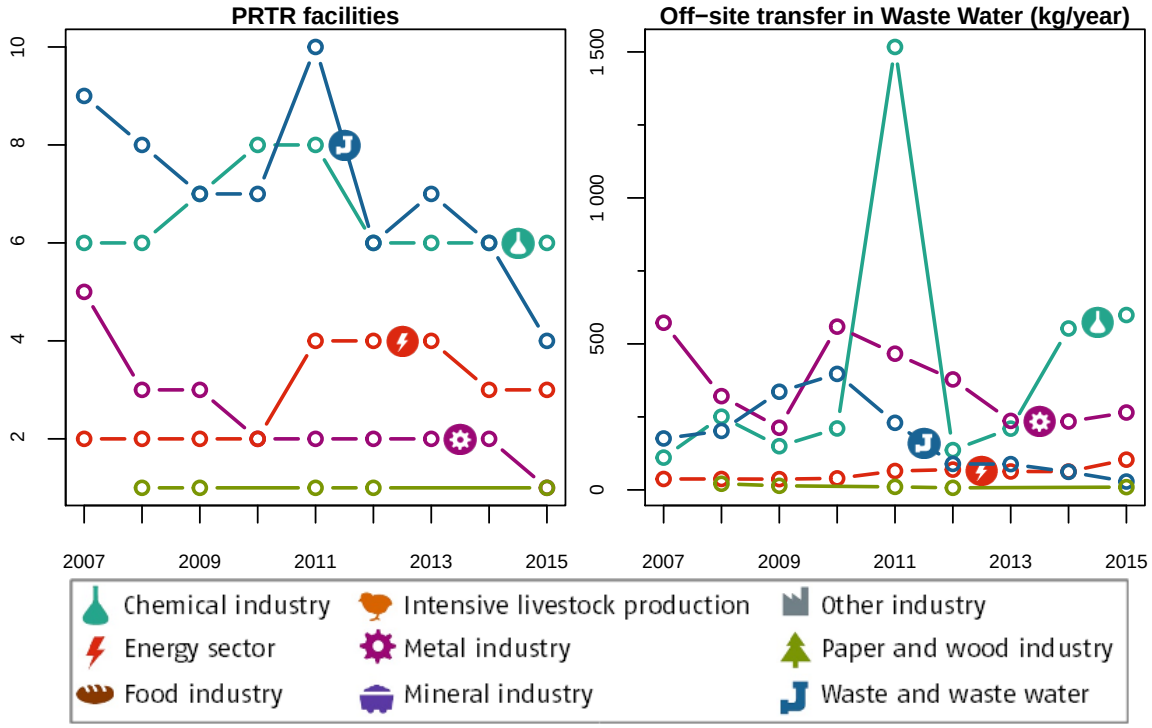

Figure 77: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Arsenic and compounds (as As)"**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

3.2 Benzene

The threshold is **200 kg "Benzene" per year.** Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Energy sector	1	14.3	5 780	65.5
Chemical industry	6	85.7	3 043	34.5
TOTAL	7	100	8 823	100

Table 78: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Benzene"** of the different industrial sectors including the corresponding shares.

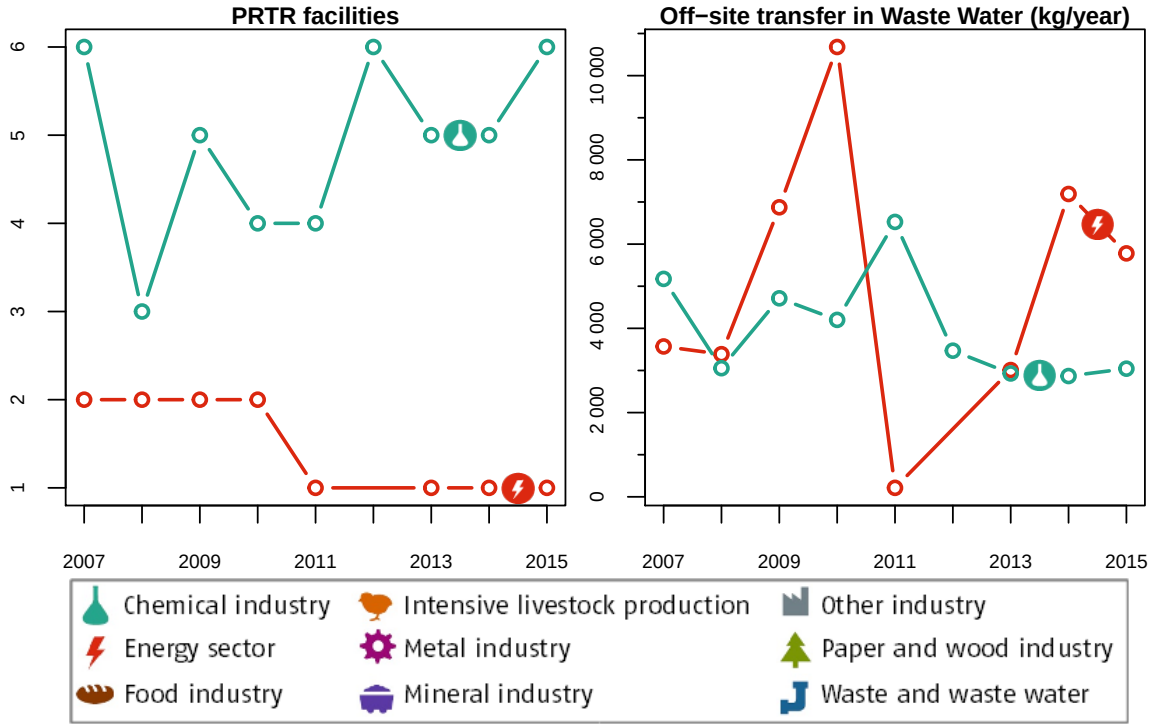

Figure 78: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Benzene"**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

3.3 Benzo(g,h,i)perylene

The threshold is **1 kg "Benzo(g,h,i)perylene" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Energy sector	1	100	1.46	100
TOTAL	1	100	1.46	100

Table 79: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Benzo(g,h,i)perylene"** of the different industrial sectors including the corresponding shares.

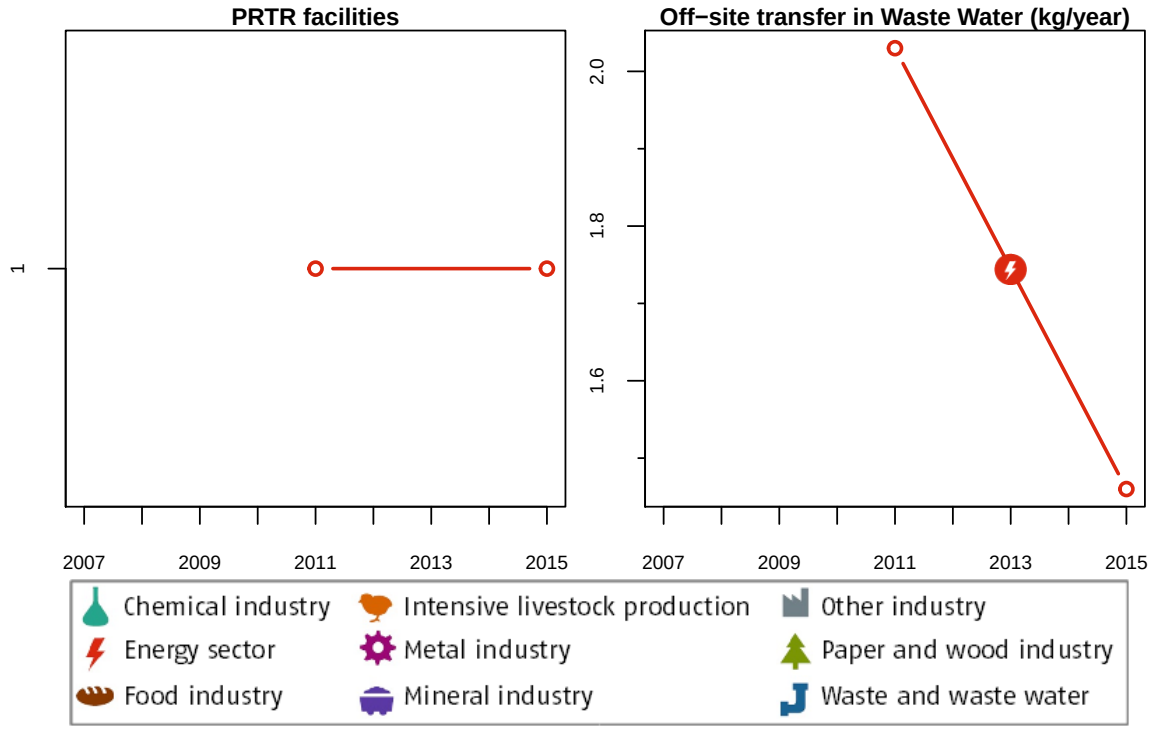

Figure 79: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Benzo(g,h,i)perylene"**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

3.4 Cadmium and compounds (as Cd)

The threshold is **5 kg "Cadmium and compounds (as Cd)" per year.** Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Metal industry	2	33.3	1 365	98
Waste and waste water management	1	16.7	8.5	0.61
Paper- and wood industry	1	16.7	7	0.503
Energy sector	1	16.7	7	0.503
Chemical industry	1	16.7	5.15	0.37
TOTAL	6	100	1 392	100

Table 80: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Cadmium and compounds (as Cd)"** of the different industrial sectors including the corresponding shares.

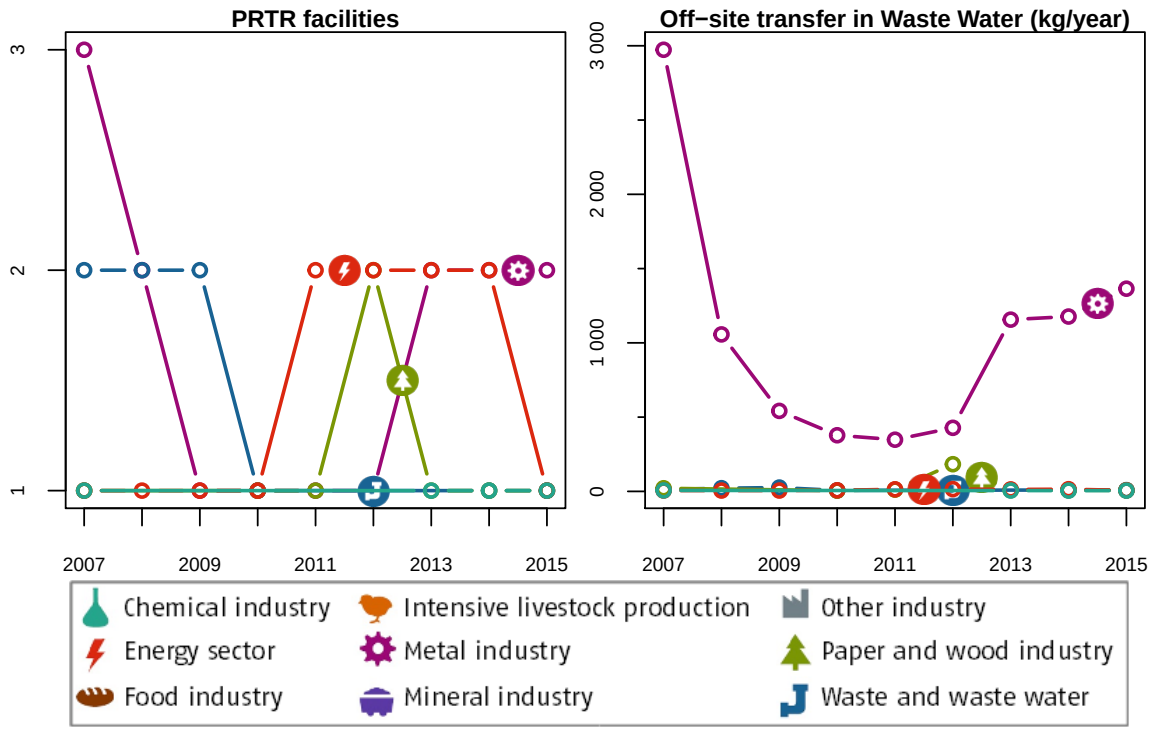

Figure 80: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Cadmium and compounds (as Cd)"**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

3.5 Chlorides (as total Cl)

The threshold is **2 000 000 kg "Chlorides (as total Cl)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	23	85.2	419 060 000	79.2
Mineral industry	2	7.41	100 400 000	19
Food industry	1	3.7	7 690 000	1.45
Waste and waste water management	1	3.7	2 100 000	0.397
TOTAL	27	100	529 250 000	100

Table 81: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Chlorides (as total Cl)"** of the different industrial sectors including the corresponding shares.

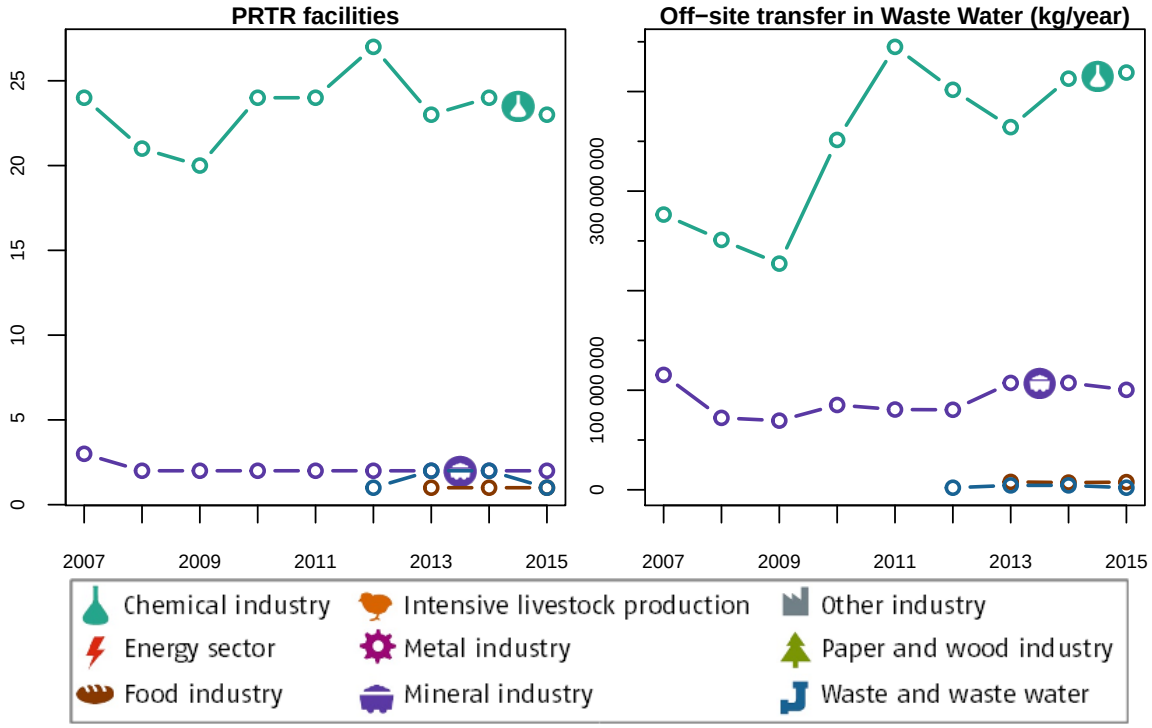

Figure 81: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Chlorides (as total Cl)"**, each by the 4 industrial sector(s) with the highest emissions in the year 2015.

