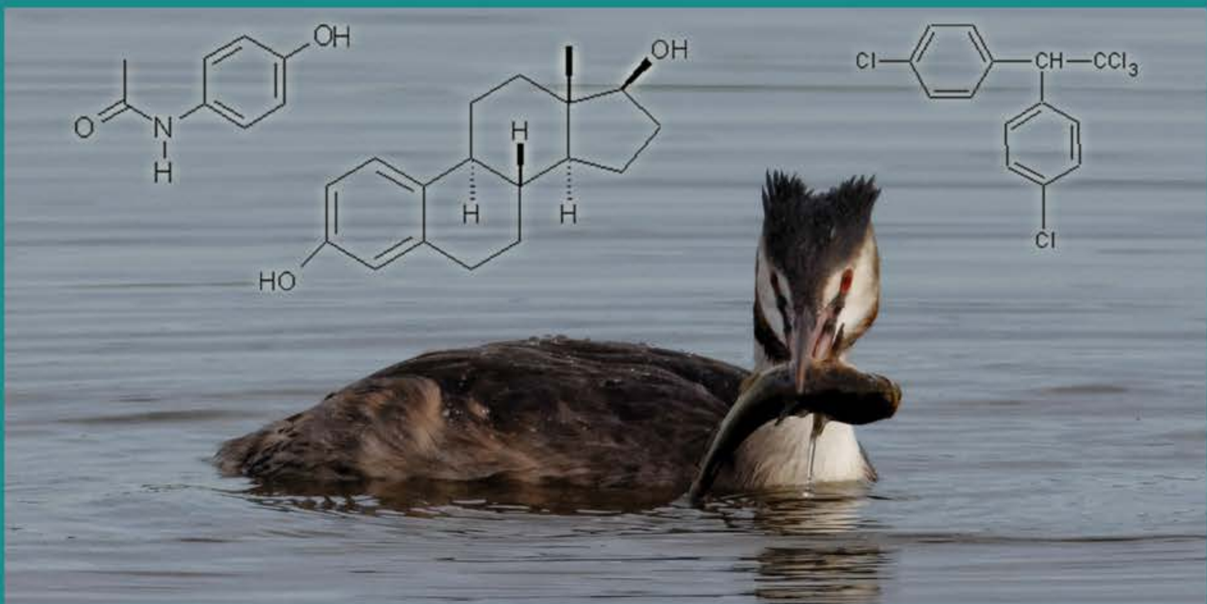
EEA/NSV/13/002 – ETC/ICM

European Topic Centre
Inland, coastal, marine waters

# Hazardous Substances in European waters
# Volume 1

## Analysis of the data on hazardous substances in groundwater, rivers, lakes, transitional, coastal and marine waters reported to the European Environment Agency from 2002–2011

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**Cover photo**: Chemical pollution of water and the water dependent foodchain. Great crested grebe eating a catfish at étang des landes, Creuse, France in water with substances paracetamol, oestradiol and DDT symbolizing hazardous substances in water.



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## Volume 1



## Volume 2

# 0 Executive summary

This ETC/ICM Technical Report on Hazardous Substances in Water is a complementary report to the European Environment Agency (EEA) Report No. 8/2011 – Hazardous Substances in Europe's Fresh and Marine Water[1].

This report is an update and extension ofthe ETC/ICM Technical Report No. 1/2013 'Hazardous substances in European waters – Analysis of the data on hazardous substances in groundwater, rivers, transitional, coastal and marine waters reported to the European Environment Agency from 1998–2010'. The report provides a systematic summary presentation of the data. It gives a quick overview of the state and availability of State of Environment (SoE) hazardous substances data in rivers, lakes, groundwater, transitional/coastal/marine waters, occurrence, concentrations levels and developments over time as well as "traffic light indicators" at country level by comparisons with quality standards, where applicable. These overviews are considered useful for a compact display of the thousands of data records for each substance, but should not be seen as an assessment of the situation between the reporting countries.

This report has been further developed from the ETC/ICM Technical Report No.1/2013 on hazardous substances to cover the new period 2002–2011 as well as including lake data for the first time. The marine environment assessment has not been updated with 2011 data, but a new comprehensive overview of the availability of marine biota and sediments has been added.

After a comprehensive clean-up of the database, including discarding of unrealistically low and high values, some of the river water samples reported from the countries were discarded from further data processing, due to a lack of essential supplementary data not submitted in a correct way. The quality of the hazardous substances data has been continually improved due to the on-going thorough quality assurance/quality control (QA/QC) procedures within the State of Environment (SoE) data reported to the European Environment Agency (latest version of tests from January–February 2015) and in the communication with respective national reference centers (NRCs) from member countries. Despite of the QA/QC done by the ETC/ICM, some of the presented values are still "questionable", which is highlighted in the text where applicable. Issues related to the limit of detection (LOD) or limit of quantification (LOQ) are the main cause for the exclusion of data and consequently, the provision of LOQ/LOD may significantly improve the data coverage.

The State of Environment (SoE) groundwater data show that mainly triazine pesticides and their metabolites (atrazine, desethylatrazine), heavy metals and metalloids (lead, arsenic) are the hazardous substances most frequently occurring and exceeding quality standards. For water in rivers and lakes, concentrations of cadmium, nickel, mercury, lead, and PAH-compounds reported as the sum of benzo(g,h,i)-perylene and indeno(1,2,3-cd)-pyrene were among the compounds that exceeded environmental quality standards (EQS) in most countries. For biota (fish and mussels) from transitional and coastal waters, high concentration levels are particularly seen for DDT and PCBs i.e. persistent substances with high bioaccumulation potential.

It is the aim that compilations such as this Technical Report, presenting data on hazardous substances in water and marine biota, may contribute to the European knowledge base on this important topic and enhance the use of these data by a number of different stakeholders.

The report provides overview statistics on methodological issues (chapter 2) and on the spatial and temporal data coverage (chapter 3) followed by the main part on presenting results from the monitoring data on hazardous substances in groundwater, the marine environment, rivers and lakes, respectively (chaper 4). The very comprehensive display of hazardous substances data in each of these water categories is presented by an initial statistical overview followed by graphical and tabular presentation per substance. This structure allows the user to search for information on the same

[1] http://www.eea.europa.eu/publications/hazardous-substances-in-europes-fresh

substance across different water categories. In the future, any updates of this report might happen by establishment of an interactive viewer at the EEA website enabling the user to create similar graphical and tabular displays of the data by direct querying the underlying European datasets.

# 1 Introduction

Hazardous substances occur in the freshwater and marine environment. Their effects on the environment and their potential risk to human health and socio-economics are considered serious and therefore considerable efforts have been channeled to combat their emissions to water and air. The reason for concern has been the proven and potential hazard that some chemicals have on humans, biota, and the environment due to their toxic, bio-accumulative and persistent characteristics. There are a lot of possible pathways to water ecosystem contamination. They occur not only at hot spots directly caused by a particular human activity. Diffuse pollution and long-range transport causes some substances also to be found at locations far away from point-sources.

Considerable efforts have been made to establish and maintain monitoring programs to assess the level, trends and effects of hazardous substances in water ecosystems throughout Europe via the Water Framework Directive (2000/60/EC) implementation for example. However, there is a lack of reliable and consistent information for many hazardous substances at pan-European level. State of Environment (SoE) hazardous substances data have until now not been used for an assessment in the form of indicators of the current status of the chemical pollution of Europe's waters except for some pesticides for the Agri-environmental indicator – pesticide pollution of water[2] and the marine indicator (MAR001[3]). This missing use of the SoE hazardous substances data in waterbase also influenced the analysis for this report as many data quality issues were only discovered during the processing of the SoE data.

The groundwater, river and lake data are solely based on SoE data and reflect the current status of the SoE dataflow and the resulting internal ETC/ICM working database on hazardous substances. From this database, extracts on annual averages and summary statistics have been published in the respective Waterbases for rivers, lakes, groundwater and transitional/coastal/marine environment within the Water Information System for Europe (WISE).

Some of the river and lake data were excluded from the assessment due to data quality issues. The limits of quantification (LOQ) differ among countries. The LOQ is very crucial for comparison of the results, especially for groundwater. As a matter of fact, some countries using low LOQs are somehow "penalized" compared to other countries with higher LOQs. This is due to the fact that those countries with low LOQs have a higher percentage of positive samples and are consequently indicating a more frequent occurrence of hazardous substances in each of these respective countries. On the other hand the countries should aim at applying chemical analytical methods with a lower LOQ, ideally equal or below a value of 30 % of the relevant environmental quality standard as required by the 2009/90/EC Directive[4] to ensure a comparable assessment throughout Europe.

The marine chapter is partly based on SoE data, partly on the Marine Conventions' (OSPAR and HELCOM) data.

