2 Current State

2.1 Hazardous substances in rivers and lakes across Europe in 1999 -2009

2.1.1 Overview

This assessment draws upon data reported to the EEA from the National Monitoring Programs via WISE-SOE (Eionet-Water). Data for the period 1999-2009 were chosen for long term analysis and 2008-2009 data were used for the most recent.

A hazardous substance “traffic light” indicator has been developed for rivers and lakes based on Environmental Quality Standards (EQS) (Directive 2008/105/EC on environmental quality standards in the field of water policy). The average concentration of each hazardous substance is divided by the EQS and hence creating an indicator with a trigger value of 1. A substance with an indicator equalling or larger than one (“red light”) is a substance posing a possible problem in European surface waters. Substances with an indicator between 0.8 and 1 is given a “yellow” light indicating a substance close to the EQS values. Substances with an indicator below 0.8 is given a “green light”.

Environmental quality standards as annual average concentrations (AA) and maximum allowable concentrations (MAC) are set in Annex I of the Directive 2008/105/EC on environmental quality standards (EQS directive) as listed in Table 5.1.1.1. In addition article 2 (2) also states that Member States may opt to apply EQS for sediment and/or biota instead of those laid down in Annex I in certain categories of surface water. Member States that apply this option shall: apply, for mercury and its compounds, an EQS of 20 µg/kg, and/or for hexachlorobenzene, an EQS of 10 µg/kg, and/or for hexachlorobutadiene, an EQS of 55 µg/kg, these EQS being for prey tissue (wet weight), choosing the most appropriate indicator from among fish, molluscs, crustaceans and other biota. The Member States shall establish and apply EQS other than those mentioned above for sediment and/or biota for specified substances. These EQS shall offer at least the same level of protection as the EQS for water set out in Annex I.

It should be noted that whilst the respective EQS’s arising from the Priority Substances Directive have been used in this assessment, the data analysed does not arise from WFD reporting but the EEA’s WISE-SoE reporting.

Table 2.1.1.1 Environmental quality standards for surface freshwater (Directive 2008/105/EC)

No.	Name of substance	CAS number	AA-EQS (µg/l)	MAC-EQS (µg/l)
(1)	Alachlor	15972-60-8	0,3	0,7
(2)	Anthracene	120-12-7	0,1	0,4
(3)	Atrazine	1912-24-9	0,6	2,0
(4)	Benzene	71-43-2	10	50
(5)	Brominated diphenylether	32534-81-9	0,0005	not applicable
(6)	Cadmium and its compounds (depending on water hardness classes)	7440-43-9	≤ 0,08(Class1) 0,08(Class2) 0,09(Class3) 0,15(Class4) 0,25(Class5)	≤ 0,45(Class1) 0,45(Class2) 0,6 (Class3) 0,9 (Class4) 1,5 (Class5)
(6a)	Carbon tetrachloride	56-23-5	12	not applicable
(7)	C10-13 Chloroalkanes	85535-84-8	0,4	1,4
(8)	Chlorfenvinphos	470-90-6	0,1	0,3
(9)	Chlorpyrifos	2921-88-2	0,03	0,1
(9a)	Aldrin Dieldrin Endrin Isodrin	309-00-2 60-57-1 72-20-8 465-73-6	Σ=0,01	not applicable
(9b)	DDT total	not applicable	0,025	not applicable
	para-para-DDT	50-29-3	0,01	not applicable
(10)	1,2-Dichloroethane	107-06-2	10	not applicable
(11)	Dichloromethane	75-09-2	20	not applicable
(12)	Di(2-ethylhexyl)-phthalate (DEHP)	117-81-7	1,3	not applicable
(13)	Diuron	330-54-1	0,2	1,8
(14)	Endosulfan	115-29-7	0,005	0,01
(15)	Fluoranthene	206-44-0	0,1	1
(16)	Hexachlorobenzene	118-74-1	0,01(9)	0,05
(17)	Hexachlorobutadiene	87-68-3	0,1(9)	0,6
(18)	Hexachlorocyclohexane	608-73-1	0,02	0,04
(19)	Isoproturon	34123-59-6	0,3	1,0
(20)	Lead and its compounds	7439-92-1	7,2	not applicable
(21)	Mercury and its compounds	7439-97-6	0,05(9)	0,07
(22)	Naphthalene	91-20-3	2,4	not applicable
(23)	Nickel and its compounds	7440-02-0	20	not applicable
(24)	Nonylphenol (4-Nonylphenol)	104-40-5	0,3	2,0
(25)	Octylphenol (4-(1,1′,3,3′-tetramethylbutyl)-phenol)	140-66-9	0,1	not applicable
(26)	Pentachlorobenzene	608-93-5	0,007	not applicable
(27)	Pentachlorophenol	87-86-5	0,4	1
(28)	Polyaromatic hydrocarbons (PAH)	not applicable	not applicable	not applicable
	Benzo(a)pyrene	50-32-8	0,05	0,1
	Benzo(b)fluoranthene	205-99-2	Σ=0,03	
	Benzo(k)fluoranthene	207-08-9		not applicable
	Benzo(g,h,i)-perylene	191-24-2	Σ=0,002	
	Indeno(1,2,3-cd)-pyrene	193-39-5		not applicable
(29)	Simazine	122-34-9	1	4
29a)	Tetrachloroethylene	127-18-4	10	not applicable
29b)	Trichloroethylene	79-01-6	10	not applicable
(30)	Tributyltin compounds (Tributyltin-cation)	36643-28-4	0,0002	0,0015
(31)	Trichlorobenzenes	12002-48-1	0,4	not applicable
(32)	Trichloromethane	67-66-3	2,5	not applicable
(33)	Trifluralin	1582-09-8	0,03	not applicable

Generally only few hazardous substances surpass the EQS criteria in European surface waters in the 2008-2009 period. In European lakes Benzo(g,h,i)perylene, DEHP, Mercury and Cadmium surpasses the EQS. In European rivers Benzo(g,h,i)perylene , Indeno(1,2,3-cd)pyrene ,TBT, Cadmium and Mercury surpasses the EQS. Generally speaking the concentrations of hazardous substances in European surface waters were roughly unchanged in the period 1999 – 2009. The amount of reported data generally increased over the 1999 – 2009 period.

The majority of chemicals causing poor chemical status are on OECD HPVC list. High production volume chemicals (HPVC) are produced or imported in quantities greater than 1,000 tonnes per year in at least one member country or region. List of HPVC is used by member countries to choose chemicals on which to make a hazard assessment for human health and the environment in the context of the OECD HPV Chemicals Programme.