3.6 Chromium and compounds (as Cr)

The threshold is **50 kg "Chromium and compounds (as Cr)" per year.** Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	7	70	2 151	60.4
Metal industry	2	20	1 292	36.3
Other industry	1	10	120	3.37
TOTAL	10	100	3 563	100

Table 82: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Chromium and compounds (as Cr)"** of the different industrial sectors including the corresponding shares.

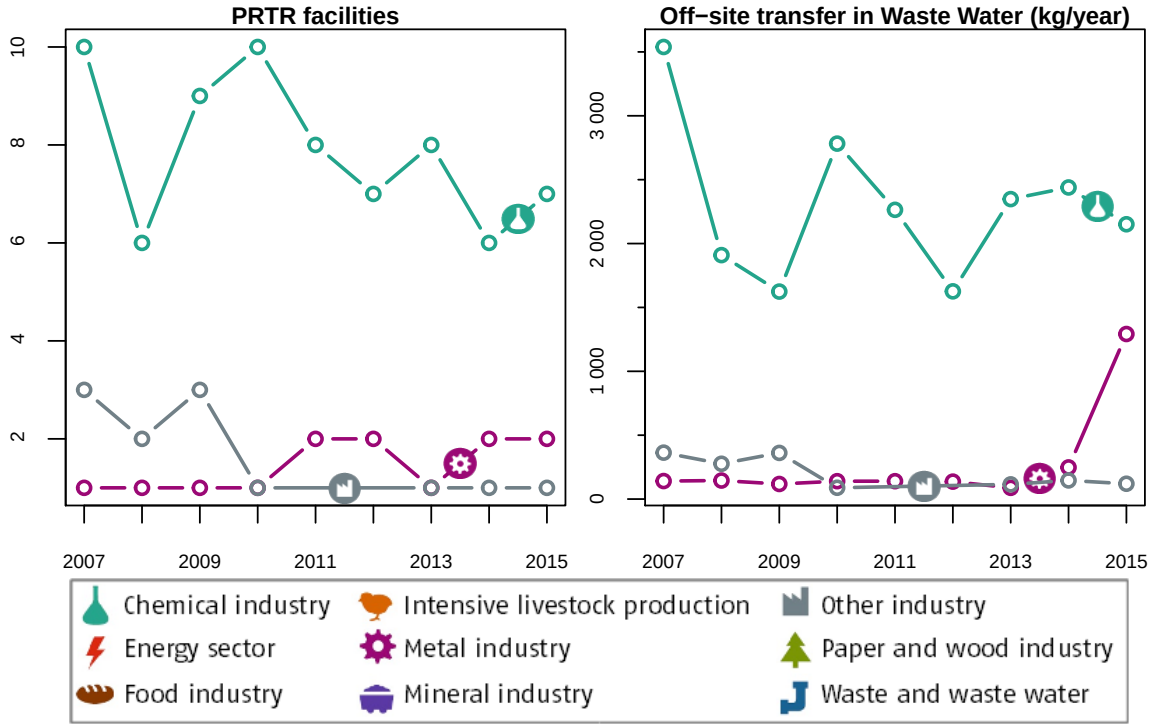

Figure 82: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Chromium and compounds (as Cr)"**, each by the 3 industrial sector(s) with the highest emissions in the year 2015.

3.7 Copper and compounds (as Cu)

The threshold is **50 kg "Copper and compounds (as Cu)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	13	61.9	4 021	83
Metal industry	2	9.52	262	5.4
Other industry	2	9.52	232	4.79
Energy sector	1	4.76	92.5	1.91
Food industry	1	4.76	80.8	1.67
Waste and waste water management	1	4.76	79	1.63
Paper- and wood industry	1	4.76	76	1.57
TOTAL	21	100	4 843	100

Table 83: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Copper and compounds (as Cu)"** of the different industrial sectors including the corresponding shares.

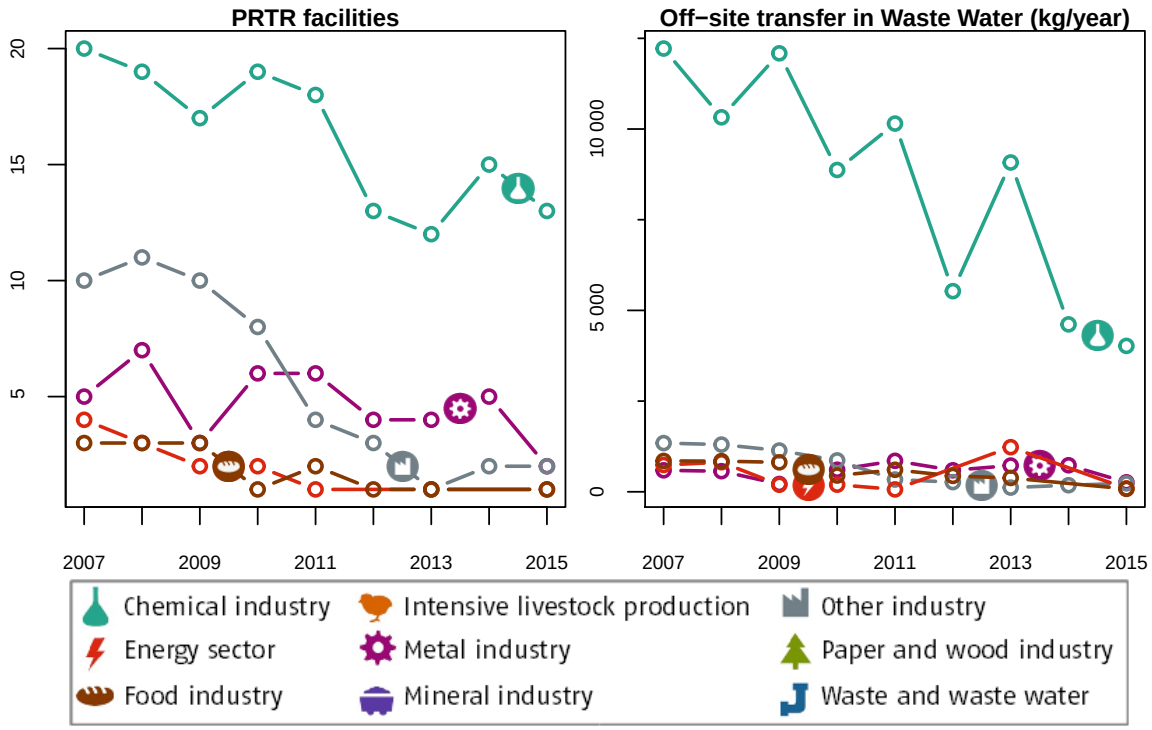

Figure 83: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Copper and compounds (as Cu)"**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

3.8 Cyanides (as total CN)

The threshold is **50 kg "Cyanides (as total CN)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Energy sector	4	33.3	18 356	77.3
Chemical industry	4	33.3	2 747	11.6
Metal industry	3	25	2 597	10.9
Paper- and wood industry	1	8.33	51.5	0.217
TOTAL	12	100	23 752	100

Table 84: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Cyanides (as total CN)"** of the different industrial sectors including the corresponding shares.

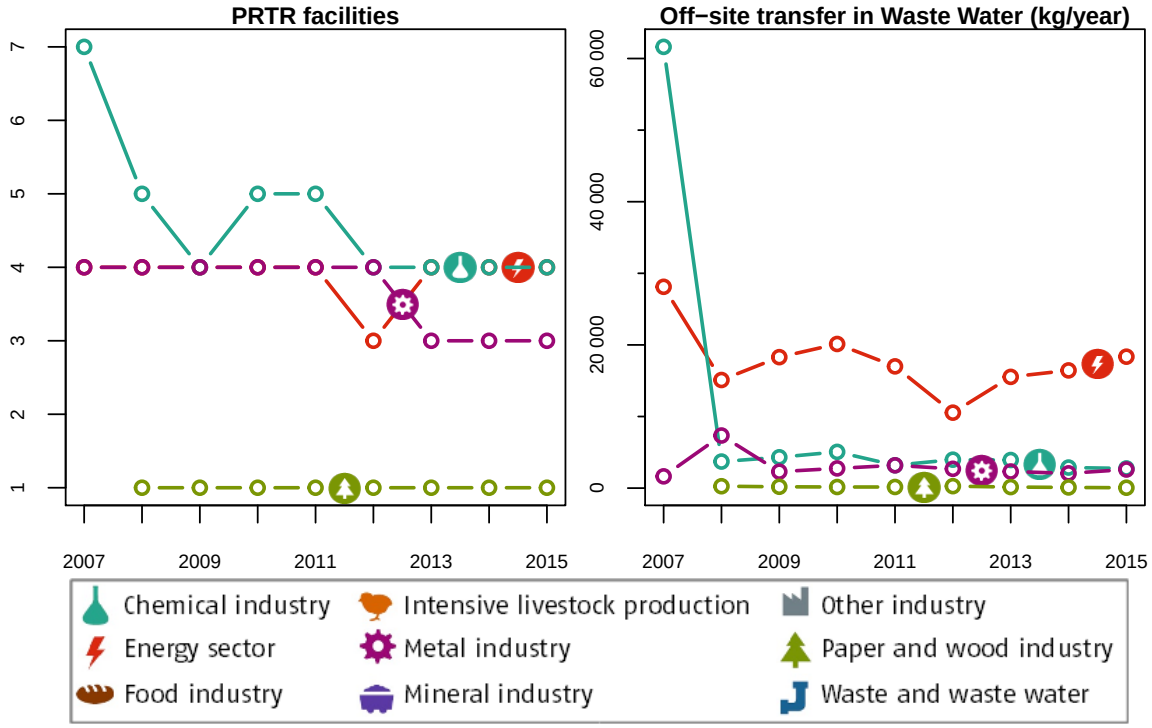

Figure 84: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Cyanides (as total CN)"**, each by the 4 industrial sector(s) with the highest emissions in the year 2015.

3.9 Dichloromethane (DCM)

The threshold is **10 kg "Dichloromethane (DCM)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	5	83.3	312	73.4
Waste and waste water management	1	16.7	113	26.6
TOTAL	6	100	425	100

Table 85: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Dichloromethane (DCM)"** of the different industrial sectors including the corresponding shares.

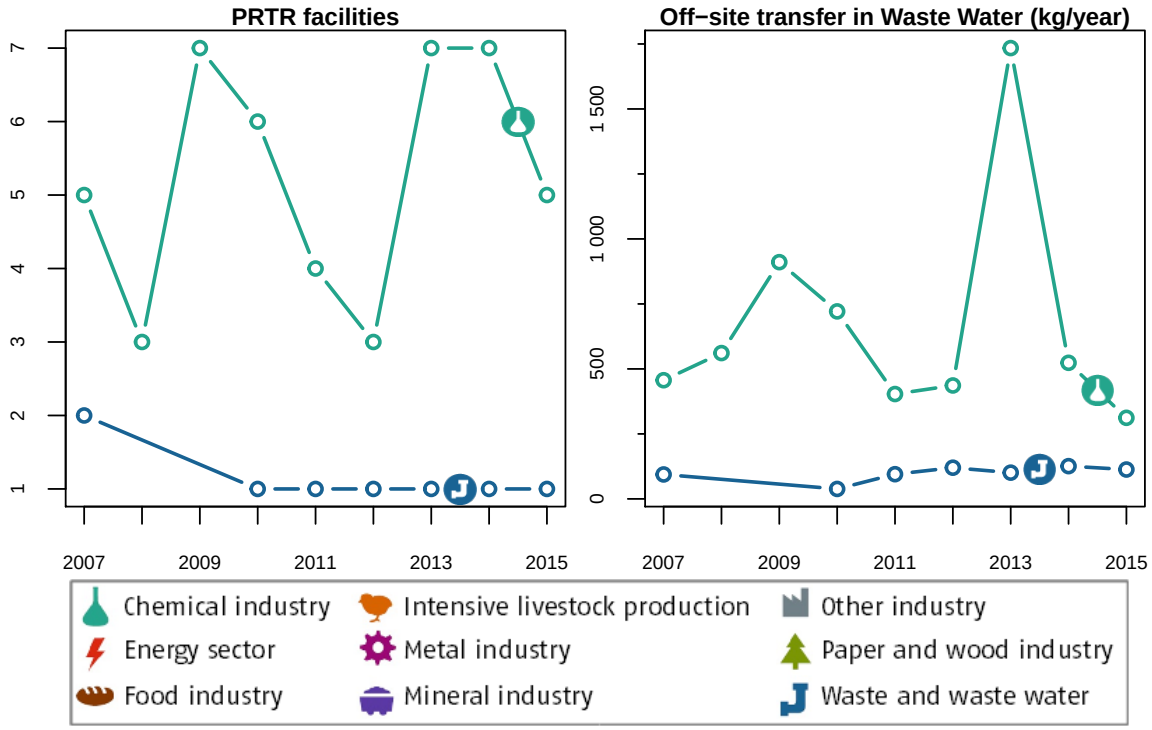

Figure 85: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Dichloromethane (DCM)"**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

3.10 Ethyl benzene

The threshold is **200 kg "Ethyl benzene" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	5	83.3	1 411	78
Energy sector	1	16.7	398	22
TOTAL	6	100	1 809	100

Table 86: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Ethyl benzene"** of the different industrial sectors including the corresponding shares.