SoE data collection for the EEA has been supported by the ETC/ICM within the Eionet network and takes place electronically via Reportnet[5]. The reporting obligations for the relevant dataflows, further addressed in this report, are defined in the Reporting Obligation Database (ROD) for the WISE-SoE

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[2] http://ec.europa.eu/eurostat/statistics-explained/index.php?title=Agri-environmental_indicator_-esticide_pollution_of_water&oldid=221211

[3] http://www.eea.europa.eu/data-and-maps/indicators/hazardous-substances-in-marine-organisms/hazardous-substances-in-marine-organisms-3

[4] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:201:0036:0038:EN:PDF

[5] http://www.eionet.europa.eu/reportnet

reporting: Groundwater quality[6], Rivers Water Quality[7], Lakes Water Quality[8] (from 2015 onwards combined into one joint reporting obligation on water quality) and Transitional, Coastal and Marine Waters (TCM)[9], respectively. From these ROD pages, links are provided to the reporting guidelines, and further description of the datasets and data models (Data Dictionary). The SoE data are processed by the ETC/ICM, which includes quality assessment (QA) and quality check (QC) and, where applicable, also processing of annual averages from dis-aggregated data per station (individual samples). Further details of the process are described in Chapter 2 and 3. The data are published and are freely available for download from Waterbase[10] for each of the dataflows. For groundwater, rivers and lakes, annual averages are published. For TCM-data, the individual measurements are available in Waterbase, however, only results from biota monitoring used for the indicator and from sediment monitoring are presented in this report.

The SoE data reported to the EEA do not fully represent all of the national data on hazardous substances, but their selection should provide a representative overview of the water quality in each member country of the European Environment Agency. The aim of this report is to provide an updated overview of information on hazardous substances in the working database, SoE data availability and the occurrence of hazardous substances throughout Europe including spatial and temporal changes.

This report is supposed to be a periodical Technical Report updated every second year, however, other means of interactive display of the data is planned. The feedback and suggestions for the improvement of this report by EEAs 39 National Reference Centres (NRCs) is highly desirable to assure better quality of the next issue of this report – or other means of displaying the results – that will cover the 10 year period of 2005–2014.

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[6] http://rod.eionet.europa.eu/obligations/30

[7] http://rod.eionet.europa.eu/obligations/28

[8] http://rod.eionet.europa.eu/obligations/29

[9] http://rod.eionet.europa.eu/obligations/630

[10] http://www.eea.europa.eu/themes/water/dc#tab-datasets

# 2 Methodology

## *2.1 Groundwater*

For the analysis of hazardous substances concentrations in groundwater a dataset from data reported via the Water Information System for Europe – State of Environment (WISE-SoE, also called EIONET-Water) reporting to the EEA and stored in the ETC/ICM internal working database was used. The dataset is highly heterogeneous with uneven spatial and temporal coverage and is currently not directly supporting any EEA thematic indicator. Data from the period 2002–2011 were used for hazardous substances analysis. The majority of concentration data were reported as "total" and just some data for metals as "dissolved" concentrations depending on the country and even the year. Both forms of metal concentrations were assessed separately in this report. Even though considering just the dissolved fractions of metals would be the most appropriate approach, due to the state of the data described above, it would lead to the elimination of the majority of the data from the processing. All the groundwater data presented in this report were handled in the same manner i.e. concentrations below limit of detection/quantification (LOD/LOQ) were replaced by half of the corresponding LOD/LOQ, with an exception for statistics of maximum concentrations and the statistics of positive/negative findings.

The monitoring sites have been chosen as the spatial assessment units. Since the analysis should provide comparable information throughout Europe, the Directive 98/83/EC on the quality of water intended for human consumption also known as Drinking Water Directive (DWD) which establishes Drinking Water quality standards (hereinafter referred to as DW) was used as common ground. For pesticides, the DW corresponds to the groundwater quality standards pursuant to the Directive 2006/118/EC on the protection of groundwater against pollution and deterioration, also known as Groundwater Directive (GWD). For naturally occurring pollutants (e.g. metals) in groundwater it would be advisable to refer to the groundwater threshold values which are the national groundwater quality standards. The natural background values might vary due to varying geological characteristics and the exceeding of drinking water standards does not always mean anthropogenic influence. In many cases it is not possible to improve groundwater quality due to natural circumstances. This is one of the reasons why threshold values were introduced. Additionally, threshold values also consider the receptors and uses that might be affected and causing risk in groundwater bodies, therefore threshold values for synthetic substances have been established in the EU Member States as well. The problem of various threshold values used throughout the EU Member States for Directive 2000/60/EC, also called Water Framework Directive (WFD), for its chemical status assessment might be solved if all Member States provide to ETC/ICM the corresponding threshold values established pursuant to the GWD in each Member State. The ETC/ICM would use the national threshold values for consecutive analysis in the next version of this Technical Report. This approach is not possible for the analysis for EEA member countries outside of the EU which have not established threshold values. From this perspective the use of drinking water standards currently seems to be the most feasible solution.

A hazardous substance "traffic light" indicator has been developed for groundwater based on Groundwater Quality Standards set out by GWD and the Drinking Water Standards set out by DWD and occurrence in groundwater. Both directives have a common standard for pesticides of 0.1 μg/l. The Drinking Water Standards (DW) also apply to the other hazardous substances, see Table 2.1.1. The majority of selected hazardous substances are considered extraneous; hence their natural concentration should be below the limit of detection/quantification (this only partly applies for heavy metals). Since groundwater dynamics are in most cases very slow, monitored concentrations are "naturally" averaged, thus the measured concentration of each hazardous substance is classified into three classes (below LOD/LOQ, above LOD/LOQ and still below or equal to the DW, above the DW). Substance with a concentration above the DW ("red light") is a substance representing a possible threat for European groundwaters. Substances with a concentration above the LOQ, but still not exceeding the DWare given a "yellow" light. This indicate a groundwater anthropogenically impacted by the occurrence of hazardous substances in case of synthetic compounds. In the case of metals, measurable concentrations may be due to natural conditions within the aquifer. Substances with a concentration below LOD/LOQ are given a “green light”. Occurrence in groundwater is indicated by at least one measurement above the LOQ and exceedance of the DW is indicated by at least one measurement exceeding the DW.

The selection of substances for the groundwater analysis has been done taking into account spatial and temporal coverage of available data within the ETC/ICM working database, relevance of substances for groundwater and EU legislation. Pre-selection of hazardous substances was based on EU legislation requirements e.g. WFD, GWD and DWD. Additionally, selected substances with sufficient spatial (number of countries) and temporal (time series) availability of data and with relevance for groundwater (occurrence, environmental properties) have been added to the resulting list of so called “preferred substances”. Those preferred substances should be preferentially reported to the EEA via WISE-SoE dataflow by all EEA member countries in order to improve the data quality and coverage.

**Table 2.1.1 Drinking water standards pursuant to the Directive 98/83/EC used for the analysis**

| Substance | CAS | Limit | Unit |
|---|---|---|---|
| 1,1,2,2-tetrachloroethene | 127-18-4 | 10* | µg/l |
| 1,1,2-trichloroethene | 79-01-6 | 10* | µg/l |
| 1,2-dichloroethane | 107-06-2 | 3 | µg/l |
| 2,4-D | 94-75-7 | 0.1 | µg/l |
| Alachlor | 15972-60-8 | 0.1 | µg/l |
| Arsenic | 7440-38-2 | 10 | µg/l |
| Atrazine | 1912-24-9 | 0.1 | µg/l |
| Bentazone | 25057-89-0 | 0.1 | µg/l |
| Benzene | 71-43-2 | 1 | µg/l |
| Benzo(a)pyrene | 50-32-8 | 0.01 | µg/l |
| Cadmium | 7440-43-9 | 5 | µg/l |
| Copper | 7440-50-8 | 2000 | µg/l |
| DDD, p,p' | 72-54-8 | 0.1 | µg/l |
| DDT, p,p' | 50-29-3 | 0.1 | µg/l |
| Desethylatrazine | 6190-65-4 | 0.1 | µg/l |
| Desisopropylatrazine | 1007-28-9 | 0.1 | µg/l |
| Dieldrin | 60-57-1 | 0.03 | µg/l |
| Diuron | 330-54-1 | 0.1 | µg/l |
| gamma-HCH (Lindane) | 58-89-9 | 0.1 | µg/l |
| Chlorpyrifos | 2921-88-2 | 0.1 | µg/l |
| Chromium | 7440-47-3 | 50 | µg/l |
| Isoproturon | 34123-59-6 | 0.1 | µg/l |
| Lead | 7439-92-1 | 10 | µg/l |
| Linuron | 330-55-2 | 0.1 | µg/l |
| MCPA | 94-74-6 | 0.1 | µg/l |

| Substance | CAS | Limit | Unit |
|---|---|---|---|
| Mecoprop | 7085-19-0 | 0.1 | µg/l |
| Mercury | 7439-97-6 | 1 | µg/l |
| Nickel | 7440-02-0 | 20 | µg/l |
| Prometryn | 7287-19-6 | 0.1 | µg/l |
| Propazine | 139-40-2 | 0.1 | µg/l |
| Simazine | 122-34-9 | 0.1 | µg/l |
| Terbuthylazine | 5915-41-3 | 0.1 | µg/l |
| Trifluralin | 1582-09-8 | 0.1 | µg/l |

* Drinking water standard for the Sum of 1,1,2,2,-tetrachloroethene and 1,1,2-trichloroethene

LOQs vary considerably among countries and even among the years, with in some cases 5 or more orders of magnitude, probably due to the errors in reported data. Some substances were also reported with 20 or more various LOQs throughout Europe, see Table 2.1.2. in the Annex. More details on the number of various LOQs reported by countries is given in Table 2.1.3 in the Annex for the whole of the 2002–2011 period and in Table 2.1.4 in the Annex for the 2010–2011 period. Lists of minimal and maximal LOQs reported by countries within the 2002–2011 period are provided in Tables 2.1.5 and 2.1.6 in the Annex, lists of minimal and maximal LOQs reported by countries within the 2010–2011 period are provided in Tables 2.1.7 and 2.1.8 in the Annex. Reported data below the LOQ that was higher than the drinking water standards (DW) were excluded from the analysis. Together 4831 values from the 2002–2011 period and 431 values from the 2010–2011 period were excluded. An overview of excluded values for the 2002–2011 period is given in Table 2.1.9 in the Annex and for the 2010–2011 period in Table 2.1.10 in the Annex.