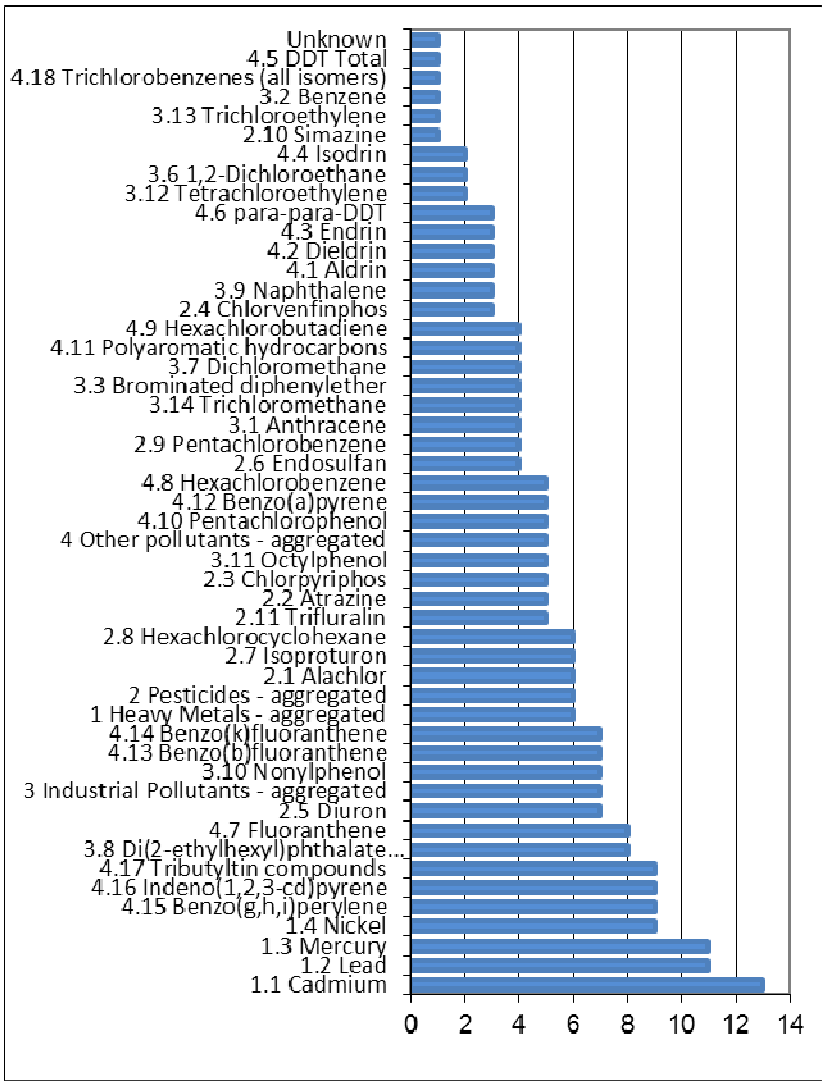


Figure 2.1.1.1 Number of Member States that identified corresponding chemical causing poor chemical status