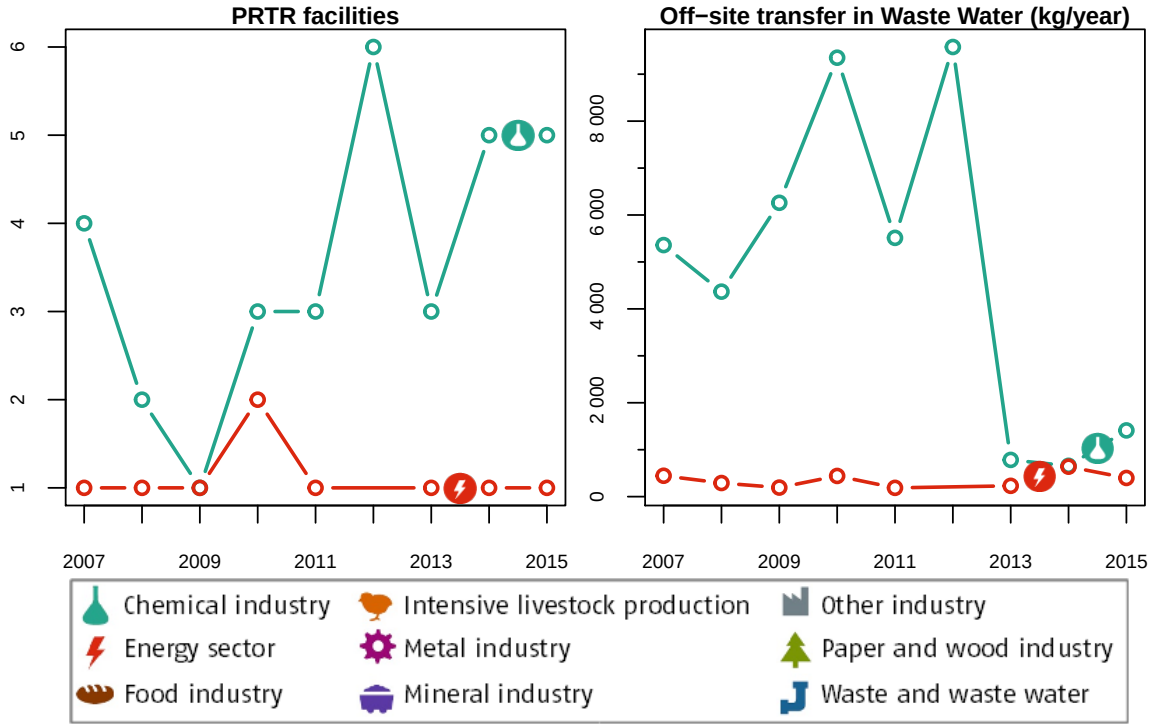

Figure 86: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Ethyl benzene"**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

3.11 Fluoranthene

The threshold is **1 kg "Fluoranthene" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Energy sector	1	50	9.82	55.2
Other industry	1	50	7.98	44.8
TOTAL	2	100	17.8	100

Table 87: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Fluoranthene"** of the different industrial sectors including the corresponding shares.

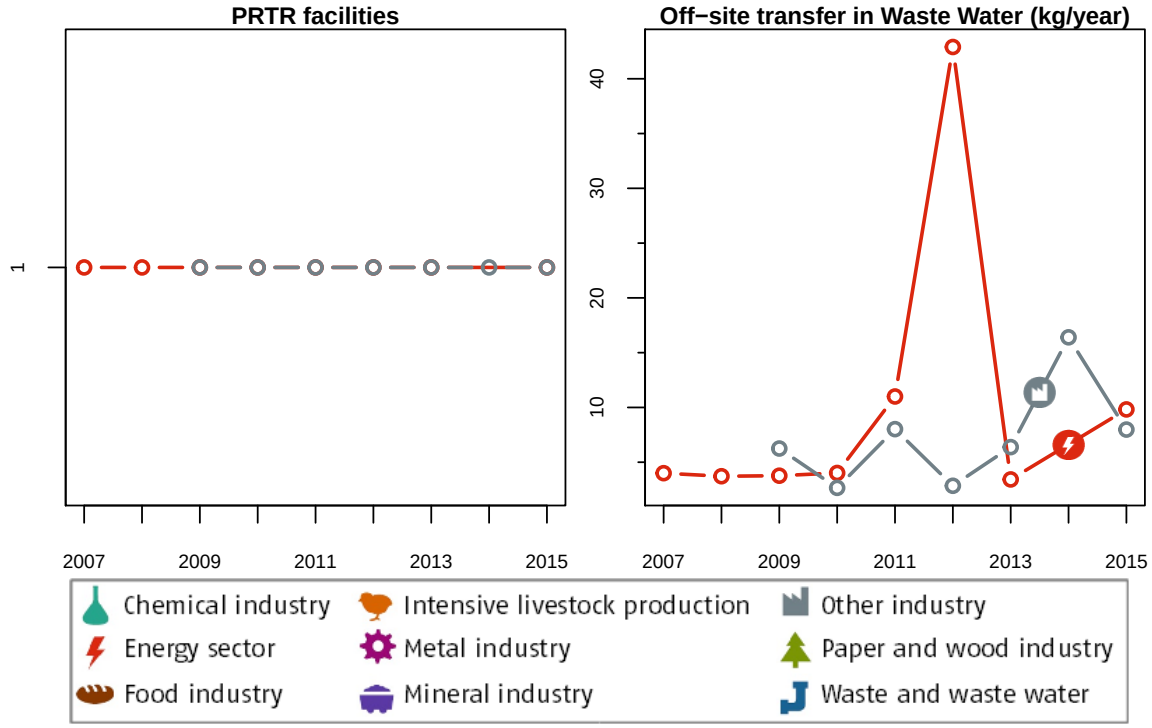

Figure 87: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Fluoranthene"**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

3.12 Fluorides (as total F)

The threshold is **2 000 kg "Fluorides (as total F)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	6	33.3	144 390	57.6
Energy sector	1	5.56	44 000	17.6
Metal industry	4	22.2	41 440	16.5
Other industry	6	33.3	17 410	6.95
Waste and waste water management	1	5.56	3 280	1.31
TOTAL	18	100	250 520	100

Table 88: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Fluorides (as total F)"** of the different industrial sectors including the corresponding shares.

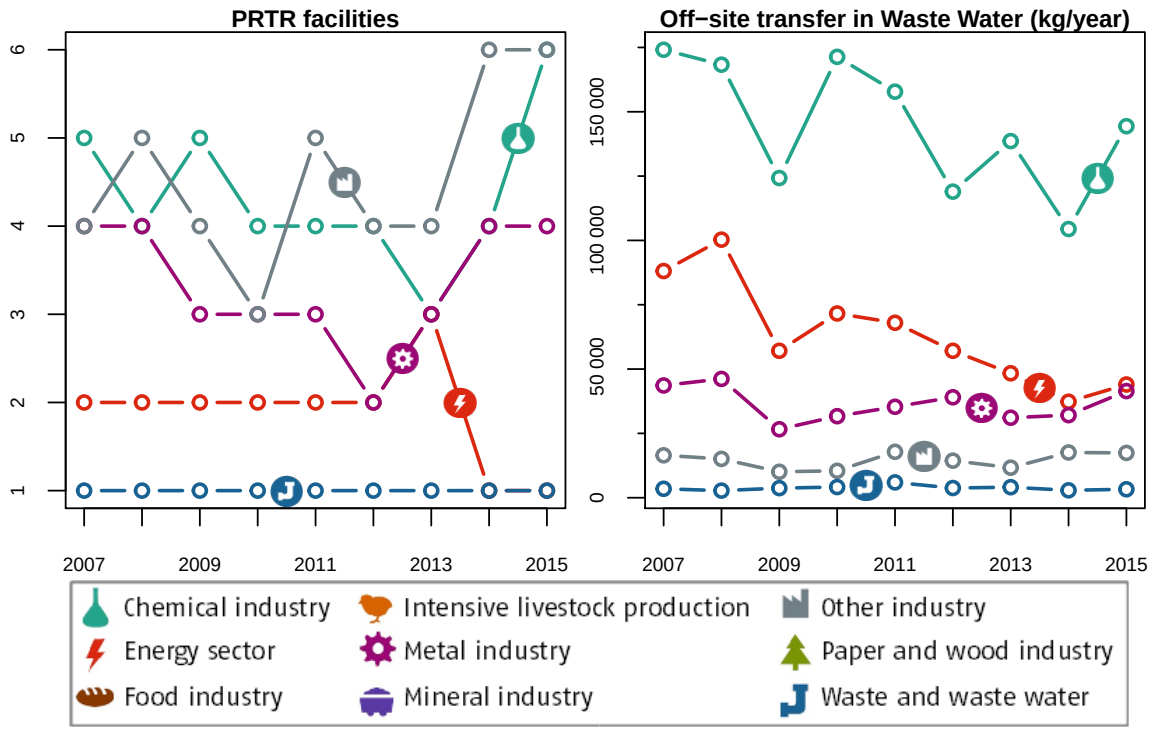

Figure 88: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Fluorides (as total F)"**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

3.13 Halogenated organic compounds (as AOX)

The threshold is **1 000 kg "Halogenated organic compounds (as AOX)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	18	78.3	478 590	98.4
Paper- and wood industry	4	17.4	5 860	1.2
Energy sector	1	4.35	1 890	0.389
TOTAL	23	100	486 340	100

Table 89: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Halogenated organic compounds (as AOX)"** of the different industrial sectors including the corresponding shares.

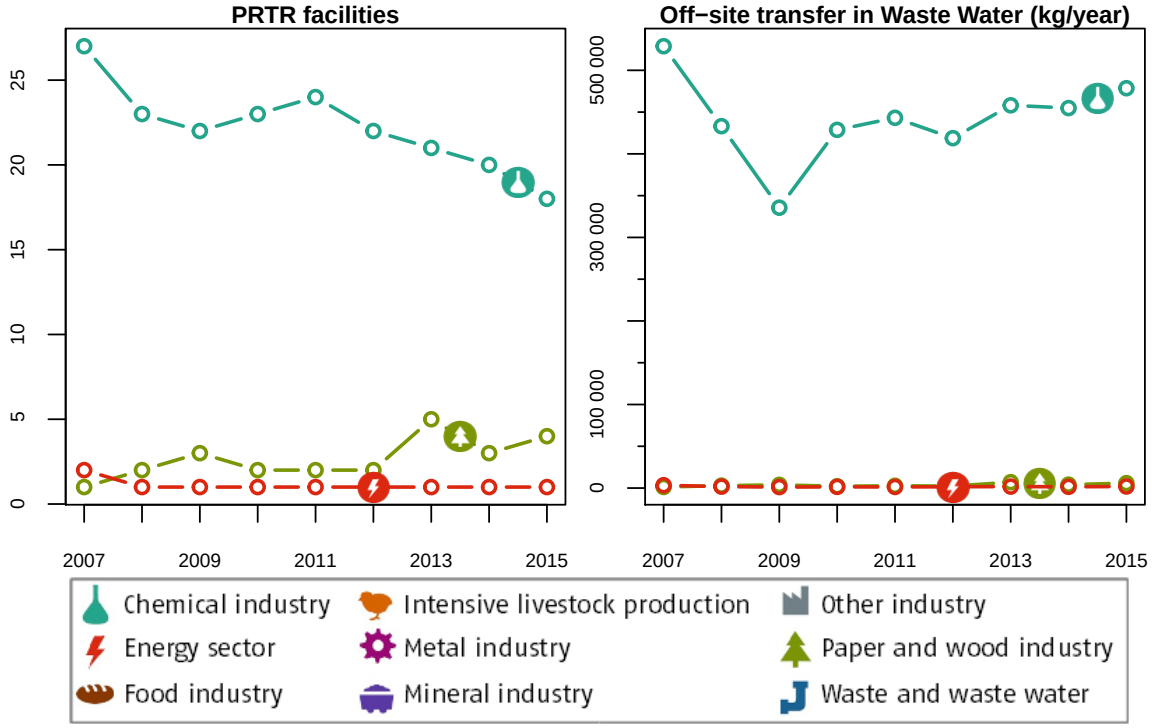

Figure 89: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Halogenated organic compounds (as AOX)"**, each by the 3 industrial sector(s) with the highest emissions in the year 2015.

3.14 Lead and compounds (as Pb)

The threshold is **20 kg "Lead and compounds (as Pb)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Metal industry	5	31.2	2 807	72.9
Chemical industry	4	25	767	19.9
Energy sector	3	18.8	144	3.72
Mineral industry	2	12.5	71.2	1.85
Waste and waste water management	1	6.25	32.6	0.846
Paper- and wood industry	1	6.25	32	0.831
TOTAL	16	100	3 853	100

Table 90: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Lead and compounds (as Pb)"** of the different industrial sectors including the corresponding shares.

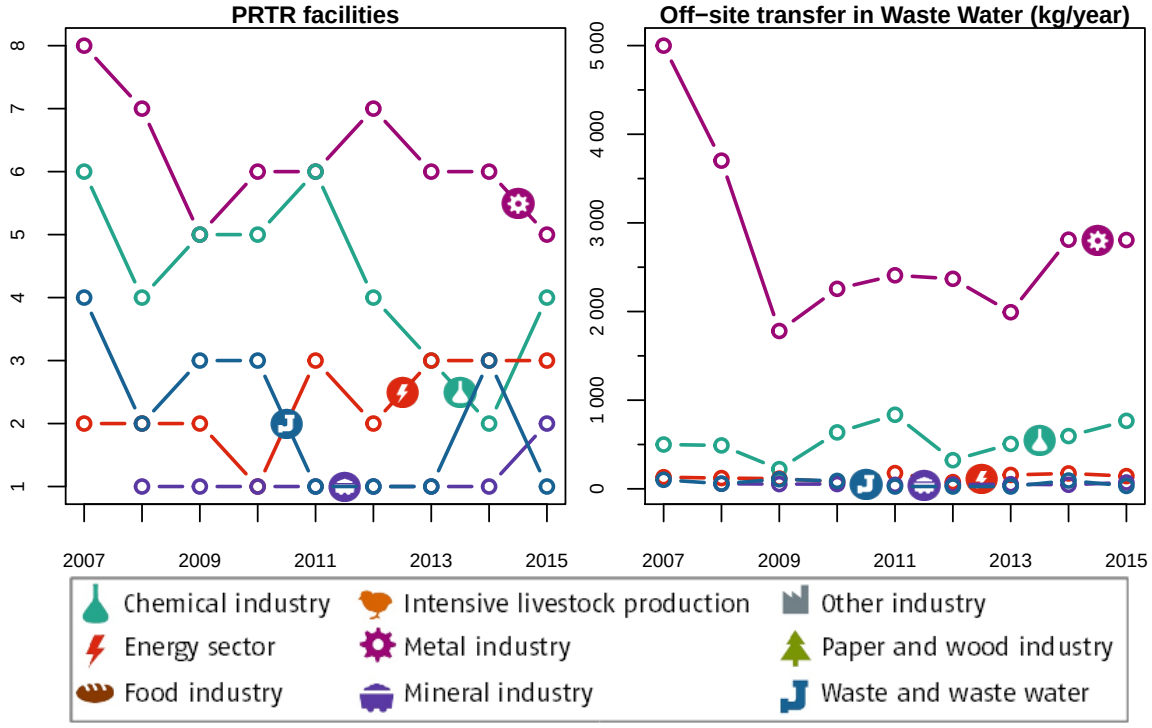

Figure 90: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Lead and compounds (as Pb)"**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

3.15 Mercury and compounds (as Hg)

The threshold is **1 kg "Mercury and compounds (as Hg)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Metal industry	2	20	550	80.8
Chemical industry	4	40	115	16.9
Energy sector	2	20	9.93	1.46
Waste and waste water management	1	10	4.3	0.631
Mineral industry	1	10	1.1	0.162
TOTAL	10	100	681	100

Table 91: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Mercury and compounds (as Hg)"** of the different industrial sectors including the corresponding shares.