## 2.2 Marine environment

There is a large number of potentially hazardous substances, but to date, only a few where data are available with sufficient geographical and temporal coverage to warrant a pan-European assessment. Therefore, the EEA pan-European assessment of the state of hazardous substances in marine organisms is based on the assessment of seven substances (cadmium, lead, mercury (total), the pesticides DDT (using pp'DDE as a representative of DDT) and lindane (γ-HCH), hexachlorobenzene (HCB), and PCBs (using chlorinated biphenyls CB28, CB52, CB101, CB118, CB138, CB153, and CB180 as representatives)) that form the core set of indicators for the EEA. All except PCBs are included in the lists of the WFD Daughter Directive 2008/105/EC, commonly referred to as Environmental Quality Standard Directive (EQSD). The assessment is solely based on the EEA MAR001 indicator. Data from the 1998–2010 period were used for hazardous substances assessment. Because there has not been an update of the EEA/ETC MAR001 indicator (Hazardous Substances in Marine Organisms), that is the basis for an assessment in this hazardous substances technical report, since the publication of the ETC/ICM Technical Report 1/2013, the marine assessment has not been updated with the 2011 data.

General trend assessments for the main regions are based on a tally of significant upward and downward trends for the contaminant and region in question (OSPAR, 2009). A significant dominance of time series trends in one direction is taken as indicating a regional trend in that direction.

Symbol colour (Table 2.2.1) shows the classification of recent concentration levels into Low, Moderate and High, based on comparing the upper 95% confidence limit of the estimated geometric mean for recent years with limits provided in Table 2.2.2. The selection of limits is currently being reassessed. For a series with less than 5 years of data, the mean is taken over all yearly medians, for a longer series the mean is the fitted trend value at the most recent year of the time series. Using the upper confidence limit means that the classification has a built-in bias against giving too good a classification; a short time series with a large between-year variation may get a worse classification than if a percentile level of observed concentrations was used. Symbol shape indicates four categories of trend assessment: Too few data, Not Significant, Up or Down. Assessment of level and trend requires at least 3 and 5 years of data, respectively, and including data from 2006 or later. In trend assessments, only data from the last 10 years were used. Symbols are placed at station positions without any geographical aggregation, so stations close to each other will overlap: Moderate may hide Low, and High may hide Low and Moderate indicated stations.

**Table 2.2.1 Map symbol description indicating Low, Moderate and High classes of concentrations, combined with four categories of time trend assessment**

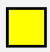
| Time trend assessment (requires at least 5 years of data) | Classification of recent level (requires at least 3 years of data) | | |
|---|---|---|---|
| | Low (green) | Moderate (yellow) | High (red) |
| Too few data (circle) |  |  |  |
| Not significant (square) |  |  |  |
| Decrease (arrow down) |  |  |  |
| Increase (arrow up) |  |  |  |

**Table 2.2.2 Limit concentrations used for the classification of recent concentration levels in figures and maps: Low/High concentration limits for spatial assessment which delimits the classes Low, Moderate and High. EU foodstuff limits are highlighted in a grey shade. Except for EU legislation, the limits have no legal application. All values are expressed in units of µg/kg and on a dry weight (D), wet weight (W) or a fat weight (L) basis. Many values are derived from OSPAR Background Assessment Concentration (BAC) or Eco-toxicological Assessment Criteria (EAC). NB: these concentrations are under development.**

Note: * indicates where limits have been revised (cf. EEA 2003). Limits for lindane in fish have also been added.

| Name and tissue | Latin name | Low/High limits | µg/kg | basis | Reference | Comment |
|---|---|---|---|---|---|---|
| CADMIUM | | | | | | |
| Mussels | Mytilus sp.[1] | Low | 960 | D | OSPAR 2008 | BAC limit |
| Mussels | Mytilus sp. | High | 5000 | D | EU 2006 | Foodstuffs limit for "bivalve molluscs", Regulation (EC) No. 1881/2006, conversion assuming 20% wet weight (cf. OSPAR CEMP assessment manual 2008, Table 2.1) |
| Atlantic cod, liver | Gadus morhua | Low | 26 | W | OSPAR 2008 | BAC limit |
| Atlantic cod, liver | Gadus morhua | High | 1000 | W | EU 2006 | Foodstuffs limit for "bivalve molluscs", Regulation (EC) No. 1881/2006 |
| Herring, muscle | Clupea harengus | Low | 26 | W | OSPAR 2008 | BAC limit |
| Herring, muscle | Clupea harengus | High | 1000 | W | EU 2006 | Foodstuffs limit for "bivalve molluscs", Regulation (EC) No. 1881/2006 |
| MERCURY | | | | | | |
| Mussels | Mytilus sp.[1] | Low | 90 | D | OSPAR 2008 | BAC limit |
| Mussels | Mytilus sp. | High | 2500 | D | EU 2006 | Foodstuffs limit for "fisheries products", Regulation (EC) No. 1881/2006, conversion assuming 20% wet weight (cf. OSPAR CEMP assessment manual 2008, Table 2.1) |
| Atlantic cod, muscle | Gadus morhua | Low | 35 | W | OSPAR 2008 | BAC limit |
| Atlantic cod, muscle | Gadus morhua | High | 500 | W | EU 2006 | Foodstuffs limit for "meat of fish molluscs", Regulation (EC) No. 1881/2006 |
| Herring, muscle | Clupea harengus | Low | 35 | W | OSPAR 2008 | BAC limit |
| Herring, muscle | Clupea harengus | High | 500 | W | EU 2006 | Foodstuffs limit for "meat of fish molluscs", Regulation (EC) No. 1881/2006 |
| LEAD | | | | | | |
| Mussels | Mytilus sp.[1] | Low | 1300 | D | OSPAR 2008 | BAC limit |

| Name and tissue | Latin name | Low/High limits | µg/kg | basis | Reference | Comment |
|---|---|---|---|---|---|---|
| Mussels | Mytilus sp. | High | 7500 | D | EU 2006 | Foodstuffs limit for "bivalve molluscs", Regulation (EC) No. 1881/2006, conversion assuming 20% wet weight (cf. OSPAR CEMP assessment manual 2008, Table 2.1) |
| Atlantic cod, liver | Gadus morhua | Low | 26 | W | OSPAR 2008 | BAC limit |
| Atlantic cod, liver | Gadus morhua | High | 1500 | W | EU 2006 | Foodstuffs limit for "bivalve molluscs", Regulation (EC) No. 1881/2006 |
| Herring, muscle | Clupea harengus | Low | 26 | W | OSPAR 2008 | BAC limit |
| Herring, muscle | Clupea harengus | High | 1500 | W | EU 2006 | Foodstuffs limit for "bivalve molluscs", Regulation (EC) No. 1881/2006 |
| HCB | | | | | | |
| Mussels | Mytilus sp.[1] | Low | 0.63 | D | OSPAR 2008 | BAC limit |
| Mussels | Mytilus sp. | High | 6.3 | D | | Taken as 10 times "Low" (or approximately the median of High:Low ratio for CBs in mussel, which is 8.6) |
| Atlantic cod, liver | Gadus morhua | Low | 0.18 | L | OSPAR 2008 | BAC limit times 2 (OSPAR [2]) |
| Atlantic cod, liver | Gadus morhua | High | 135 | L | | Taken as 750 times "Low" (median of High:Low ratio for CBs in cod) |
| Herring, muscle | Clupea harengus | Low | 1.8 | L | OSPAR 2008 | BAC [2] limit times 20 (OSPAR [2]) |
| Herring, muscle | Clupea harengus | High | 135 | L | | Taken as the same for cod, in pattern with CBs EAC's |
| LINDANE | | | | | | |
| Mussels | Mytilus sp.[1] | Low | 0.97 | D | OSPAR 2008 | BAC limit |
| Mussels | Mytilus sp. | High | 1.45 | D | OSPAR 2008 | EAC limit |
| Atlantic cod, liver | Gadus morhua | Low | 0.29 | L | | Taken as 1/750 times "High" (median of Low:High ratio for CBs in cod) |
| Atlantic cod, liver | Gadus morhua | High | 220 | L | | Taken as the same for herring |
| Herring, muscle | Clupea harengus | Low | 2.9 | L | | Taken as 10 times value for cod, as |
| Herring, muscle | Clupea harengus | High | 220 | L | OSPAR 2008 | Taken as OSPAR EAC (2008) = 11 * 20 (to convert wet weight to lipid weight – (OSPAR [2]) = 220 ppb l.w. |
| PCB (CB 28) | | | | | | |
| Mussels | Mytilus sp.[1] | Low | 0.75 | D | OSPAR 2008 | BAC limit |
| Mussels | Mytilus sp. | High | 3.2 | D | OSPAR 2008 | EAC limit |
| Atlantic cod, liver | Gadus morhua | Low | 0.2 | W | OSPAR 2008 | BAC limit times 2 (OSPAR [2]) |
| Atlantic cod, liver | Gadus morhua | High | 64 | L | OSPAR 2008 | EAC limit |