Source: WFD 2010 reports

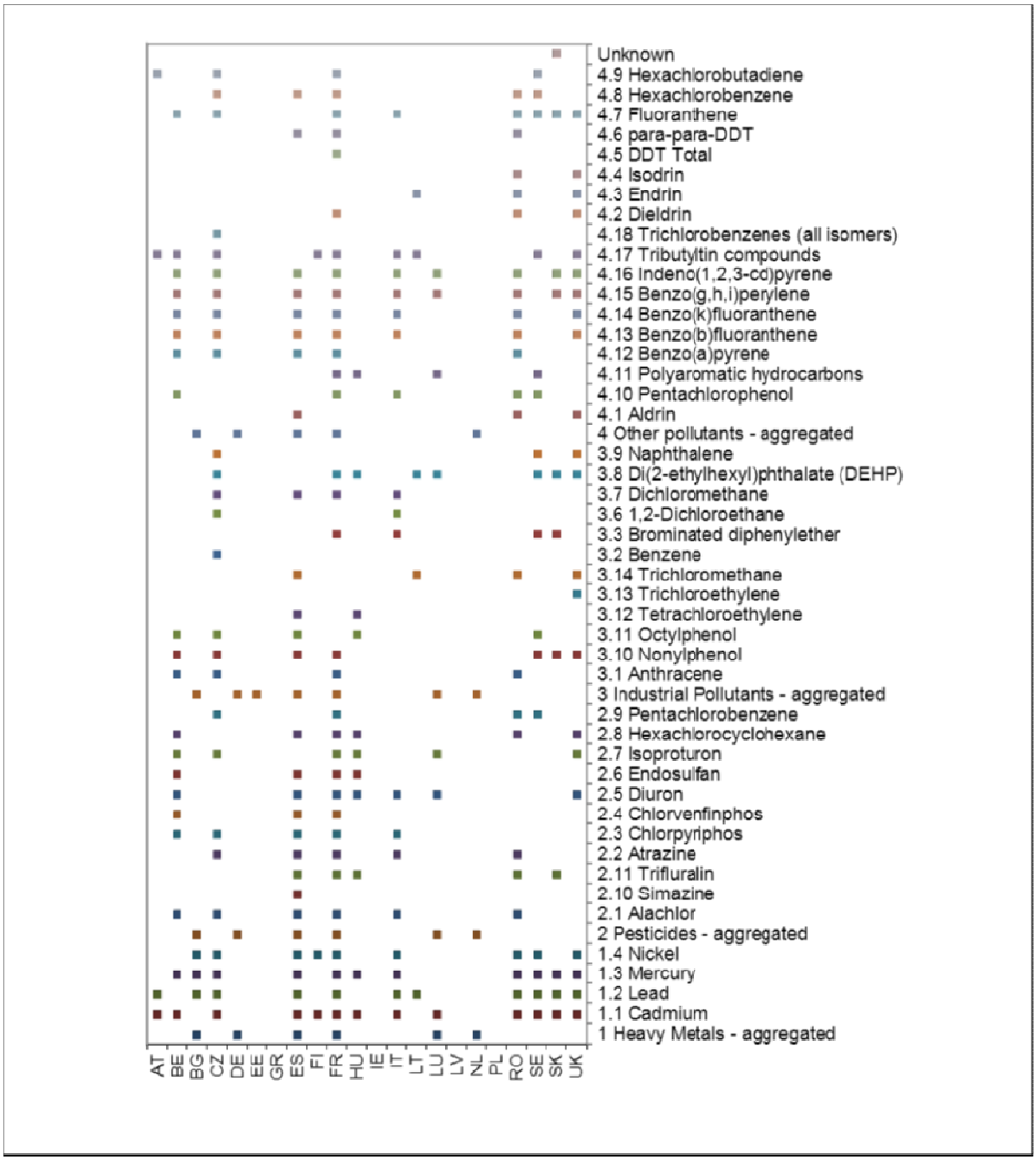


Figure 2.1.1.2 Chemicals causing poor chemical status in Member States

Source: WFD 2010 reports

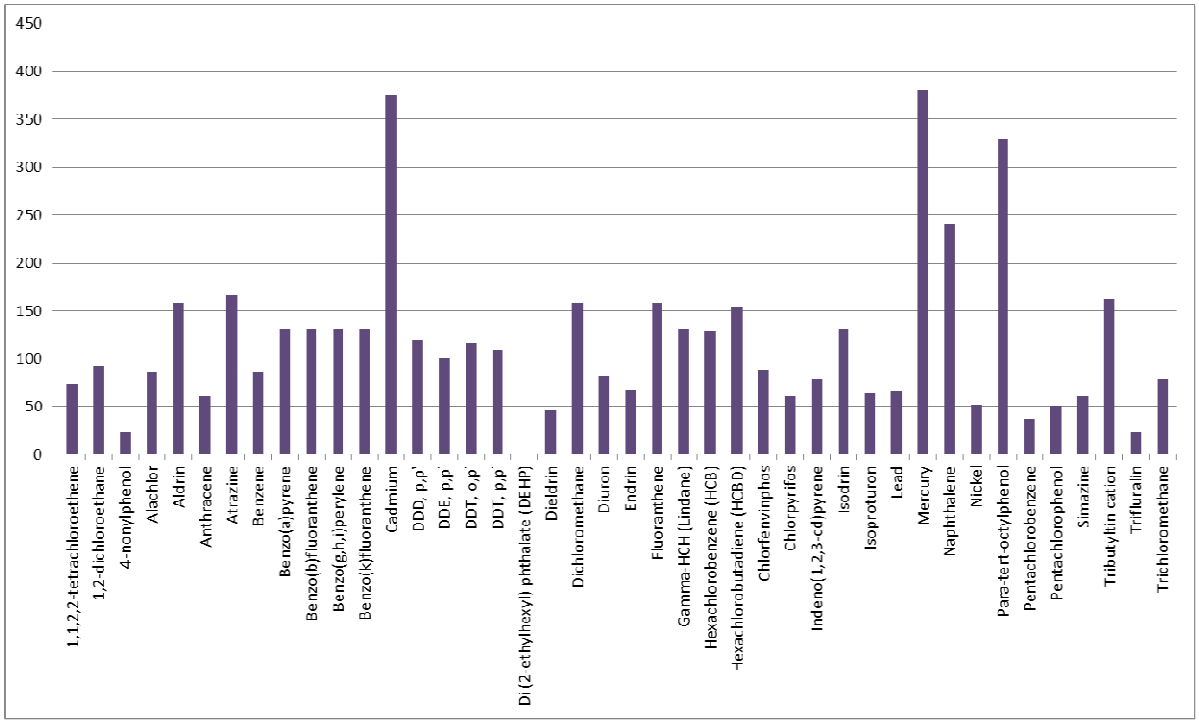


Figure 2.1.1.3 No. of lake stations with available data within the 1999-2009

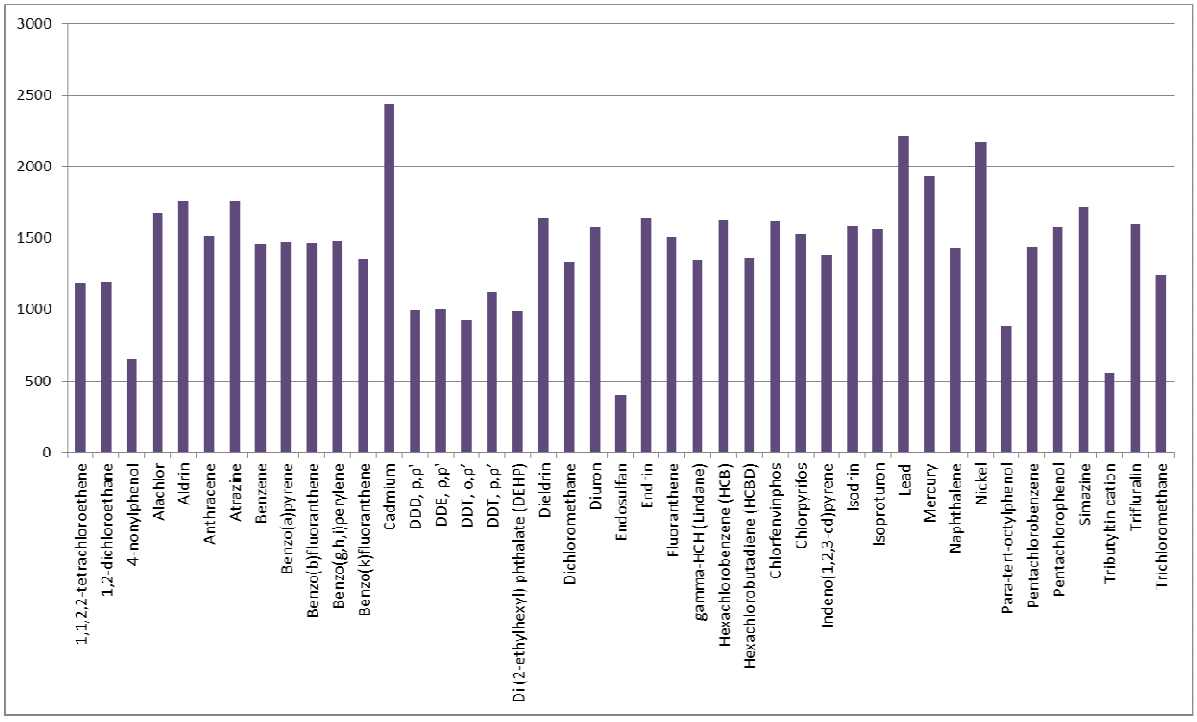


Figure 2.1.1.4 No. of river stations with available data within the 1999-2009 period