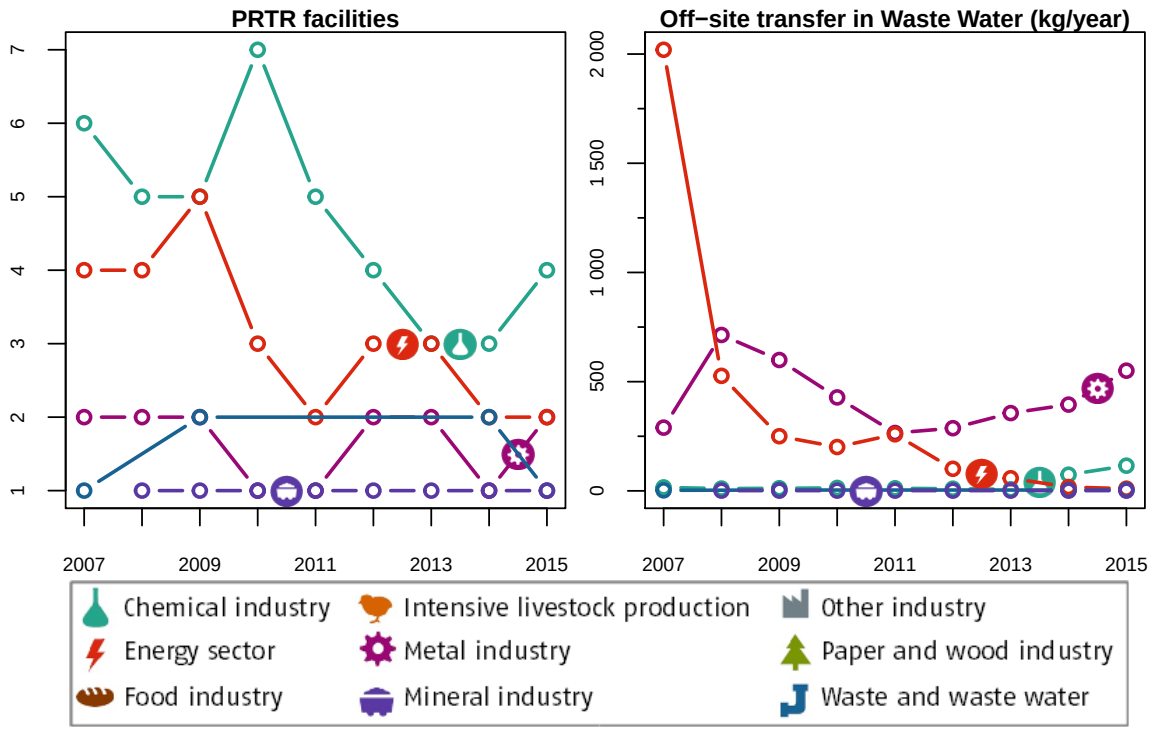

Figure 91: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Mercury and compounds (as Hg)"**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

3.16 Naphthalene

The threshold is **10 kg "Naphthalene" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	1	50	2 230	92.5
Energy sector	1	50	180	7.47
TOTAL	2	100	2 410	100

Table 92: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Naphthalene"** of the different industrial sectors including the corresponding shares.

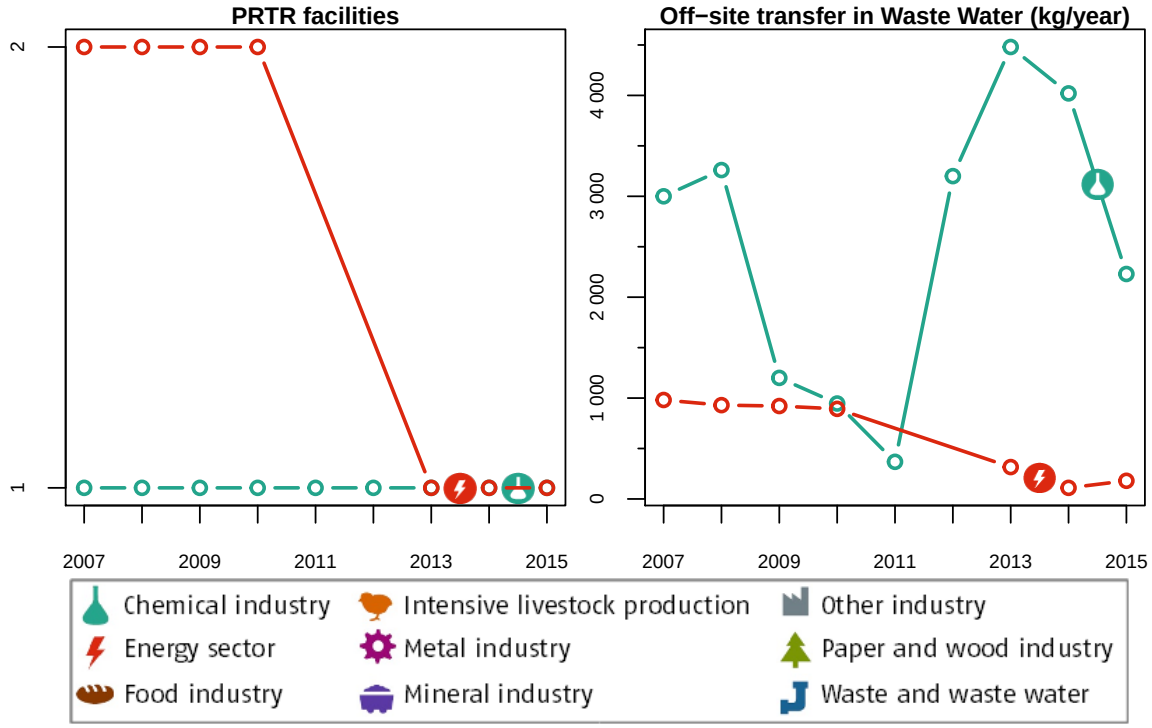

Figure 92: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Naphthalene"**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

3.17 Nickel and compounds (as Ni)

The threshold is **20 kg "Nickel and compounds (as Ni)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	21	39.6	2 431	39
Energy sector	1	1.89	1 610	25.8
Metal industry	15	28.3	1 462	23.4
Waste and waste water management	10	18.9	415	6.65
Other industry	2	3.77	139	2.24
Mineral industry	1	1.89	67	1.07
Paper- and wood industry	2	3.77	61.6	0.988
Food industry	1	1.89	50.1	0.803
TOTAL	53	100	6 236	100

Table 93: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Nickel and compounds (as Ni)"** of the different industrial sectors including the corresponding shares.

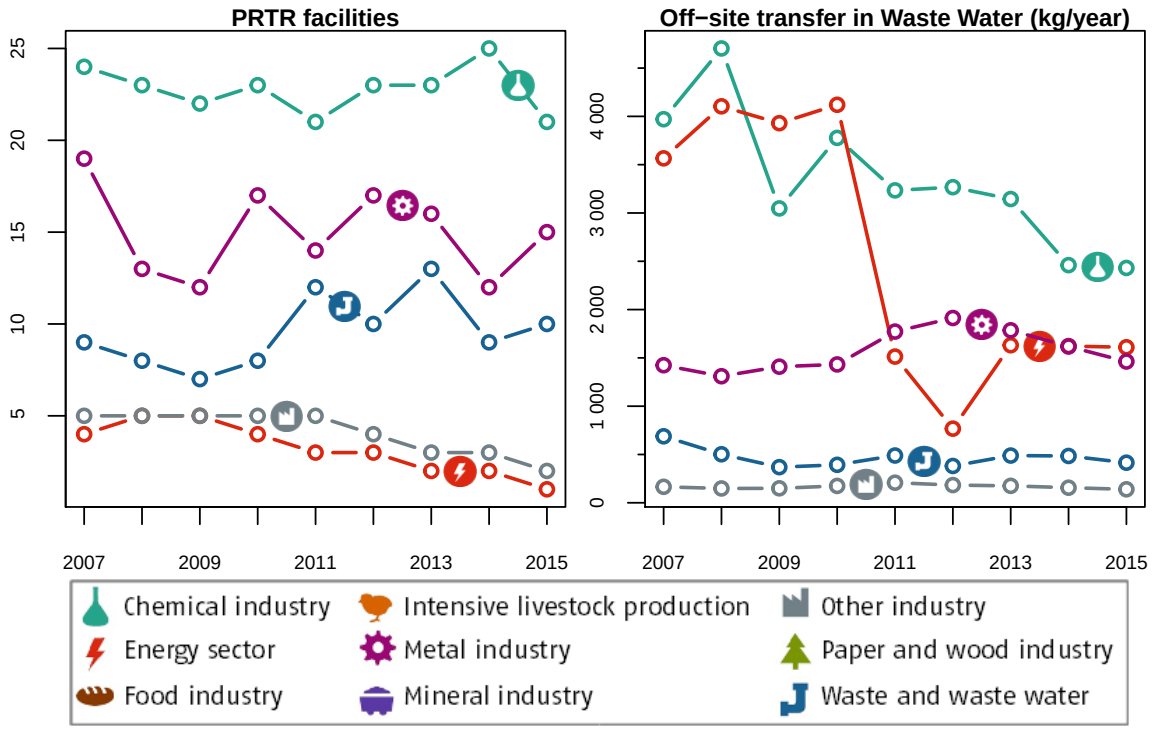

Figure 93: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Nickel and compounds (as Ni)"**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

3.18 Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)

The threshold is **1 kg "Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	2	66.7	28.1	86.9
Other industry	1	33.3	4.24	13.1
TOTAL	3	100	32.3	100

Table 94: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)"** of the different industrial sectors including the corresponding shares.

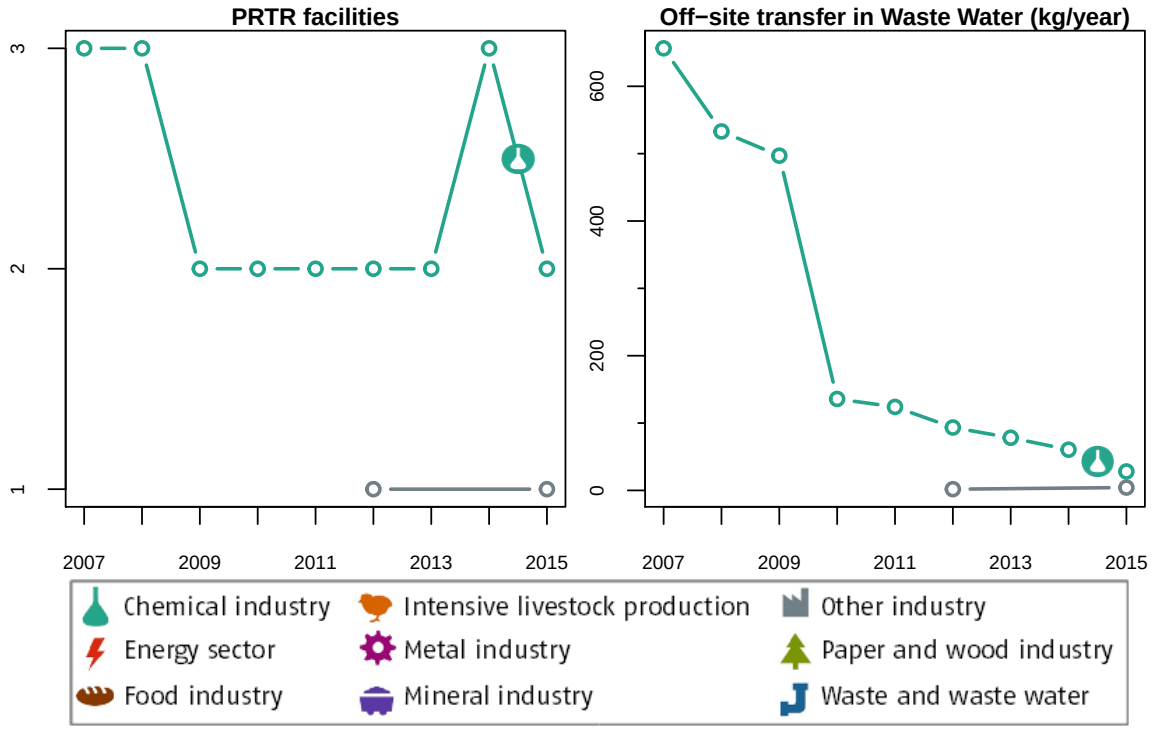

Figure 94: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)"**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

3.19 Octylphenols and Octylphenol ethoxylates

The threshold is **1 kg "Octylphenols and Octylphenol ethoxylates" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	1	50	7.87	70.4
Other industry	1	50	3.31	29.6
TOTAL	2	100	11.2	100

Table 95: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Octylphenols and Octylphenol ethoxylates"** of the different industrial sectors including the corresponding shares.

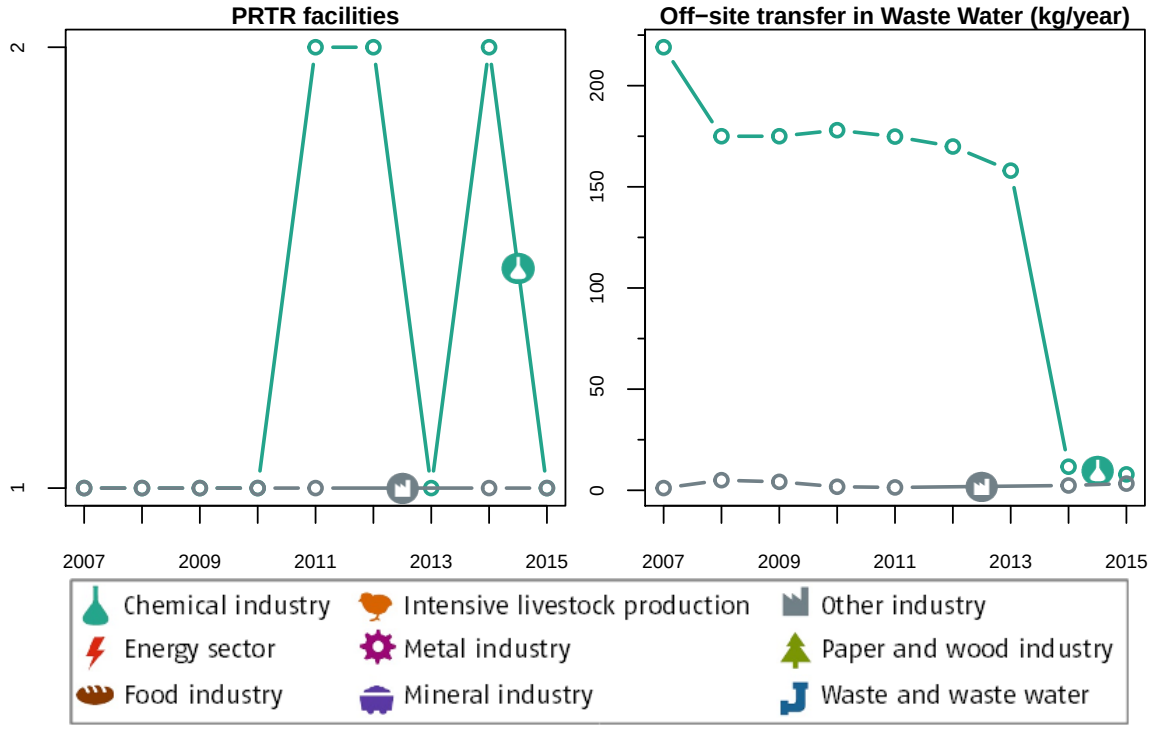

Figure 95: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Octylphenols and Octylphenol ethoxylates"**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

3.20 Organotin compounds(as total Sn)

The threshold is **50 kg "Organotin compounds(as total Sn)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	1	33.3	1 960	83.2
Energy sector	2	66.7	395	16.8
TOTAL	3	100	2 355	100

Table 96: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Organotin compounds(as total Sn)"** of the different industrial sectors including the corresponding shares.