| Name and tissue | Latin name | Low/High limits | µg/kg | basis | Reference | Comment |
|---|---|---|---|---|---|---|
| Herring, muscle | Clupea harengus | Low | 2 | W | OSPAR 2008 | BAC limit times 20 (OSPAR [2]) |
| Herring, muscle | Clupea harengus | High | 64 | L | OSPAR 2008 | EAC limit |
| PCB (CB 52) | | | | | | |
| Mussels | Mytilus sp.[1] | Low | 0.75 | D | OSPAR 2008 | BAC limit |
| Mussels | Mytilus sp. | High | 5.4 | D | OSPAR 2008 | EAC limit |
| Atlantic cod, liver | Gadus morhua | Low | 0.16 | W | OSPAR 2008 | BAC limit times 2 (OSPAR [2]) |
| Atlantic cod, liver | Gadus morhua | High | 108 | L | OSPAR 2008 | EAC limit |
| Herring, muscle | Clupea harengus | Low | 1.6 | W | OSPAR 2008 | BAC limit times 20 (OSPAR [2]) |
| Herring, muscle | Clupea harengus | High | 108 | L | OSPAR 2008 | EAC limit |
| PCB (CB 101) | | | | | | |
| Mussels | Mytilus sp.[1] | Low | 0.7 | D | OSPAR 2008 | BAC limit |
| Mussels | Mytilus sp. | High | 6 | D | OSPAR 2008 | EAC limit |
| Atlantic cod, liver | Gadus morhua | Low | 0.16 | W | OSPAR 2008 | BAC limit times 2 (OSPAR [2]) |
| Atlantic cod, liver | Gadus morhua | High | 120 | L | OSPAR 2008 | EAC limit |
| Herring, muscle | Clupea harengus | Low | 1.6 | W | OSPAR 2008 | BAC limit times 20 (OSPAR [2]) |
| Herring, muscle | Clupea harengus | High | 120 | L | OSPAR 2008 | EAC limit |
| PCB (CB 118) | | | | | | |
| Mussels | Mytilus sp.[1] | Low | 0.6 | D | OSPAR 2008 | BAC limit |
| Mussels | Mytilus sp. | High | 1.2 | D | OSPAR 2008 | EAC limit |
| Atlantic cod, liver | Gadus morhua | Low | 0.2 | W | OSPAR 2008 | BAC limit times 2 (OSPAR [2]) |
| Atlantic cod, liver | Gadus morhua | High | 24 | L | OSPAR 2008 | EAC limit |
| Herring, muscle | Clupea harengus | Low | 2 | W | OSPAR 2008 | BAC limit times 20 (OSPAR [2]) |
| Herring, muscle | Clupea harengus | High | 24 | L | OSPAR 2008 | EAC limit |
| PCB (CB 138) | | | | | | |
| Mussels | Mytilus sp.[1] | Low | 0.6 | D | OSPAR 2008 | BAC limit |
| Mussels | Mytilus sp. | High | 15.8 | D | OSPAR 2008 | EAC limit |
| Atlantic cod, liver | Gadus morhua | Low | 0.18 | W | OSPAR 2008 | BAC limit times 2 (OSPAR [2]) |
| Atlantic cod, liver | Gadus morhua | High | 316 | L | OSPAR 2008 | EAC limit |
| Herring, muscle | Clupea harengus | Low | 1.8 | W | OSPAR 2008 | BAC limit times 20 (OSPAR [2]) |
| Herring, muscle | Clupea harengus | High | 316 | L | OSPAR 2008 | EAC limit |
| PCB (CB 153) | | | | | | |

| Name and tissue | Latin name | Low/High limits | µg/kg | basis | Reference | Comment |
|---|---|---|---|---|---|---|
| Mussels | Mytilus sp.[1] | Low | 0.6 | D | OSPAR 2008 | BAC limit |
| Mussels | Mytilus sp. | High | 80 | D | OSPAR 2008 | EAC limit |
| Atlantic cod, liver | Gadus morhua | Low | 0.2 | W | OSPAR 2008 | BAC limit times 2 (OSPAR [2]) |
| Atlantic cod, liver | Gadus morhua | High | 1600 | L | OSPAR 2008 | EAC limit |
| Herring, muscle | Clupea harengus | Low | 2 | W | OSPAR 2008 | BAC limit times 20 (OSPAR [2]) |
| Herring, muscle | Clupea harengus | High | 1600 | L | OSPAR 2008 | EAC limit |
| PCB (CB 180) | | | | | | |
| Mussels | Mytilus sp.[1] | Low | 0.6 | D | OSPAR 2008 | BAC limit |
| Mussels | Mytilus sp. | High | 24 | D | OSPAR 2008 | EAC limit |
| Atlantic cod, liver | Gadus morhua | Low | 0.22 | W | OSPAR 2008 | BAC limit times 2 (OSPAR [2]) |
| Atlantic cod, liver | Gadus morhua | High | 480 | L | OSPAR 2008 | EAC limit |
| Herring, muscle | Clupea harengus | Low | 2.2 | W | OSPAR 2008 | BAC limit times 20 (OSPAR [2]) |
| Herring, muscle | Clupea harengus | High | 480 | L | OSPAR 2008 | EAC limit |
| DDE (as DDT representative) | | | | | | |
| Mussels | Mytilus sp.[1] | Low | 0.63 | D | OSPAR 2008 | BAC limit |
| Mussels | Mytilus sp. | High | 6.3 | D | | Taken as 10 times "Low" |
| Atlantic cod, liver | Gadus morhua | Low | 0.2 | L | OSPAR 2008 | BAC limit times 2 (OSPAR [2]) |
| Atlantic cod, liver | Gadus morhua | High | 150 | L | | Taken as 750 times "Low" (median of High:Low ratio for CBs) |
| Herring, muscle | Clupea harengus | Low | 2 | L | OSPAR 2008 | BAC limit times 20 (OSPAR [2]) |
| Herring, muscle | Clupea harengus | High | 150 | L | | Taken as the same for cod, in pattern with CB's EACs |

[1] Blue mussel (Mytilus edulis) for the north-east Atlantic, Mediterranean mussel (M. galloprovincialis) for the Mediterranean and Black Sea.

[2] Used in the OSPAR statistical assessment (R.Fryer (Marine Lab., UK) pers. comm.)

## 2.3 Rivers and lakes

A selection of hazardous substances for the river and lake analysis with coherent Environmental Quality Standards (EQS) as annual average concentrations was performed according to Annex I of Environmental Quality Standard Directive (EQSD), later amended by the Directive 2013/39/EU (Table 2.3.1). The analysis draws upon data reported to the EEA from the National Monitoring Programs via WISE-SOE (Eionet-Water). Data for the period 2002–2011 were chosen for long term analysis, while data from 2010–2011 were used for the current status analysis. Preferably disaggregated data were used. In cases of missing disaggregated data, reported aggregated datasets were used instead.

**Table 2.3.1 Environmental Quality Standards (EQS) as Annual Average concentrations (AA) for surface freshwater pursuant to the Directive 2008/105/EC.**

| No. | Name of Substance | CAS Number | AA-EQS (µg/l) |
|---|---|---|---|
| (1) | Alachlor | 15972-60-8 | 0.3 |
| (2) | Anthracene | 120-12-7 | 0.1 |
| (3) | Atrazine | 1912-24-9 | 0.6 |
| (4) | Benzene | 71-43-2 | 10 |
| (6) | Cadmium and its compounds<br>(depending on water hardness classes) | 7440-43-9 | ≤ 0.08(Class1)<br>0.08(Class2)<br>0.09(Class3)<br>0.15(Class4)<br>0.25(Class5) |
| (8) | Chlorfenvinphos | 470-90-6 | 0.1 |
| (9) | Chlorpyrifos | 2921-88-2 | 0.03 |
| (9a) | Aldrin<br>Dieldrin<br>Endrin<br>Isodrin | 309-00-2<br>60-57-1<br>72-20-8<br>465-73-6 | Σ=0.01 |
| (9b) | DDT total | Not applicable | 0.025 |
| | DDT, p,p’ | 50-29-3 | 0.01 |
| (10) | 1,2-Dichloroethane | 107-06-2 | 10 |
| (11) | Dichloromethane | 75-09-2 | 20 |
| (12) | Di(2-ethylhexyl)-phthalate (DEHP) | 117-81-7 | 1.3 |
| (13) | Diuron | 330-54-1 | 0.2 |
| (14) | Endosulfan | 115-29-7 | 0.005 |
| (15) | Fluoranthene | 206-44-0 | 0.1 |
| (16) | Hexachlorobenzene (HCB) | 118-74-1 | 0.01 |
| (17) | Hexachlorobutadiene (HCBD) | 87-68-3 | 0.1 |
| (18) | Hexachlorocyclohexane | 608-73-1 | 0.02 |
| (19) | Isoproturon | 34123-59-6 | 0.3 |
| (20) | Lead and its compounds | 7439-92-1 | 7.2 |
| (21) | Mercury and its compounds | 7439-97-6 | 0.05 |
| (22) | Naphthalene | 91-20-3 | 2.4 |
| (23) | Nickel and its compounds | 7440-02-0 | 20 |
| (24) | Nonylphenol (4-Nonylphenol) | 104-40-5 | 0.3 |