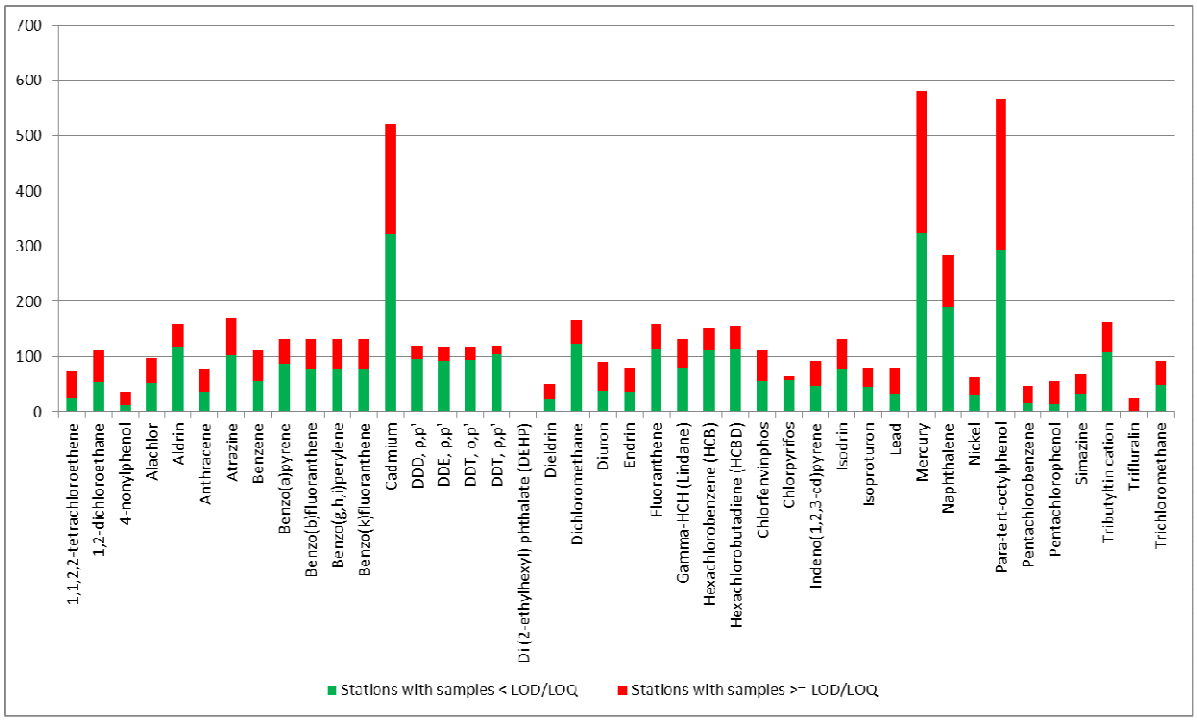


Figure 2.1.1.5 Lake stations with positive/negative findings in 1999-2009

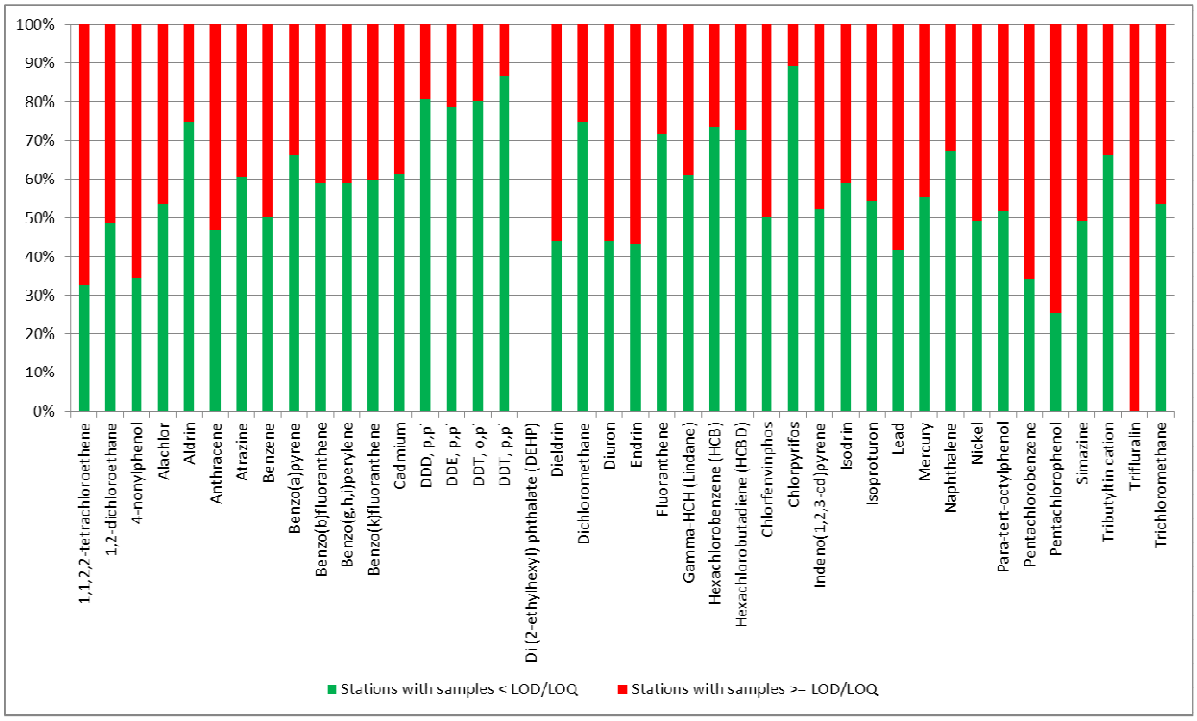


Figure 2.1.1.6 Lake stations with positive/negative findings in 1999-2009

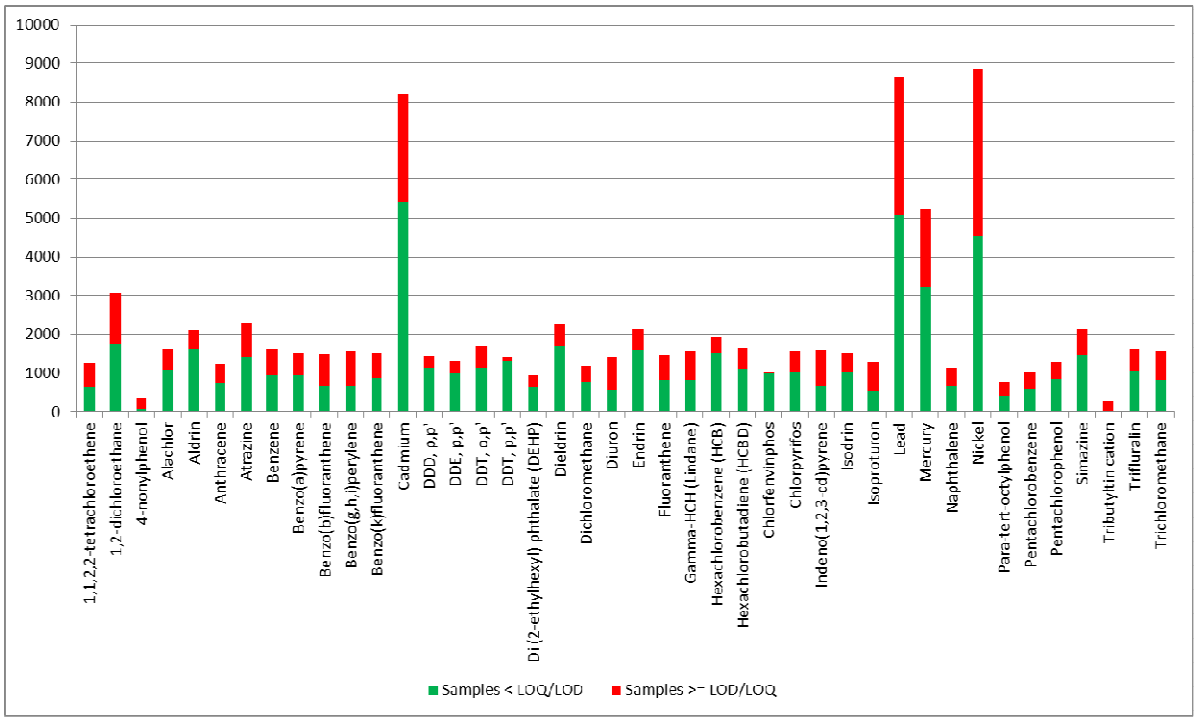
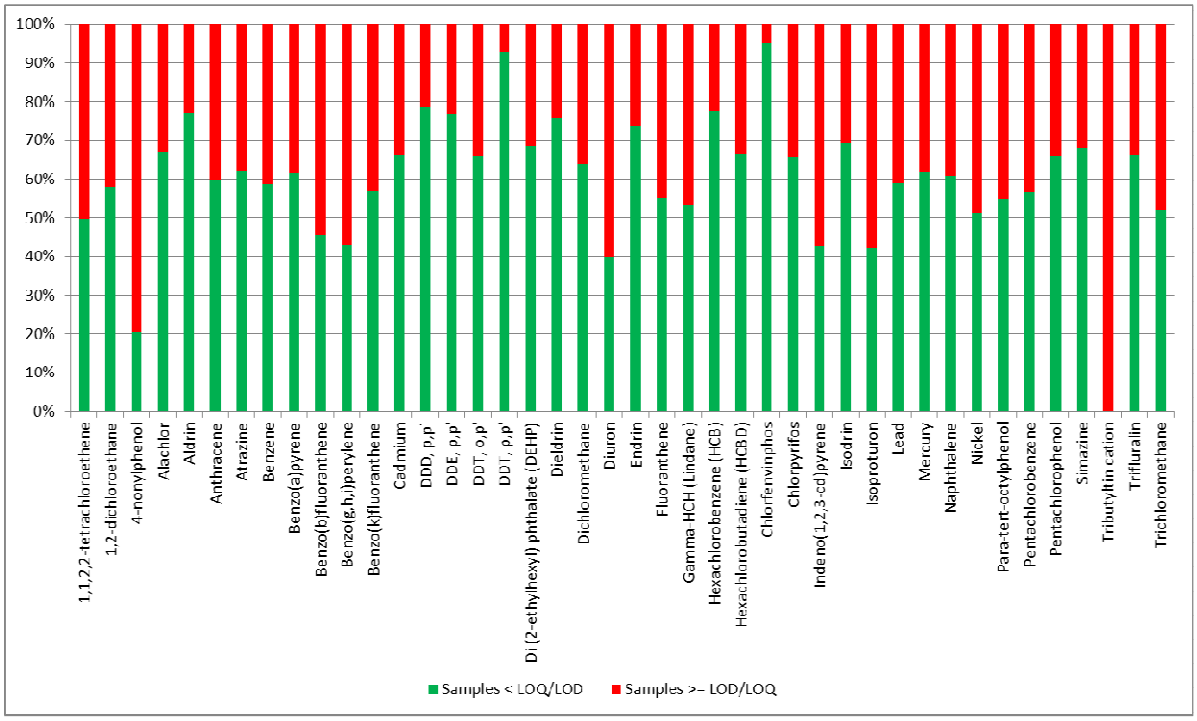