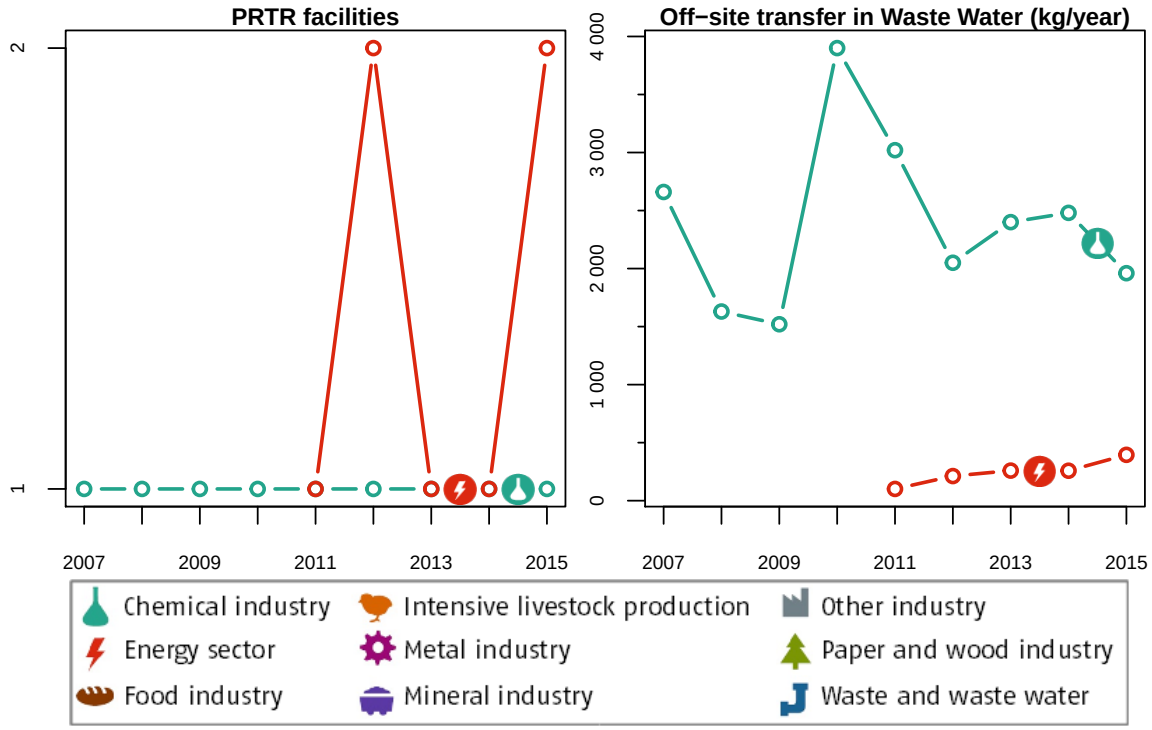

Figure 96: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Organotin compounds(as total Sn)"**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

3.21 PCDD + PCDF (dioxins + furans) (as Teq)

The threshold is **0.0001 kg "PCDD + PCDF (dioxins + furans) (as Teq)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	2	100	0.000846	100
TOTAL	2	100	0.000846	100

Table 97: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"PCDD + PCDF (dioxins + furans) (as Teq)"** of the different industrial sectors including the corresponding shares.

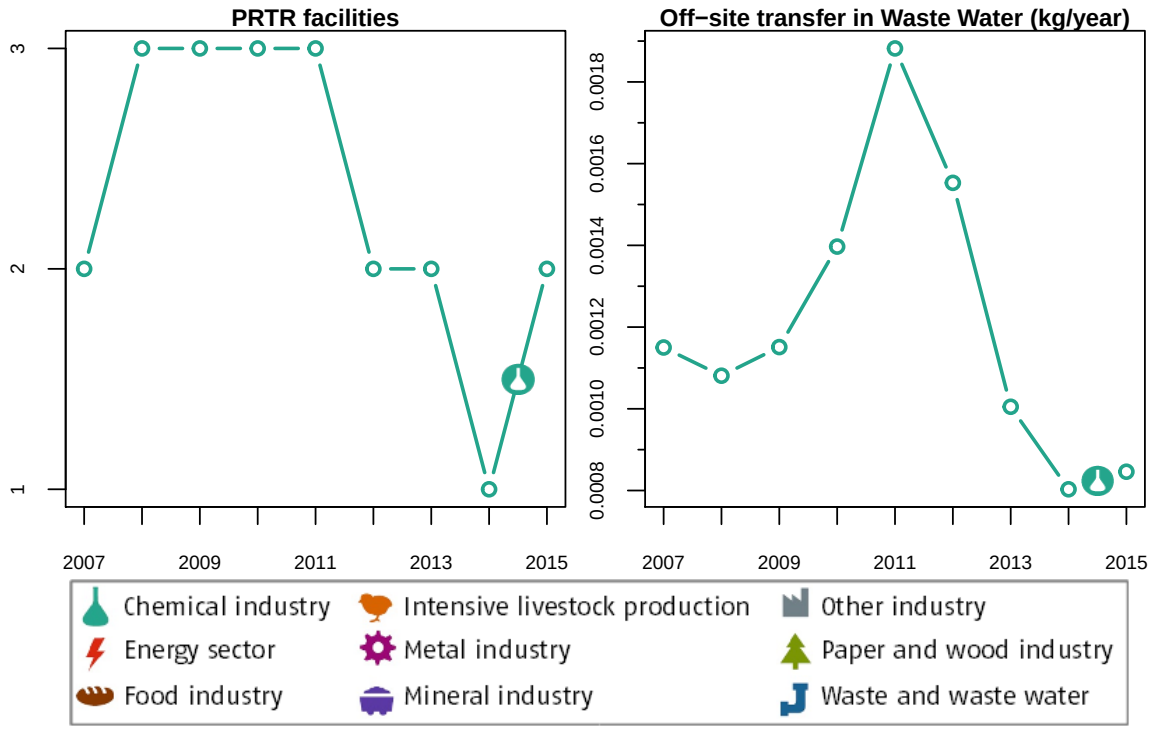

Figure 97: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"PCDD + PCDF (dioxins + furans) (as Teq)"**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

3.22 Phenols (as total C)

The threshold is **20 kg "Phenols (as total C)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Energy sector	3	7.14	279 743	64.7
Chemical industry	24	57.1	142 050	32.9
Metal industry	5	11.9	5 996	1.39
Waste and waste water management	6	14.3	3 382	0.783
Food industry	1	2.38	725	0.168
Other industry	3	7.14	173	0.04
TOTAL	42	100	432 068	100

Table 98: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Phenols (as total C)"** of the different industrial sectors including the corresponding shares.

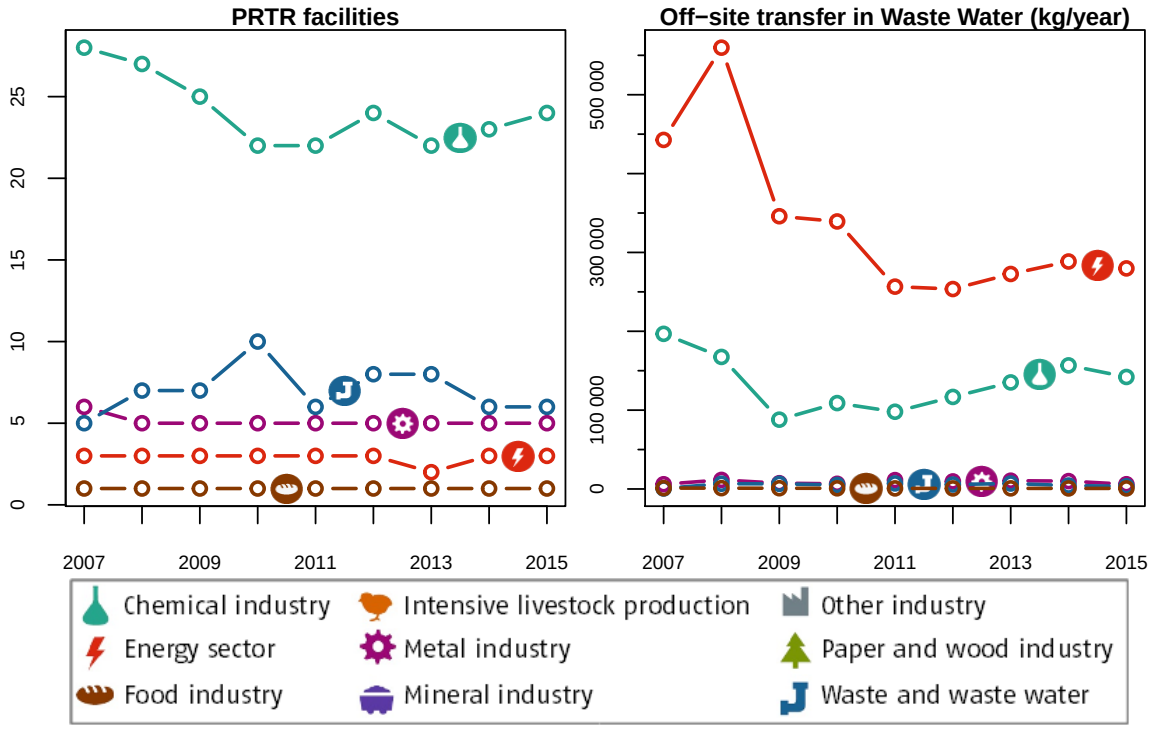

Figure 98: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Phenols (as total C)"**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

3.23 Polycyclic aromatic hydrocarbons (PAHs)

The threshold is **5 kg "Polycyclic aromatic hydrocarbons (PAHs)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Energy sector	2	100	92.7	100
TOTAL	2	100	92.7	100

Table 99: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Polycyclic aromatic hydrocarbons (PAHs)"** of the different industrial sectors including the corresponding shares.

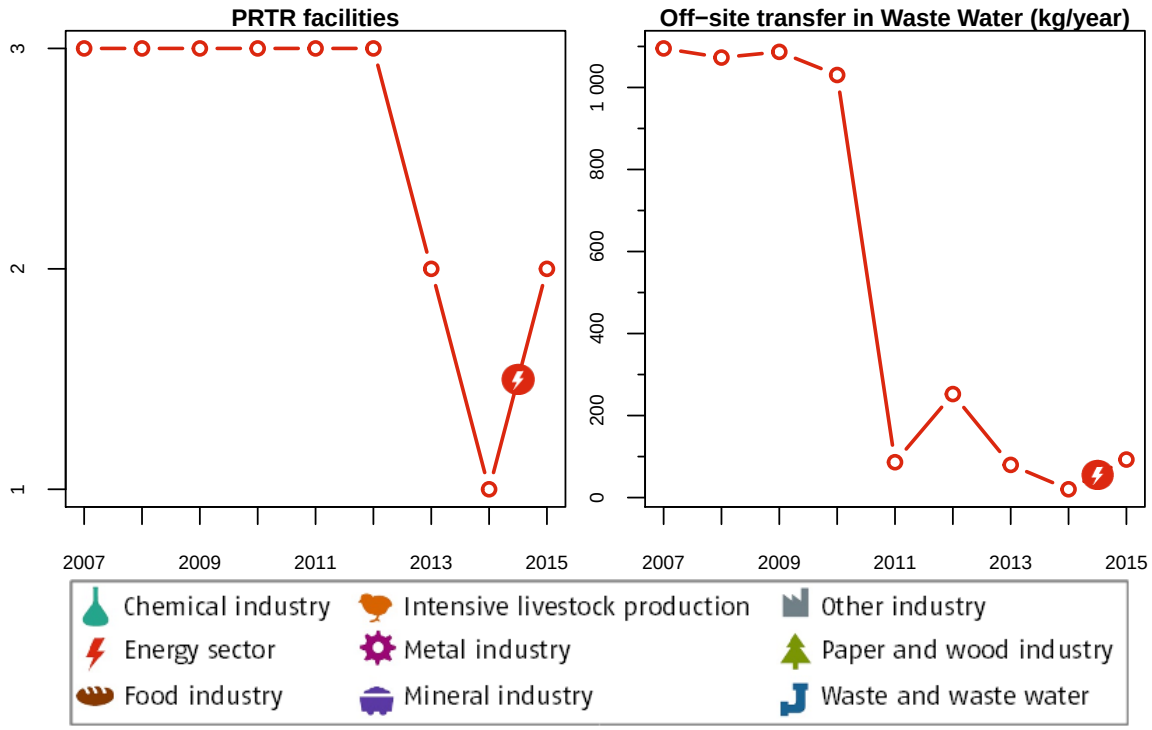

Figure 99: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Polycyclic aromatic hydrocarbons (PAHs)"**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

3.24 Tetrachloromethane (TCM)

The threshold is **1 kg "Tetrachloromethane (TCM)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	1	100	2.56	100
TOTAL	1	100	2.56	100

Table 100: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Tetrachloromethane (TCM)"** of the different industrial sectors including the corresponding shares.