| No. | Name of Substance | CAS Number | AA-EQS (µg/l) |
|---|---|---|---|
| (25) | Octylphenol (4-(1,1′,3,3′-tetramethylbutyl)-phenol) | 140-66-9 | 0.1 |
| (26) | Pentachlorobenzene | 608-93-5 | 0.007 |
| (27) | Pentachlorophenol | 87-86-5 | 0.4 |
| (28) | Polyaromatic hydrocarbons (PAH) | not applicable | not applicable |
| | Benzo(a)pyrene | 50-32-8 | 0.05 |
| | Benzo(b)fluoranthene | 205-99-2 | Σ=0.03 |
| | Benzo(k)fluoranthene | 207-08-9 | |
| | Benzo(g,h,i)-perylene | 191-24-2 | Σ=0.002 |
| | Indeno(1,2,3-cd)-pyrene | 193-39-5 | |
| (29) | Simazine | 122-34-9 | 1 |
| 29a) | Tetrachloroethylene (1,1,2,2-tetrachloroethene) | 127-18-4 | 10 |
| (30) | Tributyltin compounds (Tributyltin-cation) | 36643-28-4 | 0.0002 |
| (31) | Trichlorobenzenes | 12002-48-1 | 0.4 |
| (32) | Trichloromethane | 67-66-3 | 2.5 |
| (33) | Trifluralin | 1582-09-8 | 0.03 |

A hazardous substance “traffic light” indicator was developed for rivers and lakes, based on Environmental Quality Standards (EQS) provided from EQSD (Table 2.3.1). 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 equaling or larger than 1 (“red light”) is a substance posing a possible problem in European surface waters. Substances with an indicator between 0.8 and 1 are given a “yellow” light indicating a substance close to the EQS values. Substances with an indicator below 0.8 are given a “green light”.

It should be noted that whilst the respective EQS’s that originate from the EQSD have been used in this analysis, the analysed data do not arise from the Water Framework Directive (WFD) reporting, but the EEA’s WISE-SoE reporting, as mentioned before.

### River and lake data quality issues and data processing

For both lakes and rivers data, some QC rules were applied by the respective database managers. During autumn 2014, a document on improvement of QC procedures for hazardous substances in surface waters was developed. It was focussing on lower and upper limits of reported data to discard obviously wrong values (called simple outliers in the methodology), and to identify potentially suspicious values (called complex outliers) requiring further exploration with the data provider. For the current report, the dataset used for rivers and lakes exclude obvious wrong values (simple outliers) and follow the data processing rules detailed hereunder.

Compared to rivers, data submitted for hazardous substances in lakes were scarce, with respect to countries, numbers of stations and time developments. The various types of hazardous substances (pesticide, metal or industrial chemical) were more or less equally reported in the different stations.

The quality of data reported from the countries varied, and during the compilation of the data it was discovered that a substantial amount of data had been incorrectly submitted or essential information was missing or ambiguity on the determinand was existing. In order to reduce the uncertainty and improve the quality assurance, a considerable amount of river and lake data were excluded from the analysis. Both LOD (Limit of Detection) and LOQ (Limit of Quantification) are often not reported at all or values were set at zero. Reported LOD or LOQ above the EQS were also excluded, in order to remove uncertainties related to analytical concerns, to ensure that results < a high LOQ should not appear as “traffic light indicators” exceeding EQS and to make it visible that countries should aim at applying chemical analytical methods with a lower LOD or LOQ, ideally equal or below a value of 30 % of the relevant EQS as required by the Directive 2009/90/EC also known as Quality Assessmenta and Quality Control Directive (QA/QC Directive).

The number of different LOQs is very high and in some cases, very high LOQs are considered questionable and potentially subject to unit errors. Part of the data should not have passed the QC. We will address those issues in an improvement of automated QA/QC procedures in the next reporting exercise. An overview of how the data and individual compounds were treated is given below.

*Data processing rules*

- Data from 2002–2011 included.
- Records with the concentration = 0 or outside the plausible range (simple outlier) were excluded.
- Records with LOD and LOQ = 0 (both aggregated and disaggregated data) or missing LOQ (aggregated data only) were excluded.
- Records with unknown/ambiguous determinand were excluded.
- Values below LOD, or with LOQ > EQS were excluded.
- Concentrations exceeding upper limits empirically set for each substance were excluded in order to avoid unit errors or decimal order errors.
- Data used for the table depicting maximum concentrations below LOD or LOQ, were flagged with [or <, respectively.
- For the calculation of mean concentrations, reported concentrations flagged with [or <, were divided by ½, according to the Directive 2009/90/EC, Article 5, paragraph 1.
- Number of samples = number of all measurements.
- Number of samples below LOD or LOQ = number of samples flagged with [or <.
- When both LOD and LOQ were provided, LOQ was used in the calculations.
- Substances used for sum calculations (Σ):
  - Benzo(b)fluoranthene, Benzo(k)fluoranthene
  - Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene
  - Aldrin, Endrin, Dieldrin, Isodrin
  - DDD-p,p', DDE-p,p’, DDT-o,p', DDT-p,p'
  - Alpha-HCH, Beta-HCH, Delta-HCH, Epsilon-HCH, Gamma-HCH (Lindane)
- Sum calculations were performed according to the Directive 2009/90/EC, Article 5, paragraph 3 requirements.

*Issues regarding metals*

According to EQSD, Part B, paragraph 3, EQS for metals (Hg, Ni, Cd, and Pb) refers to the dissolved concentration, i.e. the dissolved phase of a water sample obtained after filtration through a 0.45 µm filter or any equivalent pre-treatment. Some, but few countries had reported metal data on the dissolved fraction. In the analysis, a separation between data reported as dissolved metal and “all other” fractions is given, to elucidate this issue.

For Cd and its compounds, the EQS values vary depending on the hardness of the water as specified in the five class categories. Few of the countries have reported hardness of the water concurrently with Cd concentrations. Due to the missing hardness data, the EQS of 0.15 µg/l corresponding to a water hardness of 100 to < 200 mg/l of $CaCO_3$ was selected for data analysis where no information on hardness was provided.

*Overview of excluded data*

A substantial amount of data was excluded due to deficiency in reported coordinates, and issues related to LOD and LOQ. Issues related to LOD, LOQ > EQS accounted for most of the data excluded. Considerable numbers of river data were excluded from especially Spain (ES) (63.5 %) and the Former Yugoslav Republic of Macedonia (MK) (43.6 %), mainly due to LOD, LOQ > EQS. Data from several other countries were excluded as well and data submission should be improved, as well as the use of analytical methods with LOD or LOQ lower than EQS. In rivers, there was no difference whether data for metals or organic substances were excluded due to a high LOD or LOQ.

LOQs vary considerably among countries and years, in some cases with 9 or more orders of magnitude, probably due to errors in reported data and some substances (mainly metals) were reported with 63 or more various LOQs throughout Europe; see Table 2.3.2 (rivers) and 2.3.8 (lakes) in the Annex. More detail on the number of various LOQs reported by countries for the whole of the 2002–2011 period is given in Table 2.3.3 (rivers) and Table 2.3.9 (lakes) in the Annex. Lists of minimal and maximal LOQs reported by countries within the 2002–2011 period are provided in Tables 2.3.4 and 2.3.5 (rivers) and Tables 2.3.10 and 2.3.11 (lakes) in the Annex. Some very high LOQs in the mg/l range may potentially be subject to unit errors, however, as these have been excluded from the dataset they do not appear on the visualisations in this report.

An overview of excluded values per substance for the whole of Europe for the 2010–2011 period is given in Table 2.3.6 (rivers) and Table 2.3.12 (lakes) in the Annex. An overview of the numbers of excluded values in countries for the 2010–2011 period is given in Table 2.3.7 (rivers) and Table 2.3.13 (lakes) in the Annex.

# 3 Overview of available SoE data, temporal and spatial coverage

This chapter briefly describes the status of the data available to the EEA through the agreed reporting of State of Environment (SoE) data. The ETC/ICM data managers do all data processing in working databases including importing, quality assurance/quality control (QA/QC), aggregation, querying and the exporting of data. Then the data gets exported to the EEA‘s Waterbase and quality flagged. Due to practical reasons, the data for this report were prepared from the so-called “working databases” maintained at the ETC/ICM servers, however, it is the same data-values published in the EEA’s Waterbase (quality assured and aggregated data per station and year for rivers or per groundwater body and per year for groundwater). SoE datasets are not temporally and spatially homogenous: there are gaps in the time series, the countries report various sets of hazardous substances data, with various Limits of Detection (LOD) or Quantification (LOQ) that change over time and LOD/LOQ may differ by up to three orders of magnitude depending on the reporting country. Some very extreme values were discovered in working databases during the processing of the data for this report additionally to the issues described in the previous chapter. The feedback from 15 countries regarding a draft of this report helped to improve the quality of data in the ETC/ICM working databases and enhanced the overall quality of this report.