Figure 2.1.1.7 Negative/positive findings in lake water in 1999-2009



2.1.1.8 Negative/positive findings in lake water in 1999-2009

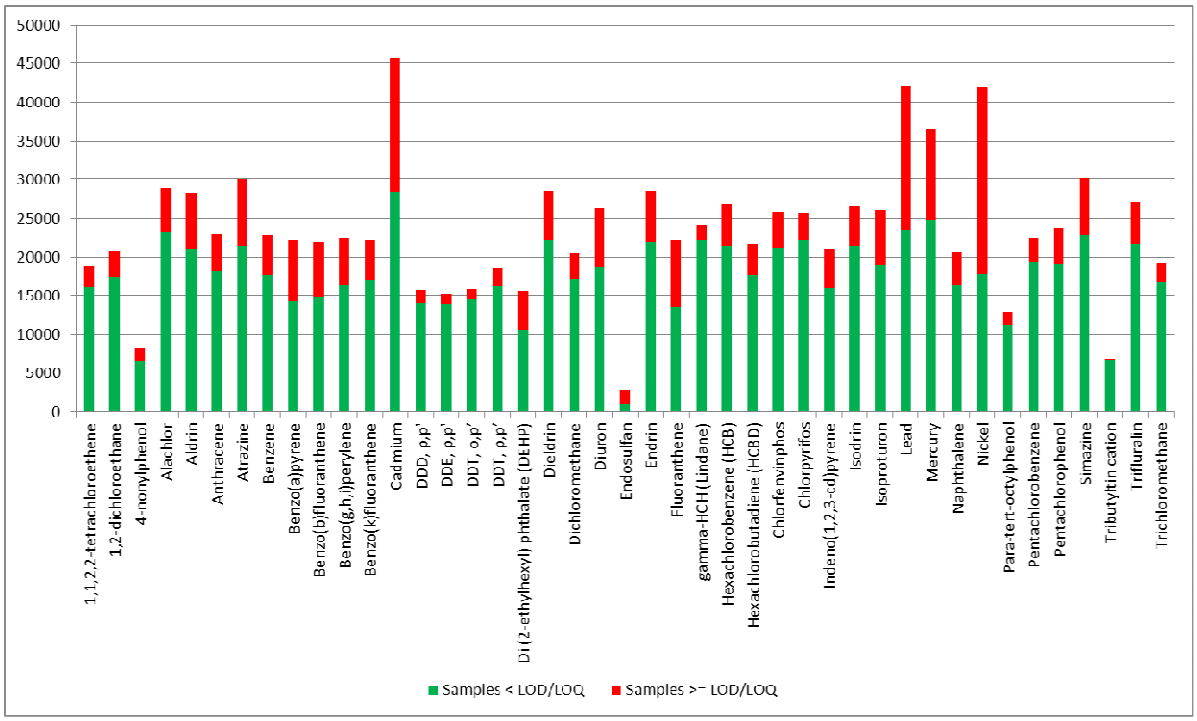


Figure 2.1.1.9 Negative/positive findings in river water in 2008-2009

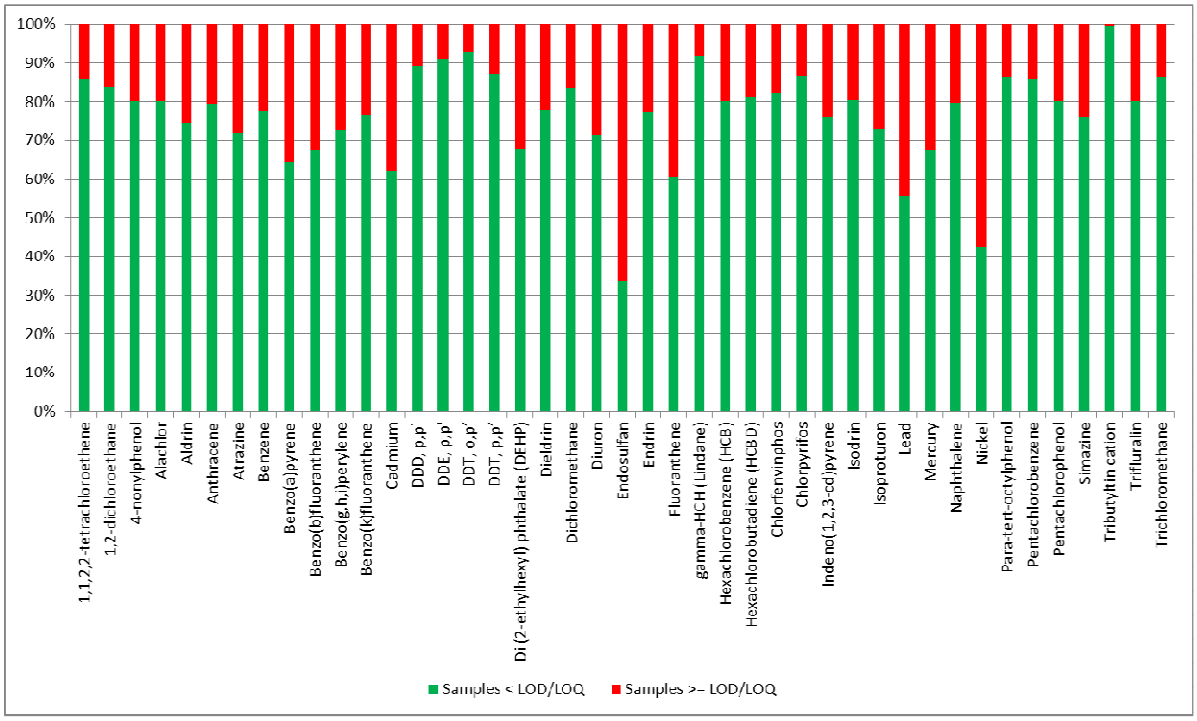


Figure 2.1.1.10 Negative/positive findings in river water in 2008-2009

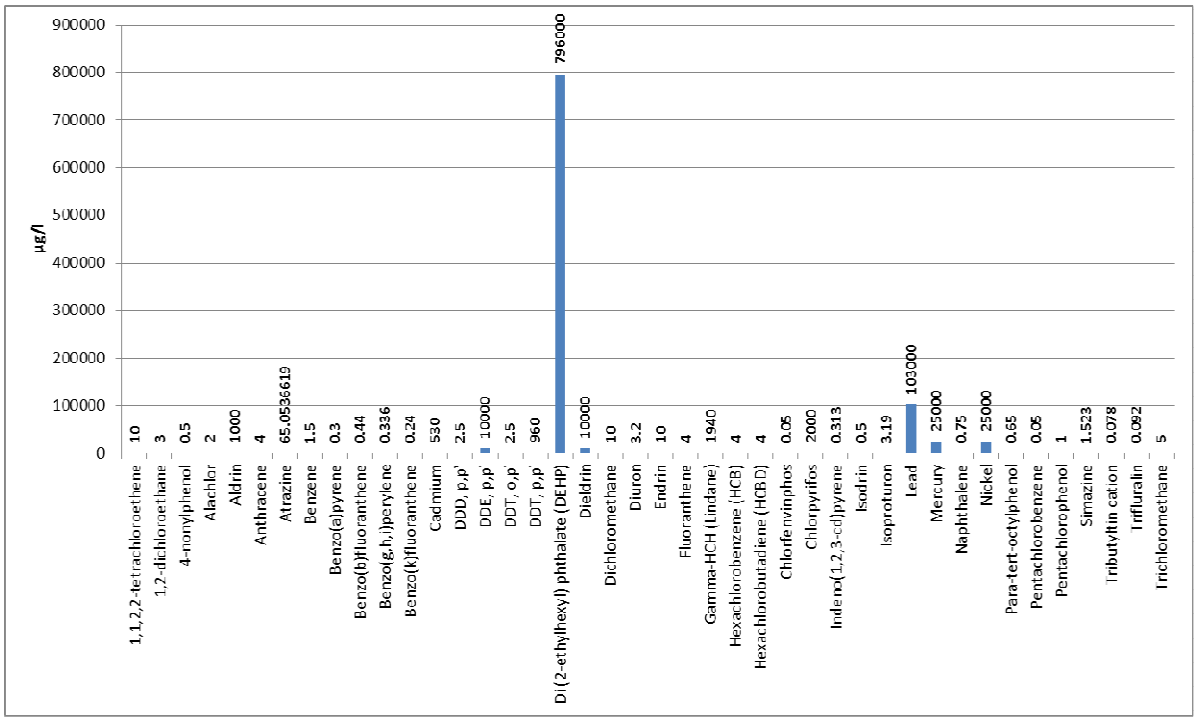


Figure 2.1.1.11 Maximum lake concentrations in 1999-2009

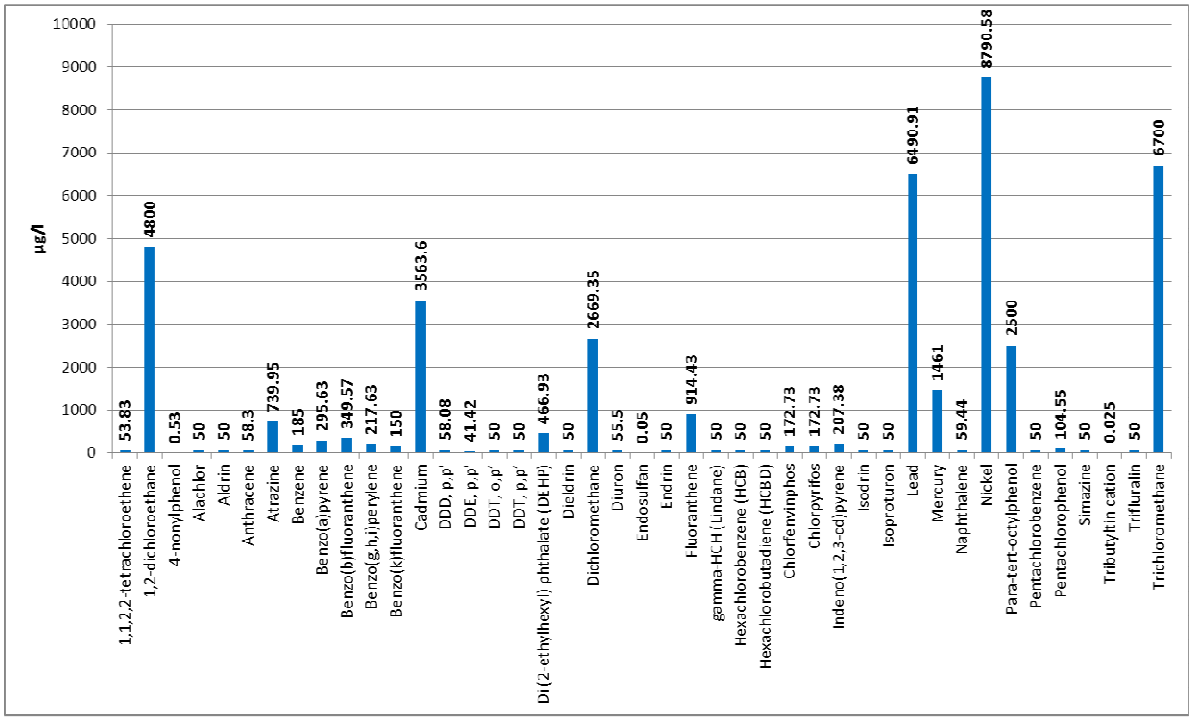


Figure 2.1.1.12 Maximum annual river concentrations in 1999-2009

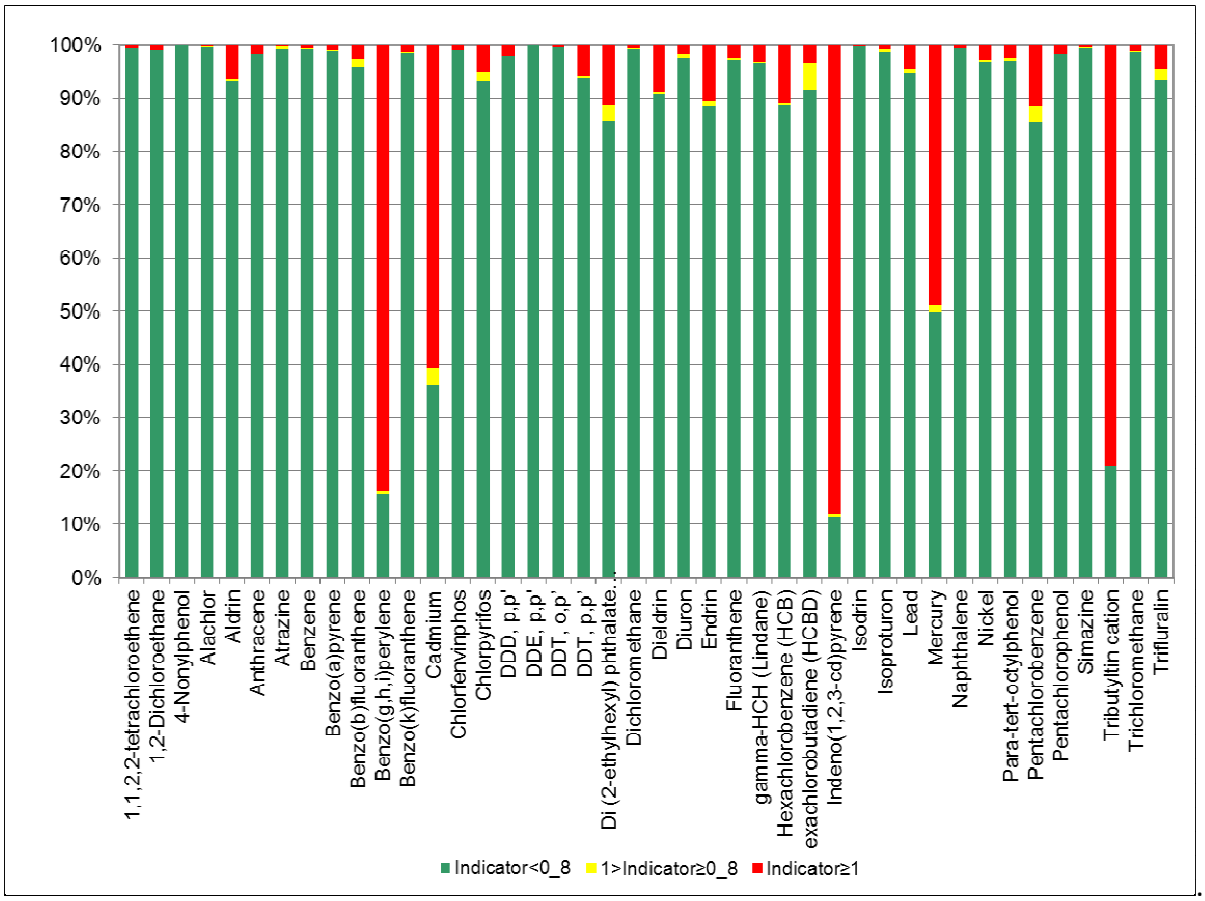


Figure 2.1.1.13 No. of river stations within indicator category in 2008-2009

Table 2.1.1.2 Maximum lake concentrations (µg/l) reported by countries in 1999-2009

Country	1,1,2,2-tetrachloroethene	1,2-Dichloroethane	4-Nonylphenol	Alachlor	Aldrin	Anthracene	Atrazine	Benzene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene
BA											
BE	0.0315	0.0800	0.0120	0.0060	0.0005	0.0020	0.0200	0.0700	0.0070	0.0200	0.0080
BG											
CY	0.0313	0.1500		0.2240	0.0080	4.0000	0.1400	0.2400	0.0004	0.0008	0.0008
EE											
FI			0.1000	0.0050	0.0050		0.0025				
FR			0.5000	0.0150	0.0040	0.0025	0.2300	0.2500	0.0025	0.0030	0.0012
GB		1.0000			0.0055	0.0100	0.0330	1.5000	0.2400	0.3070	0.3360
HR	0.2500	0.2000		0.0050	0.0003	0.0010	0.0650	0.1500	0.0010	0.0010	0.0010
HU							65.0540	1.0000			
CH							0.1300				
IE		0.2500						0.2500			
IS											
IT	10.0000	3.0000		2.0000	1000.0000	0.3000	0.0500	1.0000	0.3000	0.0500	0.3000