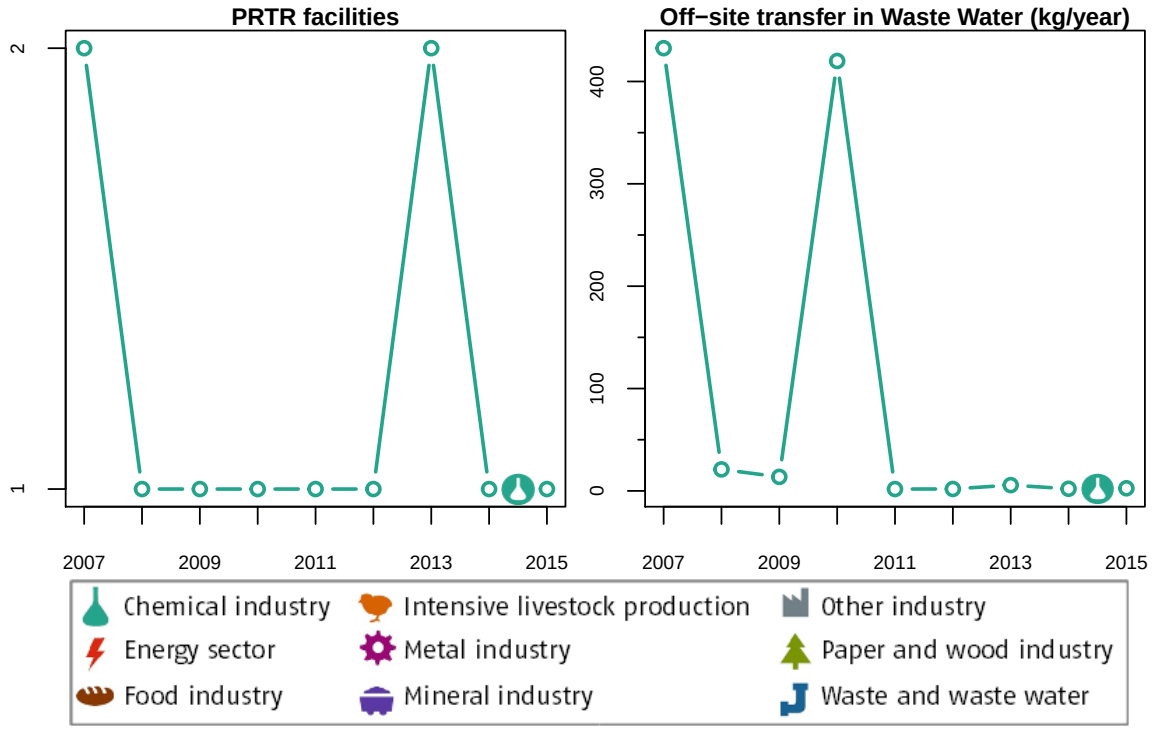

Figure 100: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Tetrachloromethane (TCM)"**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

3.25 Toluene

The threshold is **200 kg "Toluene" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	10	90.9	72 045	96.9
Energy sector	1	9.09	2 340	3.15
TOTAL	11	100	74 385	100

Table 101: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Toluene"** of the different industrial sectors including the corresponding shares.

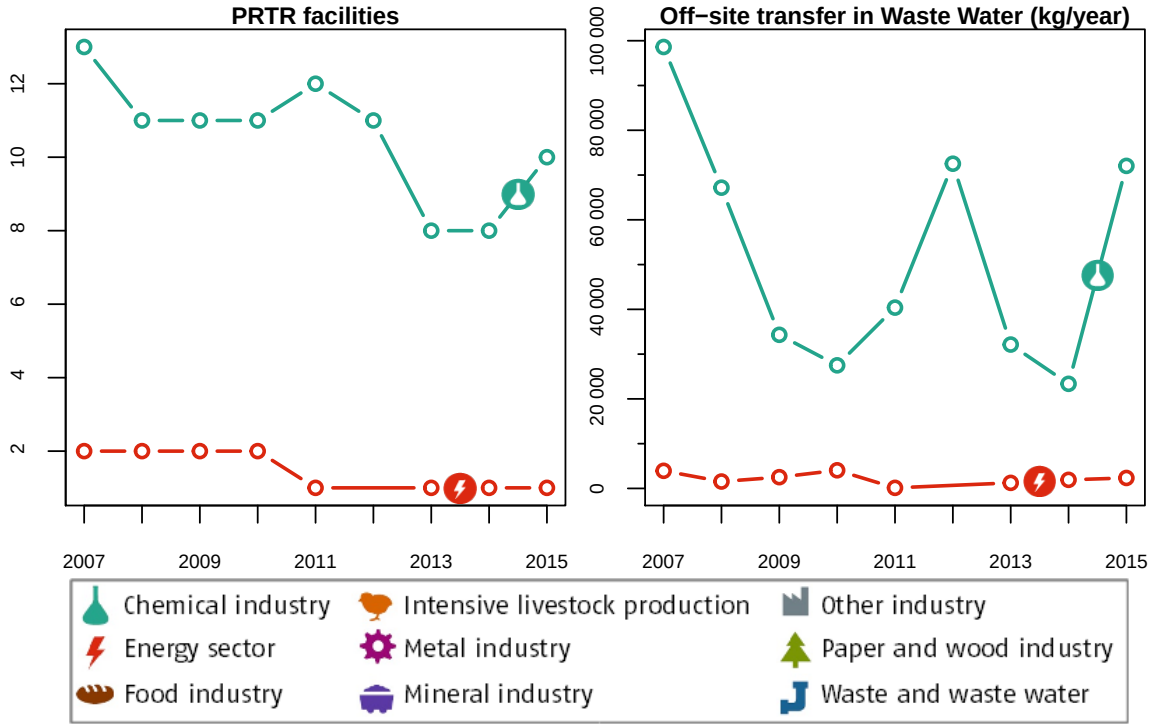

Figure 101: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Toluene"**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

3.26 Total nitrogen

The threshold is **50 000 kg "Total nitrogen" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	25	34.7	5 899 600	52.6
Food industry	26	36.1	2 771 600	24.7
Metal industry	7	9.72	1 252 100	11.2
Waste and waste water management	8	11.1	585 600	5.22
Energy sector	3	4.17	464 800	4.14
Other industry	1	1.39	126 000	1.12
Paper- and wood industry	2	2.78	124 400	1.11
TOTAL	72	100	11 224 100	100

Table 102: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Total nitrogen"** of the different industrial sectors including the corresponding shares.

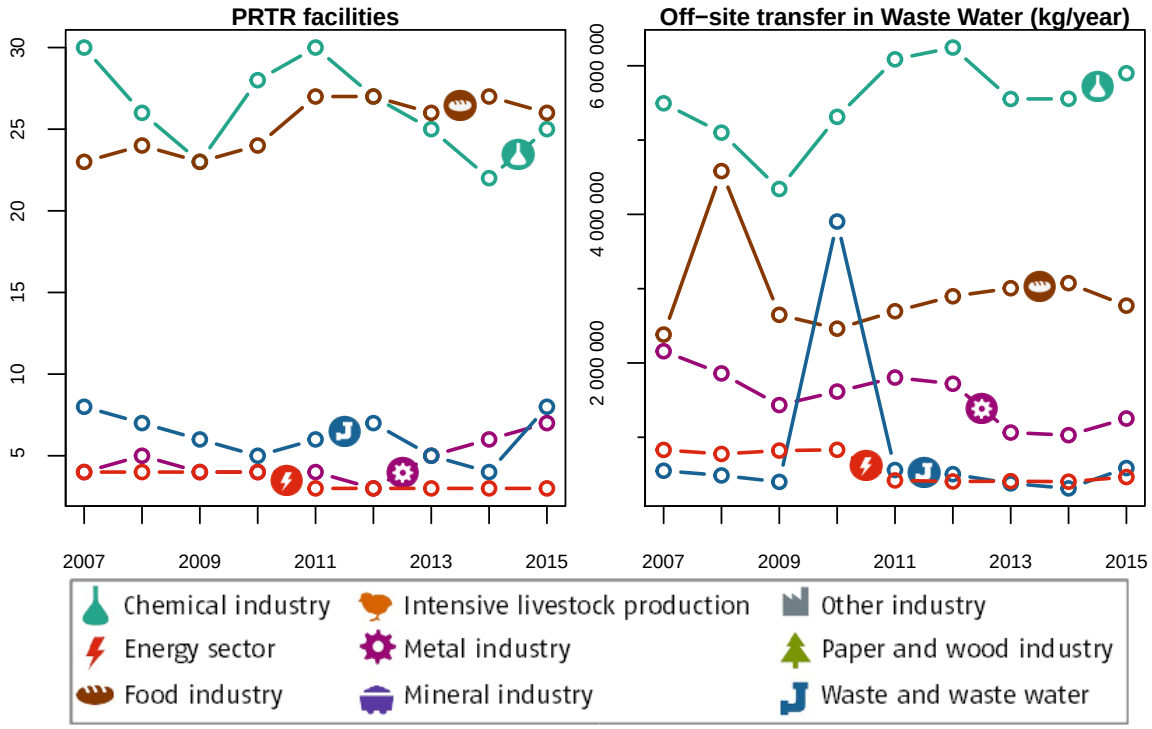

Figure 102: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Total nitrogen"**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

3.27 Total organic carbon (TOC) (as total C or COD/3)

The threshold is **50 000 kg "Total organic carbon (TOC) (as total C or COD/3)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	110	32.9	55 922 300	39.7
Food industry	143	42.8	46 374 100	32.9
Paper- and wood industry	33	9.88	27 607 100	19.6
Other industry	18	5.39	3 747 400	2.66
Waste and waste water management	15	4.49	3 154 500	2.24
Energy sector	7	2.1	3 018 600	2.14
Metal industry	8	2.4	1 148 000	0.814
TOTAL	334	100	140 972 000	100

Table 103: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Total organic carbon (TOC) (as total C or COD/3)"** of the different industrial sectors including the corresponding shares.

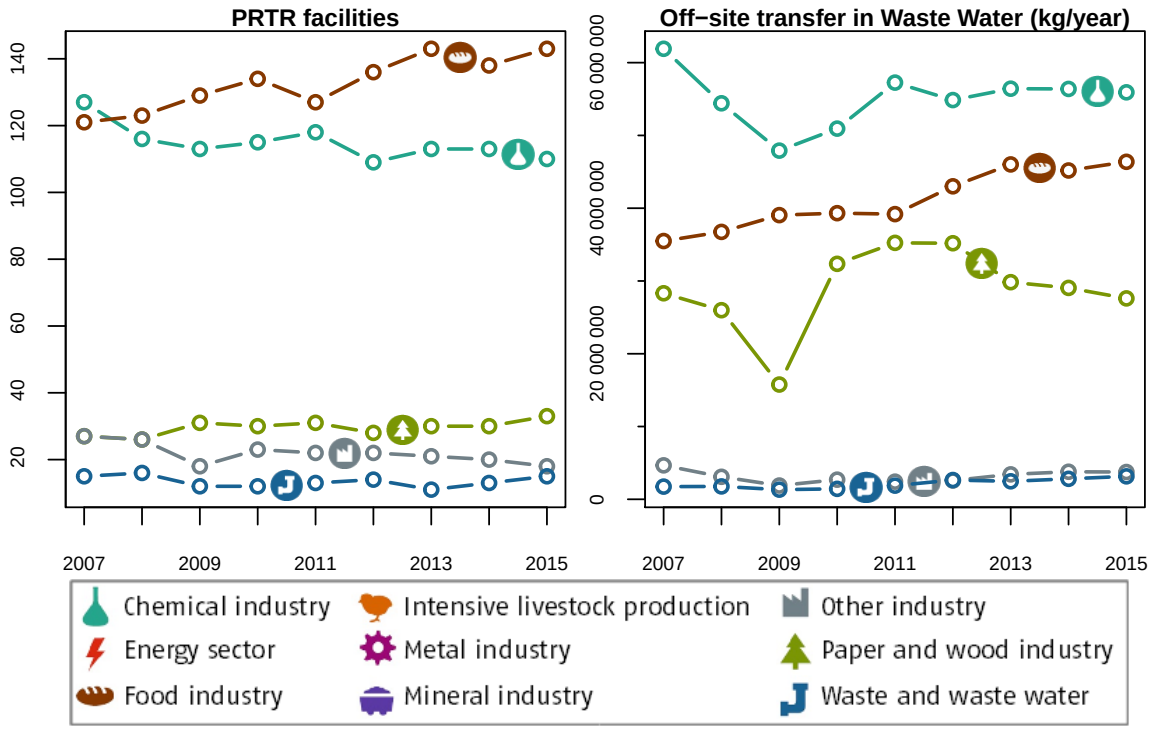

Figure 103: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Total organic carbon (TOC) (as total C or COD/3)"**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

3.28 Total phosphorus

The threshold is **5 000 kg "Total phosphorus" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Food industry	66	71.7	1 253 120	55
Chemical industry	20	21.7	957 620	42.1
Waste and waste water management	2	2.17	34 700	1.52
Paper- and wood industry	2	2.17	17 710	0.778
Other industry	1	1.09	7 770	0.341
Energy sector	1	1.09	5 760	0.253
TOTAL	92	100	2 276 680	100

Table 104: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Total phosphorus"** of the different industrial sectors including the corresponding shares.

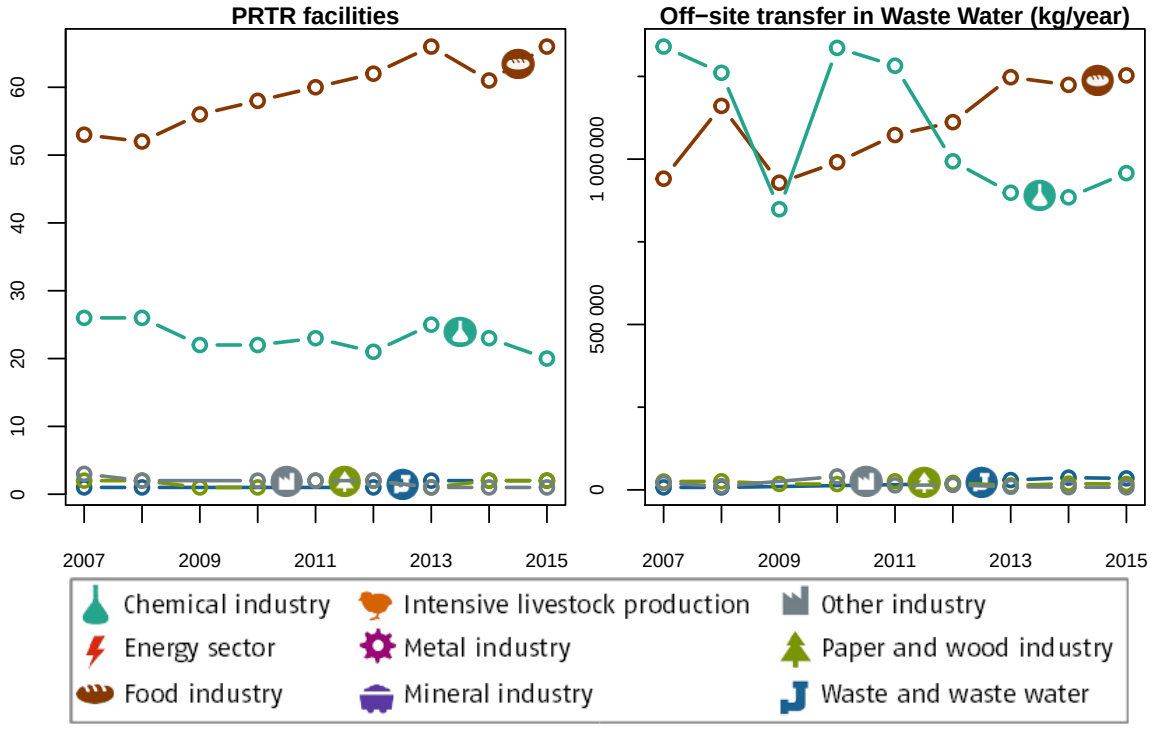

Figure 104: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Total phosphorus"**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

3.29 Tributyltin and compounds

The threshold is **1 kg "Tributyltin and compounds" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	1	100	1.19	100
TOTAL	1	100	1.19	100

Table 105: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Tributyltin and compounds"** of the different industrial sectors including the corresponding shares.