## *3.1 Groundwater*

There are more than 2 800 000 reported values for selected hazardous substances (see Table 3.1.1 for the list of substances) in more than 7 700 groundwater stations for the 2002–2011 period available in the SoE database. Generally speaking the most complete datasets are available for metals, followed by pesticides. The number of reported values significantly increased over the 2002–2011 period. Recently the SoE databases were updated with a considerable amount of data, predominantly for recent years.

**Table 3.1.1 Temporal availability of SoE groundwater data for selected hazardous substances in the 2002–2011 period**

| Substance | No. of years | Period |
|---|---|---|
| 1,1,1-trichloroethane | 10 | 2002-2011 |
| 1,1,2,2-tetrachloroethene | 10 | 2002-2011 |
| 1,1,2-trichloroethene | 10 | 2002-2011 |
| 1,2-Dichloroethane | 10 | 2002-2011 |
| 2,4-D | 10 | 2002-2011 |
| 4-nonylphenol | 10 | 2002-2011 |
| Alachlor | 10 | 2002-2011 |
| Aldrin | 10 | 2002-2011 |
| Alpha-Endosulfan | 10 | 2002-2011 |
| Alpha-HCH | 10 | 2002-2011 |
| Anthracene | 10 | 2002-2011 |
| Arsenic | 10 | 2002-2011 |
| Arsenic dissolved | 10 | 2002-2011 |
| Atrazine | 10 | 2002-2011 |
| Bentazone | 10 | 2002-2011 |
| Benzene | 10 | 2002-2011 |
| Benzo(a)pyrene | 10 | 2002-2011 |
| Benzo(b)fluoranthene | 10 | 2002-2011 |
| Benzo(g,h,i)perylene | 10 | 2002-2011 |
| Benzo(k)fluoranthene | 10 | 2002-2011 |
| Beta-HCH | 10 | 2002-2011 |
| Cadmium | 10 | 2002-2011 |
| Cadmium dissolved | 10 | 2002-2011 |
| Chlorfenvinphos | 10 | 2002-2011 |
| Chloroalkanes C10-13 | 7 | 2002-2011 |
| Chlorpyrifos | 10 | 2002-2011 |
| Chromium | 10 | 2002-2011 |
| Chromium dissolved | 10 | 2002-2011 |
| Copper | 10 | 2002-2011 |
| Copper dissolved | 10 | 2002-2011 |
| DDD, p,p' | 10 | 2002-2011 |
| DDE, p,p' | 10 | 2002-2011 |
| DDT, o,p' | 10 | 2002-2011 |
| DDT, p,p' | 10 | 2002-2011 |
| Desethylatrazine | 10 | 2002-2011 |
| Desisopropylatrazine | 10 | 2002-2011 |

| Substance | No. of years | Period |
|---|---|---|
| Di (2-ethylhexyl) phthalate (DEHP) | 8 | 2002-2011 |
| Dichloromethane | 10 | 2002-2011 |
| Dieldrin | 10 | 2002-2011 |
| Diuron | 10 | 2002-2011 |
| Endrin | 10 | 2002-2011 |
| Fluoranthene | 10 | 2002-2011 |
| Gamma-HCH (Lindane) | 10 | 2002-2011 |
| Hexachlorobenzene (HCB) | 10 | 2002-2011 |
| Hexachlorobutadiene (HCBD) | 10 | 2002-2011 |
| Indeno(1,2,3-cd)pyrene | 10 | 2002-2011 |
| Isodrin | 10 | 2002-2011 |
| Isoproturon | 10 | 2002-2011 |
| Lead | 10 | 2002-2011 |
| Lead dissolved | 10 | 2002-2011 |
| Linuron | 10 | 2002-2011 |
| MCPA | 10 | 2002-2011 |
| Mecoprop | 10 | 2002-2011 |
| Mercury | 10 | 2002-2011 |
| Mercury dissolved | 5 | 2002-2011 |
| Naphthalene | 10 | 2002-2011 |
| Nickel | 10 | 2002-2011 |
| Nickel dissolved | 10 | 2002-2011 |
| Para-tert-octylphenol | 6 | 2002-2011 |
| Pentachlorobenzene | 9 | 2002-2011 |
| Pentachlorophenol | 10 | 2002-2011 |
| Prometryn | 10 | 2002-2011 |
| Propazine | 10 | 2002-2011 |
| Simazine | 10 | 2002-2011 |
| Terbuthylazine | 10 | 2002-2011 |
| Terbutryn | 10 | 2002-2011 |
| Tetrachloromethane | 10 | 2002-2011 |
| Trichloromethane | 10 | 2002-2011 |
| Trifluralin | 10 | 2002-2011 |
| Zinc | 10 | 2002-2011 |
| Zinc dissolved | 10 | 2002-2011 |