LT					0.0025		0.5000				
LV											
NL	1.6000	0.3300	0.3000	0.0100	0.0010	0.0600	0.0600	0.6000	0.2300	0.4400	0.1870
NO											
PT					0.0100				0.0050	0.0050	
RO											
RS					0.0005		2.2050		0.0001	0.0001	0.0001
SE											
SI				0.0250			0.0250				
SK	0.2500	1.6000	0.1500	0.0040	0.0050	0.0054	0.0030	0.1500	0.0082	0.0150	0.0420

Country	Benzo(k)fluoranthene	Cadmium	DDD, p,p'	DDE, p,p'	DDT, o,p'	DDT, p,p'	Di (2-ethylhexyl) phthalate	Dieldrin	Dichloromethane	Diuron	Endrin
BA		0.5600									
BE	0.0020	1.0000	0.0005	0.0010	0.0010	0.0005		0.0010	4.7000	0.1600	0.0015
BG		8.0000									
CY	0.0004	16.6300	0.0025	0.0060	0.0000	0.0020	796000.0000	0.0010	2.7600	0.0250	0.0100
EE		0.1000									
FI		1.0000	0.0050	0.0050	0.0050	0.0050	11.0000	0.0100		0.0050	0.0100
FR	0.0025	0.1000						0.0025		0.4400	0.0025
GB	0.2400	530.0000	0.0018	0.0030	0.0180	960.0000		0.0030		0.3040	0.0070
HR	0.0010	0.5000	0.0500	0.0500		0.0500		0.0003	0.2000	0.0050	0.0500
HU		9.0100	2.5000	2.5000	2.5000	10.0000		5.0000			10.0000
CH		0.2750								0.0010	
IE		0.0500							0.1000		
IS		0.0050									
IT	0.0500	300.0000	0.5000	10000.0000	0.5000	0.5000		10000.0000	1.4000	0.1000	0.5000
LT		0.0250				0.0025		0.0025			0.0025
LV		0.1700									
NL	0.2000	0.5230	0.0120	0.0040	0.0060	0.0100	1.8000	0.0010	10.0000	3.2000	0.0030
NO		0.1250									
PT		5.0000						3.0000			0.0100
RO		1.2500									
RS	0.0001	3.6600	0.0010	0.0040	0.0010	0.0010		0.0040			0.0010
SE		1.9800									
SI		0.0570									
SK	0.0088	0.1900	0.0050	0.0050	0.0115		54.0000	0.0115	4.0000	0.0030	0.0115