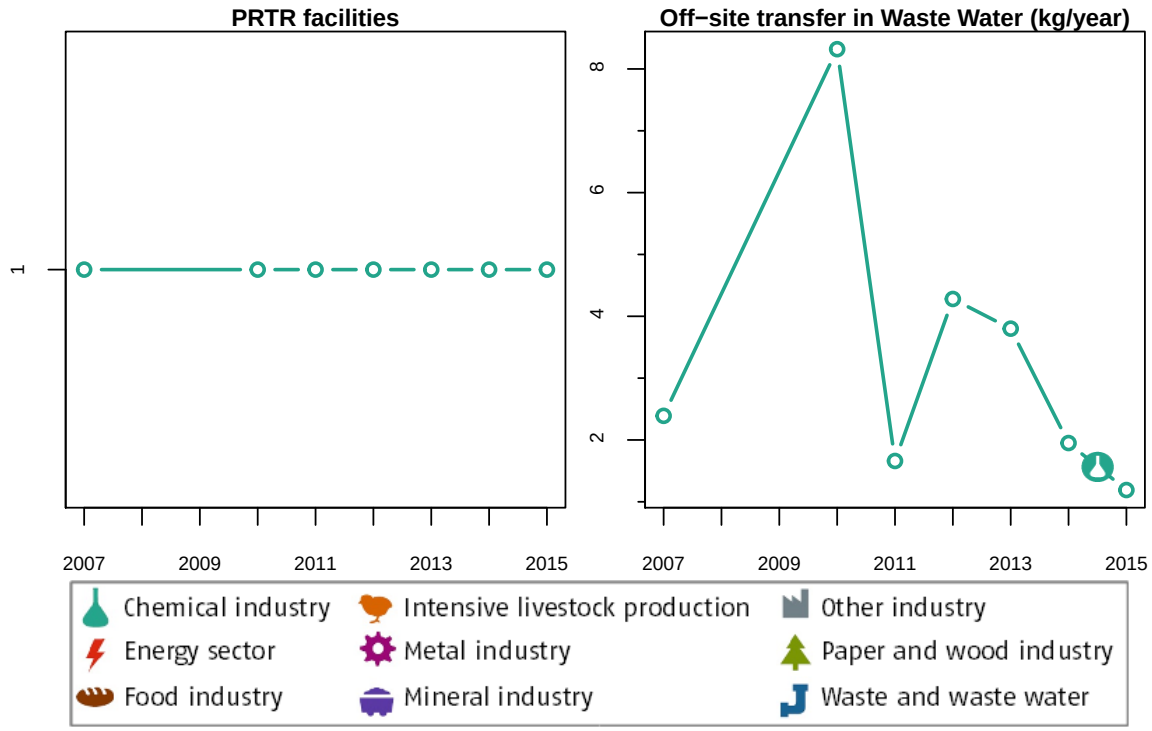

Figure 105: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Tributyltin and compounds"**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

3.30 Trichlorobenzenes (TCBs) (all isomers)

The threshold is **1 kg "Trichlorobenzenes (TCBs) (all isomers)" per year.** Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	1	100	47.9	100
TOTAL	1	100	47.9	100

Table 106: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Trichlorobenzenes (TCBs) (all isomers)"** of the different industrial sectors including the corresponding shares.

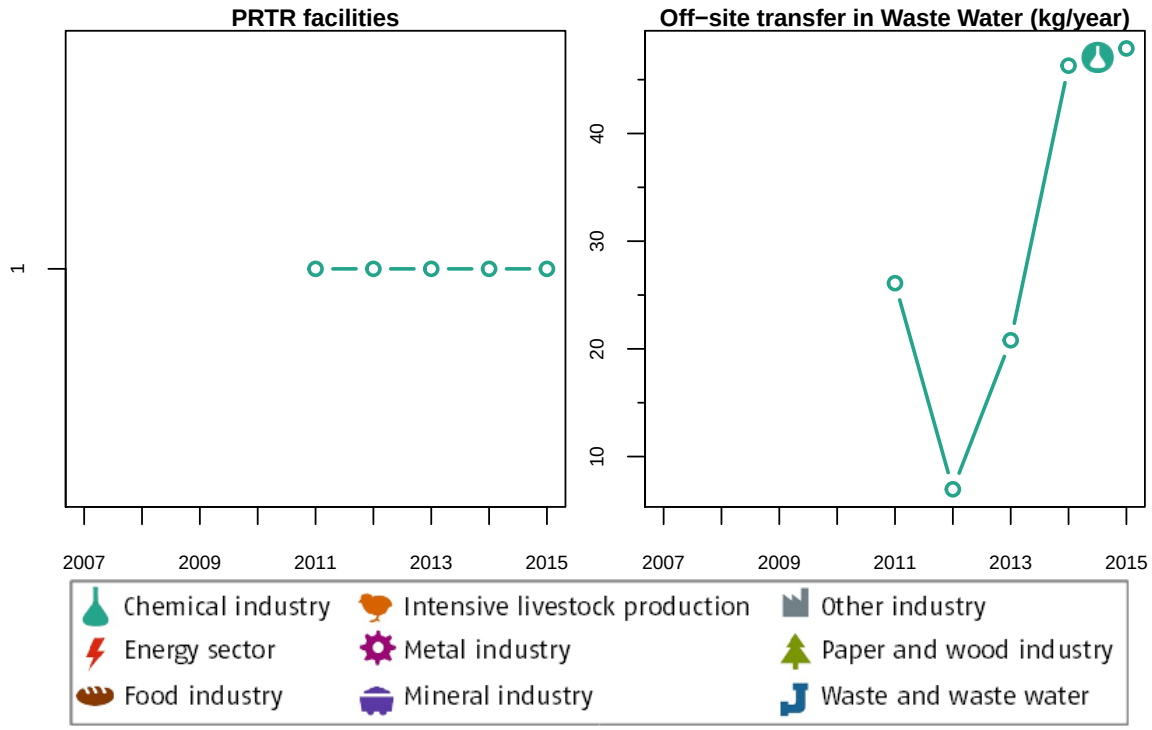

Figure 106: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Trichlorobenzenes (TCBs) (all isomers)"**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

3.31 Trichloromethane

The threshold is **10 kg "Trichloromethane" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	1	100	37.1	100
TOTAL	1	100	37.1	100

Table 107: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Trichloromethane"** of the different industrial sectors including the corresponding shares.

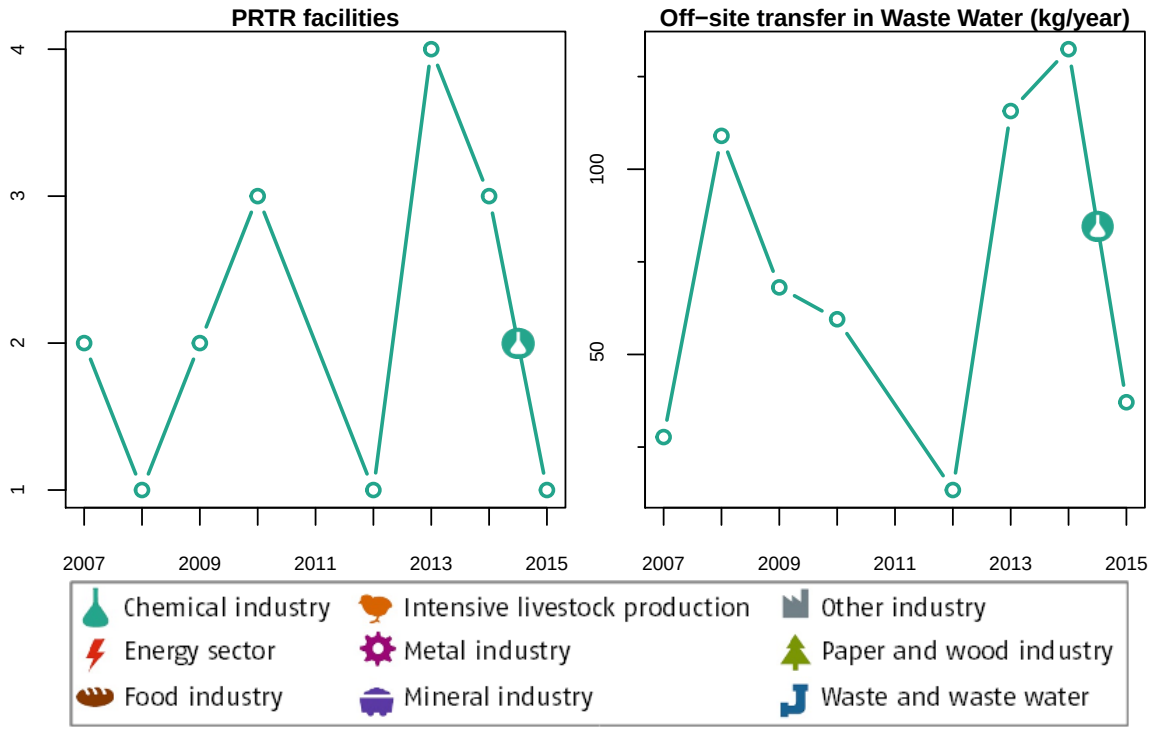

Figure 107: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Trichloromethane"**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

3.32 Vinyl chloride

The threshold is **10 kg "Vinyl chloride" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Chemical industry	6	100	1 437	100
TOTAL	6	100	1 437	100

Table 108: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Vinyl chloride"** of the different industrial sectors including the corresponding shares.

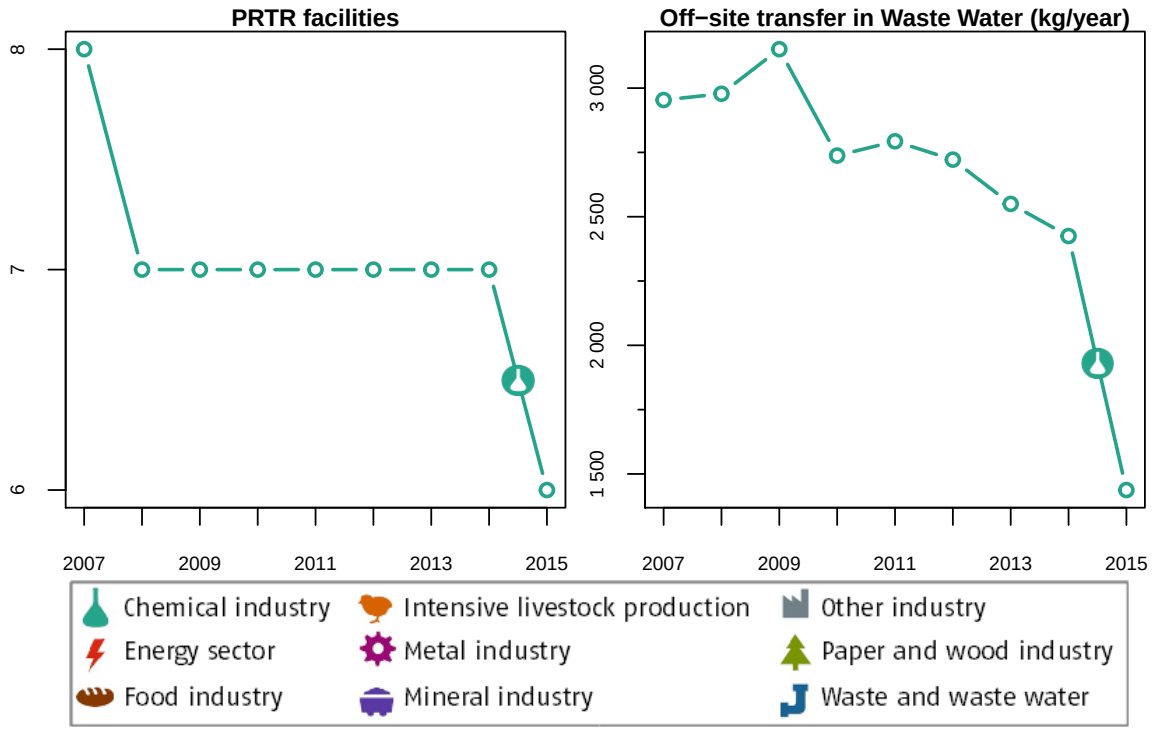

Figure 108: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Vinyl chloride"**, each by the 1 industrial sector(s) with the highest emissions in the year 2015.

3.33 Xylenes

The threshold is **200 kg "Xylenes" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Energy sector	1	12.5	1 960	64.6
Chemical industry	7	87.5	1 073	35.4
TOTAL	8	100	3 033	100

Table 109: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Xylenes"** of the different industrial sectors including the corresponding shares.