**Table 3.1.2 No. of years with available groundwater data for countries within the 2002–2011 period**

| Substance | AL | AT | BA | BE | BG | CH | CY | CZ | DE | DK | EE | ES | FI | FR | GB | GR | HR | HU | IE | IS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-trichloroethane | 0 | 0 | 1 | 6 | 0 | 10 | 0 | 0 | 6 | 10 | 0 | 0 | 0 | 6 | 10 | 0 | 3 | 0 | 6 | 0 |
| 1,1,2,2-tetrachloroethene | 0 | 0 | 1 | 6 | 6 | 10 | 4 | 4 | 0 | 10 | 0 | 0 | 0 | 6 | 10 | 0 | 2 | 0 | 6 | 0 |
| 1,1,2-trichloroethene | 0 | 0 | 0 | 6 | 6 | 10 | 4 | 4 | 0 | 10 | 0 | 0 | 0 | 6 | 10 | 0 | 0 | 0 | 6 | 0 |
| 1,2-dichloroethane | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 9 | 6 | 3 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 6 | 8 |
| 2,4-D | 0 | 0 | 0 | 6 | 2 | 3 | 0 | 4 | 6 | 6 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 3 | 0 |
| 4-nonylphenol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 3 | 0 | 0 | 0 | 0 | 0 |
| Alachlor | 0 | 10 | 0 | 9 | 4 | 3 | 4 | 10 | 1 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 3 | 0 | 0 | 0 |
| Aldrin | 0 | 5 | 1 | 9 | 10 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 0 | 0 |
| Alpha-Endosulfan | 0 | 0 | 1 | 0 | 8 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 9 | 10 | 0 | 0 | 0 | 0 | 0 |
| Alpha-HCH | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 6 | 3 | 0 | 3 | 0 | 0 | 0 |
| Anthracene | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 9 | 3 | 0 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 1 | 8 |
| Arsenic | 0 | 0 | 2 | 4 | 4 | 10 | 4 | 4 | 3 | 10 | 4 | 0 | 0 | 5 | 10 | 3 | 2 | 0 | 9 | 0 |
| Arsenic dissolved | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 1 |
| Atrazine | 0 | 10 | 0 | 10 | 10 | 10 | 4 | 10 | 8 | 10 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 3 | 0 |
| Bentazone | 0 | 10 | 0 | 6 | 0 | 4 | 0 | 4 | 6 | 10 | 0 | 0 | 0 | 6 | 10 | 0 | 0 | 0 | 3 | 0 |
| Benzene | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 9 | 6 | 10 | 1 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 6 | 8 |
| Benzo(a)pyrene | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 9 | 6 | 1 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 1 | 8 |
| Benzo(b)fluoranthene | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 9 | 6 | 0 | 0 | 0 | 0 | 9 | 9 | 0 | 3 | 0 | 0 | 8 |
| Benzo(g,h,i)perylene | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 9 | 6 | 1 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 0 | 8 |
| Benzo(k)fluoranthene | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 9 | 6 | 0 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 0 | 8 |
| Beta-HCH | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 6 | 3 | 0 | 3 | 0 | 0 | 0 |
| Cadmium | 0 | 10 | 4 | 10 | 9 | 10 | 4 | 9 | 6 | 9 | 3 | 0 | 0 | 9 | 10 | 3 | 1 | 0 | 8 | 4 |
| Cadmium dissolved | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 10 | 4 |
| Copper | 3 | 10 | 4 | 10 | 9 | 7 | 5 | 9 | 4 | 9 | 0 | 0 | 0 | 9 | 10 | 3 | 1 | 0 | 8 | 6 |
| Copper dissolved | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 10 | 2 |
| DDD, p,p' | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 0 | 3 | 0 | 0 | 0 |
| DDE, p,p' | 0 | 0 | 0 | 5 | 10 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 0 | 0 |
| DDT, o,p' | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 9 | 1 | 0 | 0 | 0 | 0 | 9 | 10 | 0 | 1 | 0 | 0 | 0 |
| DDT, p,p' | 0 | 0 | 0 | 1 | 10 | 0 | 0 | 9 | 1 | 0 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 4 | 0 |
| Desethylatrazine | 0 | 10 | 0 | 6 | 2 | 9 | 0 | 4 | 6 | 10 | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 |
| Desisopropylatrazine | 0 | 0 | 0 | 6 | 2 | 9 | 0 | 4 | 6 | 10 | 0 | 0 | 0 | 6 | 9 | 0 | 0 | 0 | 0 | 0 |
| Di (2-ethylhexyl) phthalate (DEHP) | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 8 | 0 | 0 | 0 | 6 | 6 | 0 | 1 | 0 | 0 | 0 |
| Dieldrin | 0 | 0 | 1 | 9 | 10 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 4 | 0 |
| Dichloromethane | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 9 | 9 | 2 | 0 | 0 | 0 | 8 | 10 | 0 | 3 | 0 | 0 | 8 |
| Diuron | 0 | 10 | 0 | 10 | 1 | 7 | 0 | 8 | 8 | 6 | 0 | 0 | 0 | 9 | 10 | 0 | 0 | 0 | 3 | 0 |
| Endrin | 0 | 0 | 1 | 9 | 10 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 0 | 0 |
| Fluoranthene | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 9 | 6 | 1 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 0 | 8 |
| Gamma-HCH (Lindane) | 0 | 5 | 0 | 10 | 10 | 0 | 0 | 10 | 9 | 0 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 4 | 0 |
| Hexachlorobenzene (HCB) | 0 | 5 | 0 | 6 | 9 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 0 | 0 |
| Hexachlorobutadiene (HCBD) | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 7 | 3 | 0 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 0 | 0 |
| Chlorfenvinphos | 0 | 0 | 0 | 10 | 2 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 0 | 0 |
| Chloroalkanes C10-13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chlorpyrifos | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 10 | 2 | 0 | 0 | 0 | 0 | 8 | 10 | 0 | 3 | 0 | 0 | 0 |
| Chromium | 3 | 0 | 4 | 4 | 4 | 7 | 4 | 4 | 3 | 4 | 0 | 0 | 0 | 5 | 10 | 0 | 1 | 0 | 8 | 0 |
| Chromium dissolved | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 10 | 0 |
| Indeno(1,2,3-cd)pyrene | 0 | 0 | 0 | 10 | 1 | 0 | 0 | 9 | 4 | 1 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 0 | 8 |
| Isodrin | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 0 | 0 |
| Isoproturon | 0 | 8 | 0 | 10 | 0 | 7 | 0 | 10 | 9 | 6 | 0 | 0 | 0 | 9 | 10 | 0 | 0 | 0 | 3 | 0 |
| Lead | 3 | 10 | 4 | 10 | 9 | 10 | 4 | 9 | 3 | 9 | 3 | 0 | 0 | 9 | 10 | 3 | 1 | 0 | 8 | 6 |
| Lead dissolved | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 10 | 2 |
| Linuron | 0 | 8 | 0 | 10 | 0 | 0 | 0 | 8 | 6 | 1 | 0 | 0 | 0 | 9 | 10 | 0 | 0 | 0 | 0 | 0 |
| MCPA | 0 | 0 | 0 | 6 | 0 | 4 | 0 | 4 | 6 | 6 | 0 | 0 | 0 | 6 | 10 | 0 | 0 | 0 | 3 | 0 |
| Mecoprop | 0 | 0 | 0 | 6 | 0 | 3 | 0 | 2 | 6 | 10 | 0 | 0 | 0 | 6 | 10 | 0 | 0 | 0 | 3 | 0 |
| Mercury | 0 | 10 | 4 | 10 | 4 | 5 | 4 | 9 | 6 | 3 | 3 | 0 | 0 | 9 | 10 | 0 | 1 | 0 | 3 | 6 |
| Mercury dissolved | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 5 | 2 |
| Naphthalene | 0 | 0 | 0 | 9 | 0 | 4 | 0 | 9 | 2 | 10 | 0 | 0 | 0 | 8 | 10 | 0 | 3 | 0 | 1 | 8 |
| Nickel | 3 | 10 | 2 | 10 | 9 | 7 | 5 | 9 | 6 | 10 | 0 | 0 | 0 | 9 | 10 | 3 | 1 | 0 | 8 | 4 |
| Nickel dissolved | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 9 | 0 | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 10 | 4 |
| Para-tert-octylphenol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 5 | 0 | 0 | 0 | 0 | 0 |
| Pentachlorobenzene | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 9 | 4 | 0 | 2 | 0 | 0 | 0 |
| Pentachlorophenol | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 4 | 2 | 10 | 0 | 0 | 0 | 8 | 10 | 0 | 3 | 0 | 0 | 0 |
| Prometryn | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 4 | 6 | 0 | 0 | 0 | 0 | 6 | 10 | 0 | 0 | 0 | 0 | 0 |
| Propazine | 0 | 0 | 0 | 6 | 10 | 7 | 4 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 10 | 0 | 0 | 0 | 0 | 0 |
| Simazine | 0 | 10 | 0 | 10 | 10 | 10 | 4 | 10 | 10 | 10 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 1 | 0 |
| Terbuthylazine | 0 | 0 | 0 | 6 | 2 | 10 | 0 | 4 | 6 | 6 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| Terbutryn | 0 | 0 | 0 | 6 | 7 | 10 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 4 | 10 | 0 | 0 | 0 | 0 | 0 |
| Tetrachloromethane | 0 | 0 | 0 | 6 | 1 | 10 | 0 | 4 | 3 | 10 | 0 | 0 | 0 | 6 | 10 | 0 | 3 | 0 | 0 | 0 |
| Trifluralin | 0 | 0 | 0 | 10 | 4 | 0 | 4 | 10 | 5 | 0 | 0 | 0 | 0 | 9 | 10 | 0 | 0 | 0 | 0 | 0 |
| Trichloromethane | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 9 | 9 | 10 | 0 | 0 | 0 | 9 | 10 | 0 | 3 | 0 | 0 | 8 |
| Zinc | 3 | 10 | 5 | 10 | 9 | 7 | 1 | 9 | 6 | 9 | 0 | 0 | 0 | 9 | 10 | 3 | 2 | 0 | 8 | 6 |
| Zinc dissolved | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 10 | 2 |

## Table 3.1.2 continued

| Substance | IT | LI | LT | LU | LV | ME | MK | MT | NL | NO | PL | PT | RO | RS | SE | SI | SK | TR | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-trichloroethane | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 4 | 0 | 0 |
| 1,1,2,2-tetrachloroethene | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 6 | 0 | 0 |
| 1,1,2-trichloroethene | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 0 |
| 1,2-dichloroethane | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 10 | 0 | 0 |
| 2,4-D | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 0 | 0 |
| 4-nonylphenol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| Alachlor | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 5 | 0 | 0 |
| Aldrin | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 6 | 5 | 0 | 0 |
| Alpha-Endosulfan | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 8 | 0 | 0 | 0 |
| Alpha-HCH | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 |
| Anthracene | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| Arsenic | 1 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 0 | 0 | 0 | 4 | 5 | 0 | 0 |
| Arsenic dissolved | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Atrazine | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 9 | 10 | 0 | 0 |
| Bentazone | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 0 | 0 |
| Benzene | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 10 | 0 | 0 |
| Benzo(a)pyrene | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 |
| Benzo(b)fluoranthene | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| Benzo(g,h,i)perylene | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| Benzo(k)fluoranthene | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| Beta-HCH | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 |
| Cadmium | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 1 | 0 | 9 | 9 | 0 | 0 |
| Cadmium dissolved | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 |
| Copper | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 1 | 0 | 9 | 10 | 0 | 0 |
| Copper dissolved | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 1 | 0 | 4 | 4 | 0 | 0 | 0 | 1 |
| DDD, p,p' | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 |
| DDE, p,p' | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 |
| DDT, o,p' | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 5 | 0 | 0 | 0 |
| DDT, p,p' | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 3 | 5 | 0 | 0 |
| Desethylatrazine | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 0 | 0 |
| Desisopropylatrazine | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 3 | 0 | 0 |
| Di (2-ethylhexyl) phthalate (DEHP) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| Dieldrin | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 6 | 5 | 0 | 0 |
| Dichloromethane | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 5 | 0 | 0 |
| Diuron | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 3 | 0 | 0 |
| Endrin | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 3 | 5 | 0 | 0 |
| Fluoranthene | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 |
| Gamma-HCH (Lindane) | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 3 | 0 | 3 | 10 | 0 | 0 |
| Hexachlorobenzene (HCB) | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 1 | 10 | 0 | 0 |
| Hexachlorobutadiene (HCBD) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 4 | 0 | 0 |
| Chlorfenvinphos | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 8 | 3 | 0 | 0 |
| Chloroalkanes C10-13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chlorpyrifos | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 0 |
| Chromium | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 4 | 4 | 5 | 0 | 0 |
| Chromium dissolved | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 |
| Indeno(1,2,3-cd)pyrene | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| Isodrin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| Isoproturon | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 5 | 0 | 0 |
| Lead | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 1 | 0 | 9 | 10 | 0 | 0 |
| Lead dissolved | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 1 | 0 | 4 | 4 | 0 | 0 | 0 | 0 |
| Linuron | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 |
| MCPA | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 5 | 0 | 0 |
| Mecoprop | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| Mercury | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 1 | 0 | 9 | 10 | 0 | 0 |
| Mercury dissolved | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Naphthalene | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| Nickel | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 1 | 0 | 9 | 10 | 0 | 0 |
| Nickel dissolved | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 1 | 0 | 4 | 4 | 0 | 0 | 0 | 0 |
| Para-tert-octylphenol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| Pentachlorobenzene | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| Pentachlorophenol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 0 | 0 |
| Prometryn | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 0 | 0 |
| Propazine | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 6 | 0 | 0 | 0 |
| Simazine | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 9 | 10 | 0 | 0 |
| Terbuthylazine | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 0 | 0 |
| Terbutryn | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 |
| Tetrachloromethane | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 0 |
| Trifluralin | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 5 | 0 | 0 |
| Trichloromethane | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 6 | 0 | 0 |
| Zinc | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 1 | 0 | 9 | 10 | 0 | 0 |
| Zinc dissolved | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 1 | 0 | 4 | 4 | 0 | 0 | 0 | 1 |