Table 2.1.1.2 continued

Country	Fluoranthene	Gamma-HCH	Hexachlorobenzene	Hexachlorobutadiene	Chlorfenvinphos	Chlorpyrifos	Indeno(1,2,3-cd)pyrene	Isodrin	Isoproturon	Lead
BA										1.0000
BE	0.0110	0.0040	0.0005			0.0200	0.0040	0.0010	0.0700	13.6000
BG										48.0000
CY	4.0000		4.0000	4.0000	0.0025	0.0060	0.0008		0.0250	35.7900
EE										1.0000
FI		0.0050	0.0050	0.0050	0.0050	0.0050		0.0100	0.0050	3.8700
FR	0.0070	0.0040			0.0100	0.0050	0.0016	0.0025	0.1410	2.5000
GB	0.0700	1940.0000	0.5000	0.0080	0.0130	0.0100	0.3130	0.0050	3.1900	103000.0000
HR	0.0010	0.0500	0.0003	0.0500	0.0050	0.0030	0.0010	0.0003	0.0050	8.7600
HU		5.0000								21.7000
CH									0.0100	2.0000
IE				0.2500						4.0000
IS										0.2618
IT	0.0050	0.0500	0.1288	0.2500	0.0500	2000.0000	0.3000	0.5000	0.0500	730.0000
LT		0.0025								1.4000
LV										3.6800
NL	0.7000	0.0245	0.0020	0.0100	0.0200	0.0200	0.2540	0.0010	0.4200	10.0000
NO										1.8187
PT		0.0100					0.2050	0.0050		30.0000
RO										2.5000
RS	0.0001	0.0090	0.0030				0.0001			33.9000
SE										11.5000
SI					0.0250	0.0050				1.2000
SK	0.1530		0.0100	0.0500		0.0025	0.0052	0.0025	0.0030	7.9200

Country	Mercury	Naphthalene	Nickel	Para-tert-octylphenol	Pentachlorobenzene	Pentachlorophenol	Simazine	Tributyltin cation	Trifluralin	Trichloromethane
BA	100.0000		3070.0000							
BE	0.1800	0.0200	13.0000	0.0250	0.0010	0.0150	0.0400		0.0020	0.0410
BG			61.0000							
CY	1.3800	0.0625	25.5000				0.1700		0.0920	3.1200
EE	0.2000									
FI	5.0000		180.0000		0.0050		0.0050		0.0050	
FR	0.1000	0.0600	6.9000	0.0500			0.0100		0.0100	0.2500
GB	50.0000		5130.0000			0.1140	0.2130		0.0400	0.2600
HR	0.1000	0.0400	8.2000		0.0003	0.0050	0.0140			0.2000
HU	0.8000		108.0000							
CH	0.0100		3.0000				0.0300		0.0825	
IE	0.0500	0.2500	210.0000							0.3000
IS	0.0010		0.2600							
IT	25000.0000	0.0050	25000.0000		0.0500	1.0000	0.0900		0.0500	5.0000
LT	0.0140		3.2000				0.5000			
LV	0.1000		4.7000							
NL	0.1050	0.7500	13.9000	0.6500	0.0010	0.1000	0.0900		0.0100	2.9000
NO			21.8000							
PT	3.1000									
RO	0.0800		1.0500							
RS	1.8000		159.2000				1.5230			
SE	0.0047		12.8000							
SI	0.0220		2.8000				0.0250		0.0050	
SK	0.0500	0.1500	3.8400	0.2200	0.0090	0.0500	0.0030	0.0780	0.0200	3.9000

Table 2.1.1.3 Maximum annual river concentrations (µg/l) reported by countries in 1999-2009

CountryCode	1,1,2,2-tetrachloroethene	1,2-Dichloroethane	4-Nonylphenol	Alachlor	Aldrin	Anthracene	Atrazine	Benzene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene
AT		0.750		0.050	0.001	0.005	0.179	1.611	0.008	0.008	0.007
BA				0.100	1.020	0.413	0.100	1.000	0.258	0.534	0.100
BE	0.349	2.223	0.041	0.102	0.009	0.081	1.196	0.835	0.086	0.098	0.138
BG					0.009						
CY	0.031	0.031		0.258	0.001	4.000	0.030	0.140	0.002	0.004	0.004
CZ		0.544		8.011	0.003		0.201	5.243	295.629	349.568	217.627
DE	0.650	13.000			0.035	0.050	0.340	10.500	0.050	0.050	0.050
EE											
ES	7.200	1.000		0.073	0.008	0.011	0.081	0.833	0.008	0.001	0.015
FI			0.100	0.032	0.016	0.002	0.008		0.006	0.010	0.007
FR	3.675	19.500	0.533	0.271	0.108	0.094	1.120	1.500	0.115	0.137	0.090
GB	0.563	1.200	0.265		0.005	0.032	0.045	3.000	3.013	0.918	0.155
GR					0.007		0.500				
HR				0.054	0.005	0.001	0.353	0.150	0.001	0.002	0.001
HU							739.953	1.218			
CH											
IE		0.600	0.010	0.005	0.005	0.004	0.063	0.583	0.035	0.038	0.015
IS											
IT	53.833	155.000		50.000	50.000	58.333	50.000	185.000	50.000	50.000	50.000
LT	0.155	12.500	0.025		0.003	0.004	0.500	0.028	0.004	0.004	0.006
LU	0.050	10.000		0.005		0.013	0.102	2.500	0.027	0.030	0.025
LV					0.004	0.019		1.000	0.014	0.012	0.013
MK											
NL	0.083	0.374		0.010	0.020	0.020	0.013	0.041	0.016	0.025	0.017
NO											
PL	2.500	5.000		0.250	3.000	0.052	0.517	12.500	0.191	0.067	0.071
PT				0.015	0.005	0.040	0.035	0.860	0.002	0.046	0.018
RO				0.050	0.006	0.363	0.037		0.009	0.011	0.009
RS				0.010	0.030		0.822		0.050	0.050	0.050
SE				0.010			0.010				
SI	1.000	0.250	0.026	0.025	0.005	0.002	0.260	0.500	0.005	0.003	0.003
SK	1.050	4800.000	0.460	0.004	0.010	0.035	0.198	1.867	6.000	0.037	2.667