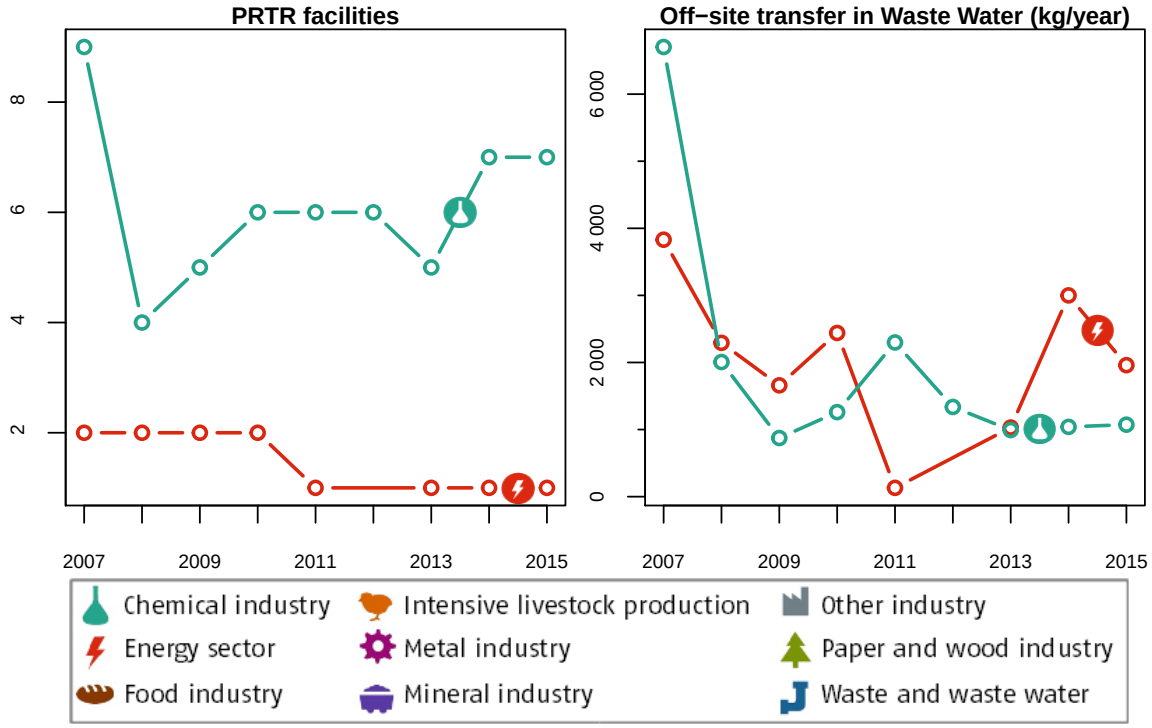

Figure 109: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Xylenes"**, each by the 2 industrial sector(s) with the highest emissions in the year 2015.

3.34 Zinc and compounds (as Zn)

The threshold is **100 kg "Zinc and compounds (as Zn)" per year**. Off-site transfer in waste water above this value have to been reported according to the German PRTR.

Industrial sector	Facilities	(%)	Off-site transfer w. w. (kg/year)	(%)
Metal industry	10	22.2	33 529	66.3
Chemical industry	24	53.3	12 153	24
Food industry	1	2.22	1 140	2.25
Energy sector	3	6.67	1 057	2.09
Paper- and wood industry	2	4.44	993	1.96
Mineral industry	1	2.22	817	1.62
Other industry	2	4.44	436	0.862
Waste and waste water management	2	4.44	436	0.862
TOTAL	45	100	50 561	100

Table 110: For the reporting year **2015** — Number of facilities and their off-site transfer in waste water (w. w.) of the pollutant **"Zinc and compounds (as Zn)"** of the different industrial sectors including the corresponding shares.

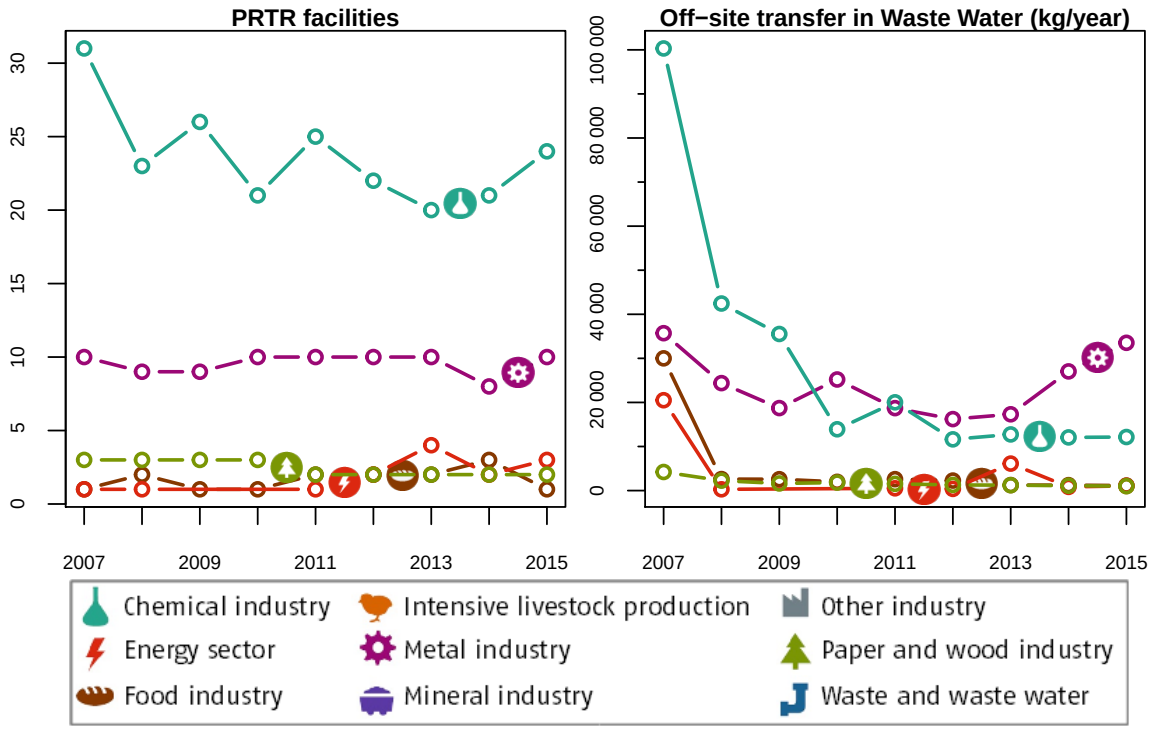

Figure 110: Annual number of facilities (left) and their off-site transfer in waste water (right) of the pollutant **"Zinc and compounds (as Zn)"**, each by the 5 industrial sector(s) with the highest emissions in the year 2015.

A Pollutants to report and threshold values

The following summary contains the threshold values separated into the environmental media of all pollutants which are coverd by the PRTR Regulation.

Source: Annex II of the *Regulation (EC) No 166/2006 of the European Parliament and of the Council of 18 January 2006 concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC*.

ANNEX II

Pollutants (*)

No	CAS number	Pollutant (1)	Threshold for releases (column 1)		
			to air (column 1a) kg/year	to water (column 1b) kg/year	to land (column 1c) kg/year
1	74-82-8	Methane (CH_4)	100 000	— (2)	—
2	630-08-0	Carbon monoxide (CO)	500 000	—	—
3	124-38-9	Carbon dioxide (CO_2)	100 million	—	—
4		Hydro-fluorocarbons (HFCs) (3)	100	—	—
5	10024-97-2	Nitrous oxide (N_2O)	10 000	—	—
6	7664-41-7	Ammonia (NH_3)	10 000	—	—
7		Non-methane volatile organic compounds (NMVOC)	100 000	—	—
8		Nitrogen oxides (NO_x/NO_2)	100 000	—	—
9		Perfluorocarbons (PFCs) (4)	100	—	—
10	2551-62-4	Sulphur hexafluoride (SF_6)	50	—	—
11		Sulphur oxides (SO_x/SO_2)	150 000	—	—
12		Total nitrogen	—	50 000	50 000
13		Total phosphorus	—	5 000	5 000
14		Hydrochlorofluorocarbons (HCFCs) (5)	1	—	—
15		Chlorofluorocarbons (CFCs) (6)	1	—	—
16		Halons (7)	1	—	—
17		Arsenic and compounds (as As) (8)	20	5	5
18		Cadmium and compounds (as Cd) (8)	10	5	5
19		Chromium and compounds (as Cr) (8)	100	50	50
20		Copper and compounds (as Cu) (8)	100	50	50
21		Mercury and compounds (as Hg) (8)	10	1	1
22		Nickel and compounds (as Ni) (8)	50	20	20
23		Lead and compounds (as Pb) (8)	200	20	20
24		Zinc and compounds (as Zn) (8)	200	100	100
25	15972-60-8	Alachlor	—	1	1
26	309-00-2	Aldrin	1	1	1
27	1912-24-9	Atrazine	—	1	1
28	57-74-9	Chlordane	1	1	1

(*) Releases of pollutants falling into several categories of pollutants shall be reported for each of these categories.

No	CAS number	Pollutant [1]	Threshold for releases (column 1)		
			to air (column 1a) kg/year	to water (column 1b) kg/year	to land (column 1c) kg/year
29	143-50-0	Chlordecone	1	1	1
30	470-90-6	Chlorfenvinphos	—	1	1
31	85535-84-8	Chloro-alkanes, C_{10}-C_{13}	—	1	1
32	2921-88-2	Chlorpyrifos	—	1	1
33	50-29-3	DDT	1	1	1
34	107-06-2	1,2-dichloroethane (EDC)	1 000	10	10
35	75-09-2	Dichloromethane (DCM)	1 000	10	10
36	60-57-1	Dieldrin	1	1	1
37	330-54-1	Diuron	—	1	1
38	115-29-7	Endosulphan	—	1	1
39	72-20-8	Endrin	1	1	1
40		Halogenated organic compounds (as AOX) [9]	—	1 000	1 000
41	76-44-8	Heptachlor	1	1	1
42	118-74-1	Hexachlorobenzene (HCB)	10	1	1
43	87-68-3	Hexachlorobutadiene (HCBD)	—	1	1
44	608-73-1	1,2,3,4,5,6-hexachlorocyclohexane(HCH)	10	1	1
45	58-89-9	Lindane	1	1	1
46	2385-85-5	Mirex	1	1	1
47		PCDD + PCDF (dioxins + furans) (as Teq) [10]	0,0001	0,0001	0,0001
48	608-93-5	Pentachlorobenzene	1	1	1
49	87-86-5	Pentachlorophenol (PCP)	10	1	1
50	1336-36-3	Polychlorinated biphenyls (PCBs)	0,1	0,1	0,1
51	122-34-9	Simazine	—	1	1
52	127-18-4	Tetrachloroethylene (PER)	2 000	10	—
53	56-23-5	Tetrachloromethane (TCM)	100	1	—
54	12002-48-1	Trichlorobenzenes (TCBs) (all isomers)	10	1	—
55	71-55-6	1,1,1-trichloroethane	100	—	—
56	79-34-5	1,1,2,2-tetrachloroethane	50	—	—
57	79-01-6	Trichloroethylene	2 000	10	—
58	67-66-3	Trichloromethane	500	10	—
59	8001-35-2	Toxaphene	1	1	1
60	75-01-4	Vinyl chloride	1 000	10	10
61	120-12-7	Anthracene	50	1	1

No	CAS number	Pollutant [1]	Threshold for releases (column 1)		
			to air (column 1a) kg/year	to water (column 1b) kg/year	to land (column 1c) kg/year
62	71-43-2	Benzene	1 000	200 (as BTEX) [11]	200 (as BTEX) [11]
63		Brominated diphenylethers (PBDE) [12]	—	1	1
64		Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)	—	1	1
65	100-41-4	Ethyl benzene	—	200 (as BTEX) [11]	200 (as BTEX) [11]
66	75-21-8	Ethylene oxide	1 000	10	10
67	34123-59-6	Isoproturon	—	1	1
68	91-20-3	Naphthalene	100	10	10
69		Organotin compounds(as total Sn)	—	50	50
70	117-81-7	Di-(2-ethyl hexyl) phthalate (DEHP)	10	1	1
71	108-95-2	Phenols (as total C) [13]	—	20	20
72		Polycyclic aromatic hydrocarbons (PAHs) [14]	50	5	5
73	108-88-3	Toluene	—	200 (as BTEX) [11]	200 (as BTEX) [11]
74		Tributyltin and compounds [15]	—	1	1
75		Triphenyltin and compounds [16]	—	1	1
76		Total organic carbon (TOC) (as total C or COD/3)	—	50 000	—
77	1582-09-8	Trifluralin	—	1	1
78	1330-20-7	Xylenes [17]	—	200 (as BTEX) [11]	200 (as BTEX) [11]
79		Chlorides (as total Cl)	—	2 million	2 million
80		Chlorine and inorganic compounds (as HCl)	10 000	—	—
81	1332-21-4	Asbestos	1	1	1
82		Cyanides (as total CN)	—	50	50
83		Fluorides (as total F)	—	2 000	2 000
84		Fluorine and inorganic compounds (as HF)	5 000	—	—
85	74-90-8	Hydrogen cyanide (HCN)	200	—	—
86		Particulate matter (PM_{10})	50 000	—	—
87	1806-26-4	Octylphenols and Octylphenol ethoxylates	—	1	—

No	CAS number	Pollutant [1]	Threshold for releases (column 1)		
			to air (column 1a) kg/year	to water (column 1b) kg/year	to land (column 1c) kg/year
88	206-44-0	Fluoranthene	—	1	—
89	465-73-6	Isodrin	—	1	—
90	36355-1-8	Hexabromobiphenyl	0,1	0,1	0,1
91	191-24-2	Benzo(g,h,i)perylene		1	

(1) Unless otherwise specified any pollutant specified in Annex II shall be reported as the total mass of that pollutant or, where the pollutant is a group of substances, as the total mass of the group.

(2) A hyphen (—) indicates that the parameter and medium in question do not trigger a reporting requirement.

(3) Total mass of hydrogen fluorocarbons: sum of HFC23, HFC32, HFC41, HFC4310mee, HFC125, HFC134, HFC134a, HFC152a, HFC143, HFC143a, HFC227ea, HFC236fa, HFC245ca, HFC365mfc.

(4) Total mass of perfluorocarbons: sum of CF_4, C_2F_6, C_3F_8, C_4F_{10}, c-C_4F_8, C_5F_{12}, C_6F_{14}.

(5) Total mass of substances including their isomers listed in Group VIII of Annex I to Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layer (OJ L 244, 29.9.2000, p. 1). Regulation as amended by Regulation (EC) No 1804/2003 (OJ L 265, 16.10.2003, p. 1).

(6) Total mass of substances including their isomers listed in Group I and II of Annex I to Regulation (EC) No 2037/2000.

(7) Total mass of substances including their isomers listed in Group III and VI of Annex I to Regulation (EC) No 2037/2000.

(8) All metals shall be reported as the total mass of the element in all chemical forms present in the release.

(9) Halogenated organic compounds which can be adsorbed to activated carbon expressed as chloride.

(10) Expressed as I-TEQ.

(11) Single pollutants are to be reported if the threshold for BTEX (the sum parameter of benzene, toluene, ethyl benzene, xylenes) is exceeded.

(12) Total mass of the following brominated diphenylethers: penta-BDE, octa-BDE and deca-BDE.

(13) Total mass of phenol and simple substituted phenols expressed as total carbon.

(14) Polycyclic aromatic hydrocarbons (PAHs) are to be measured for reporting of releases to air as benzo(a)pyrene (50-32-8), benzo(b)fluoranthene (205-99-2), benzo(k)fluoranthene (207-08-9), indeno(1,2,3-cd)pyrene (193-39-5) (derived from Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants (OJ L 229, 29.6.2004, p. 5)).

(15) Total mass of tributyltin compounds, expressed as mass of tributyltin.

(16) Total mass of triphenyltin compounds, expressed as mass of triphenyltin.

(17) Total mass of xylene (ortho-xylene, meta-xylene, para-xylene).