Table 2.1.1.3 continued

CountryCode	Benzo(k)fluoranthene	Cadmium	DDD, p,p'	DDE, p,p'	DDT, o,p'	DDT, p,p'	Di (2-ethylhexyl) phthalate	Dieldrin	Dichloromethane	Diuron	Endosulfan
AT	0.005	1.193				0.015	0.988	0.002	0.750	0.013	
BA	0.270	7.250	0.010	0.010		0.010	100.000	0.779	0.400	0.100	
BE	0.046	16.172	0.001	0.001	0.001	0.012	1.297	0.003	2669.345	3.506	0.002
BG		42.167						0.009			
CY	0.002	0.438	0.002	0.001	0.002	0.002	11.350	0.001	1.500	0.025	
CZ	150.002	2.426	58.076	41.425		16.933		0.004		0.586	
DE	0.050	113.276	2.500	2.500		2.500		0.015	30.000	0.274	
EE		0.111									
ES		66.667					0.008		3.333	0.017	0.014
FI	0.010	0.208	0.016	0.016	0.005	0.016	0.900	0.032		0.109	
FR	0.066	6.440	0.025	0.025	0.025	0.100	466.929	0.015	50.000	2.153	
GB	0.463	2.012	0.001	0.005	0.005	0.005	61.244	0.005	4.265	4.429	0.024
GR		0.820	0.002	0.002	0.060	0.009		0.005			
HR	0.001	0.783	0.050	0.050		0.050		0.005	0.200	0.010	0.005
HU		642.513	2.500	2.500	2.500	10.000		6.300			
CH		1.000									
IE	0.020	2.550					0.274	0.005	0.279	0.124	
IS		0.002									
IT	50.000	508.333	50.000	0.010	50.000	50.000	50.000	50.000	636.200	50.000	0.050
LT	0.002	0.250	0.010			0.167	0.005	0.002	0.438	0.050	0.002
LU	0.018						0.538		10.000	0.200	
LV	31.500	0.330	0.007	0.001	0.007	0.007		0.001			
MK		3563.600									
NL	0.011	1.995	0.001	0.001	0.001	0.001	1.392	0.015	10.000	0.131	0.000
NO		0.065									
PL	0.038	1412.500			0.023	0.011		0.018	17.250	0.450	0.011
PT	0.009	3.630						0.061		55.500	
RO	0.009	53.000				0.015					
RS	0.050	1.587	0.011	0.002	0.011	0.044		0.024		0.160	
SE		0.214								0.017	
SI	0.003	0.133	0.004	0.002	0.005	0.004	0.247	0.005	2.500	0.013	
SK	0.007	0.580	0.010	0.005	0.010	0.023	14.642	0.021	3.471	0.006	0.002

Table 2.1.1.3 continued

CountryCode	Endrin	Fluoranthene	gamma-HCH	Hexachlorobenzene	Hexachlorobutadiene	Chlorfenvinphos	Chlorpyrifos	Indeno(1,2,3-cd)pyrene	Isodrin	Isoproturon	Lead
AT	0.001	0.037	0.008	0.001	0.005		0.002	0.008	0.002	0.027	45.833
BA		4.877	0.000	0.100		0.100	0.100	0.104		0.100	39.497
BE	0.003	156.886	0.095	0.001	0.024	0.165	0.046	0.075	0.003	1.157	33.391
BG	0.009								0.009		87.000
CY	0.002	4.000		4.000	4.000	0.034	0.007	0.002		0.025	1.554
CZ	0.005	914.427	3.001	20.862	0.146		0.014	207.377	0.003	0.651	69.408
DE	0.020	4.000	0.050	0.050	0.100			0.050	0.025	0.585	22.210
EE											3.100
ES		0.005		0.007	0.083	0.120	0.197			0.049	3.818
FI	0.081	0.010	0.016	0.081	0.166	0.032	0.032	0.006	0.032	0.024	3.631
FR	0.025	0.345	0.113	0.500	0.875	1.980	0.100	0.075	0.035	0.883	110.000
GB	0.005	30.000	0.006	0.155	0.010	0.445	0.009	0.058	0.005	24.801	30.586
GR	0.009		0.002				0.042		0.009		10.480
HR	0.050		0.050	0.000	0.050	0.005		0.002	0.005	0.006	11.917
HU	15.250		9.879								13.108
CH											1.100
IE	0.005	0.075		0.005	0.500	0.010		0.024	0.005	0.810	5.000
IS											0.017
IT	50.000	50.000	50.000	50.000	50.000	172.727	172.727	75.000	50.000	50.000	6490.910
LT	0.002	0.018	0.050	0.050	0.025	0.250	0.250	0.007	0.002	0.085	11.800
LU		0.075	0.006	0.005	0.005	0.050		0.025		0.200	
LV	0.018	0.029	0.001	0.001				0.018			2.987
MK											4220.000
NL	0.003	0.048	0.001	0.001	0.010	0.010	0.022	0.041	0.008	0.042	18.653
NO			0.000								1.074
PL	0.050	0.120		0.010	5.000	0.800	0.195	0.273	0.006	0.250	5800.000
PT	0.005	0.010	0.014			0.007		0.002	0.002		25.000
RO	0.019	0.021	0.015	0.001				0.009			115.200
RS	0.009	0.050	0.004	0.011		0.005	0.013	0.050	0.002	0.029	15.911
SE			0.007			0.021	0.014			0.229	9.475
SI	0.005	0.006	0.003	0.005	0.050	0.025	0.005	0.003	0.002	0.020	3.470
SK	0.023	0.073	0.100	0.020	0.100	0.005	0.009	0.041	0.005	0.003	15.080

Table 2.1.1.3 continued

CountryCode	Mercury	Naphthalene	Nickel	Para-tert-octylphenol	Pentachlorobenzene	Pentachlorophenol	Simazine	Tributyltin cation	Trifluralin	Trichloromethane
AT	10.379	0.092	30.396		0.002	0.007	0.093		0.007	0.112
BA	2.000	0.691	58.333			0.100	0.100			0.400
BE	0.859	0.946	19.458	0.558	0.004	0.207	0.527	0.002	0.024	1.481
BG	0.500		155.000							
CY	0.300	4.000	243.095				0.200		0.134	0.117
CZ	3.148		50.609				0.045		1.627	
DE	200.000	2.500	23.900			0.500	0.100	0.010	0.250	5.690
EE			1.700							
ES	0.042	0.833	21.000		0.002	0.130	0.108		0.066	1.200
FI	0.150	0.019	29.308	0.100	0.032		0.016		0.032	
FR	1.000	0.916	99.500	2500.000	0.610	1.607	0.170	0.025	0.100	31.083
GB	0.155	59.435	1554.667	19.304	0.001	0.167	0.062	0.006	0.038	1.290
GR	0.933		7.710				0.026			
HR	0.050		24.782		0.000	1.077	0.180			0.946
HU	75.225		218.409			2.000				5.000
CH	0.050									
IE	0.233	0.500	100.333	0.010	0.005	0.007	0.066		0.005	
IS	0.001									
IT	550.000	0.250	8790.580	50.000	50.000	104.545	50.000		50.000	479.200
LT	0.131	0.005	13.722		0.002	1.350	0.500		0.250	345.925
LU					0.010	0.005	0.050			0.250
LV	0.105	24.000	5.467							1.000
MK			3724.170							
NL	0.064	0.115	35.389	0.165	0.001	0.100	0.016		0.010	0.072
NO	0.006		15.517							
PL	1461.000	0.250	7125.000	0.050	0.045	0.250	1.000	0.000	10.000	16.667
PT	1.040	6.143	2.500			0.000				
RO	2.500	0.360	75.250		1.125					
RS	0.160		127.533			0.100	0.090		0.015	
SE	4.417		9.783				0.009		0.008	
SI	0.325	0.010	22.140	0.008	0.002	0.025	0.070		0.025	6.425
SK	3.113	11.501	7.683	0.077	0.018	0.094	0.023	0.005	0.501	6700.000

2.1.2 Occurrence and concentrations of hazardous substances

Charts based on the long-term indicator are shown in figures 2.1.2.1a – 2.1.2.41a for selected hazardous substances in lakes across Europe in stations with data from the period 1999 - 2009.

Charts based on long-term indicator are shown in figures 2.1.2.42a – 2.1.2.83a for selected hazardous substances in rivers across Europe in stations with data from the period 1999 - 2009.

Charts showing the percentage of stations in the 2008-2009 period for each country in each of the indicator categories for selected hazardous substances in lakes are shown in figures 2.1.2.1b – 2.1.2.41b.

Charts showing the percentage of stations in the 2008-200 period for each country in each of the indicator categories for selected hazardous substances in rivers are shown in figures 2.1.2.42b – 2.1.2.83b.

Maps showing data from the 2008-2009 period based on the above indicator for selected hazardous substances in lake stations across Europe are shown in figures 2.1.2.1c –2.1.2.41c.

Maps showing data from the 2008-2009 period based on the above indicator are shown for selected hazardous substances in river stations across Europe in figures 2.1.2.42c – 2.1.2.83c.