## Table 3.1.3 No. of years with available groundwater data for countries within the 2010–2011 period

| Substance | AL | AT | BA | BE | BG | CH | CY | CZ | DE | DK | EE | ES | FI | FR | GB | GR | HR | HU | IE | IS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-trichloroethane | 0 | 0 | 1 | 2 | 0 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| 1,1,2,2-tetrachloroethene | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| 1,1,2-trichloroethene | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| 1,2-dichloroethane | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 2 |
| 2,4-D | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| 4-nonylphenol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Alachlor | 0 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 |
| Aldrin | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Alpha-Endosulfan | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Alpha-HCH | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Anthracene | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 2 |
| Arsenic | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 1 | 0 |
| Arsenic dissolved | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 |
| Atrazine | 0 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Bentazone | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Benzene | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 2 |
| Benzo(a)pyrene | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 2 |
| Benzo(b)fluoranthene | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 2 |
| Benzo(g,h,i)perylene | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 2 |
| Benzo(k)fluoranthene | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 2 |
| Beta-HCH | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Cadmium | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Cadmium dissolved | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 2 |
| Copper | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Copper dissolved | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 2 |
| DDD, p,p' | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 |
| DDE, p,p' | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| DDT, o,p' | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 0 | 0 |
| DDT, p,p' | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Desethylatrazine | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Desisopropylatrazine | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Di (2-ethylhexyl) phthalate (DEHP) | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 0 | 0 |
| Dieldrin | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Dichloromethane | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 2 |
| Diuron | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Endrin | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Fluoranthene | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 2 |
| Gamma-HCH (Lindane) | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Hexachlorobenzene (HCB) | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Hexachlorobutadiene (HCBD) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Chlorfenvinphos | 0 | 0 | 0 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Chloroalkanes C10-13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chlorpyrifos | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Chromium | 2 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Chromium dissolved | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 0 |
| Indeno(1,2,3-cd)pyrene | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 2 |
| Isodrin | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Isoproturon | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Lead | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Lead dissolved | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 2 |
| Linuron | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| MCPA | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Mecoprop | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Mercury | 0 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Mercury dissolved | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| Naphthalene | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 2 |
| Nickel | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Nickel dissolved | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 2 |
| Para-tert-octylphenol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Pentachlorobenzene | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Pentachlorophenol | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Prometryn | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Propazine | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Simazine | 0 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Terbuthylazine | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Terbutryn | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 |
| Tetrachloromethane | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 |
| Trifluralin | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| Trichloromethane | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 2 |
| Zinc | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 0 | 0 |
| Zinc dissolved | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 2 |

## Table 3.1.3 continued

| Substance | IT | LI | LT | LU | LV | ME | MK | MT | NL | NO | PL | PT | RO | RS | SE | SI | SK | TR | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-trichloroethane | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| 1,1,2,2-tetrachloroethene | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| 1,1,2-trichloroethene | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| 1,2-dichloroethane | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| 2,4-D | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| 4-nonylphenol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Alachlor | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Aldrin | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Alpha-Endosulfan | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Alpha-HCH | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Anthracene | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Arsenic | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Arsenic dissolved | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Atrazine | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Bentazone | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Benzene | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Benzo(a)pyrene | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Benzo(b)fluoranthene | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Benzo(g,h,i)perylene | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Benzo(k)fluoranthene | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Beta-HCH | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Cadmium | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Cadmium dissolved | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 |
| Copper | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Copper dissolved | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 |
| DDD, p,p' | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| DDE, p,p' | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| DDT, o,p' | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| DDT, p,p' | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Desethylatrazine | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Desisopropylatrazine | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Di (2-ethylhexyl) phthalate (DEHP) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dieldrin | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Dichloromethane | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Diuron | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Endrin | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Fluoranthene | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Gamma-HCH (Lindane) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Hexachlorobenzene (HCB) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Hexachlorobutadiene (HCBD) | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Chlorfenvinphos | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Chloroalkanes C10-13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chlorpyrifos | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Chromium | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 1 | 2 | 0 | 0 |
| Chromium dissolved | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Indeno(1,2,3-cd)pyrene | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Isodrin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Isoproturon | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Lead | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Lead dissolved | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 |
| Linuron | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| MCPA | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Mecoprop | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Mercury | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Mercury dissolved | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Naphthalene | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Nickel | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Nickel dissolved | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 |
| Para-tert-octylphenol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Pentachlorobenzene | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pentachlorophenol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Prometryn | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Propazine | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Simazine | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Terbuthylazine | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Terbutryn | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Tetrachloromethane | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Trifluralin | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Trichloromethane | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Zinc | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Zinc dissolved | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 |

## Table 3.1.4 Available groundwater samples within the 2002–2011 period

| Substance | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-trichloroethane | 309 | 661 | 480 | 708 | 1009 | 1052 | 2256 | 4224 | 4958 | 4652 | 4810 | 5797 | 4838 | **35754** |
| 1,1,2,2-tetrachloroethene | 309 | 680 | 490 | 762 | 1013 | 1054 | 2228 | 4157 | 5270 | 6024 | 6222 | 7364 | 6009 | **41582** |
| 1,1,2-trichloroethene | 309 | 682 | 490 | 763 | 1012 | 1055 | 2243 | 4219 | 5153 | 6051 | 6226 | 7260 | 5935 | **41398** |
| 1,2-dichloroethane | 794 | 736 | 462 | 726 | 1655 | 2571 | 3739 | 4404 | 5944 | 5616 | 5964 | 7072 | 5167 | **44850** |
| 2,4-D | 578 | 569 | 622 | 682 | 588 | 519 | 672 | 3047 | 4892 | 5334 | 6417 | 6122 | 7300 | **37342** |
| 4-nonylphenol | 0 | 0 | 4 | 5 | 4 | 45 | 310 | 246 | 203 | 775 | 79 | 682 | 1710 | **4063** |
| Alachlor | 655 | 619 | 653 | 973 | 989 | 1995 | 2797 | 3754 | 6069 | 5692 | 7214 | 8115 | 6749 | **46274** |
| Aldrin | 628 | 468 | 383 | 520 | 1743 | 3134 | 3187 | 4687 | 6426 | 5846 | 6889 | 5591 | 5974 | **45476** |
| Alpha-Endosulfan | 0 | 135 | 137 | 127 | 1216 | 2188 | 3104 | 3840 | 5554 | 4871 | 6169 | 4517 | 5122 | **36980** |
| Alpha-HCH | 2 | 14 | 32 | 44 | 48 | 61 | 10 | 1834 | 3453 | 4302 | 5721 | 5465 | 5805 | **26791** |
| Anthracene | 248 | 265 | 20 | 49 | 455 | 725 | 1655 | 2015 | 2850 | 3666 | 4285 | 4302 | 3798 | **24333** |
| Arsenic | 584 | 1063 | 956 | 1827 | 1957 | 2200 | 2860 | 3304 | 7966 | 9341 | 9196 | 9946 | 7590 | **58790** |
| Arsenic dissolved | 60 | 110 | 148 | 134 | 238 | 208 | 225 | 186 | 883 | 1061 | 819 | 679 | 1514 | **6265** |
| Atrazine | 1559 | 2613 | 1897 | 2022 | 4079 | 4720 | 6678 | 8708 | 10933 | 10353 | 10758 | 11330 | 9940 | **85590** |
| Bentazone | 1195 | 999 | 930 | 999 | 1062 | 2387 | 2267 | 6077 | 7774 | 8173 | 8852 | 8947 | 8415 | **58077** |
| Benzene | 464 | 829 | 489 | 745 | 1917 | 2075 | 3479 | 4462 | 5391 | 5277 | 5409 | 6600 | 5503 | **42640** |
| Benzo(a)pyrene | 259 | 518 | 130 | 173 | 1035 | 1311 | 2599 | 2580 | 3855 | 3907 | 4641 | 4790 | 3848 | **29646** |
| Benzo(b)fluoranthene | 258 | 270 | 12 | 27 | 810 | 885 | 1798 | 1800 | 3317 | 3149 | 3645 | 4664 | 3849 | **24484** |
| Benzo(g,h,i)perylene | 256 | 522 | 129 | 140 | 973 | 1290 | 2570 | 2548 | 3855 | 3903 | 4239 | 4664 | 3849 | **28938** |
| Benzo(k)fluoranthene | 256 | 523 | 131 | 146 | 981 | 1289 | 2576 | 2549 | 3853 | 3897 | 4241 | 4664 | 3851 | **28957** |
| Beta-HCH | 2 | 1 | 25 | 44 | 48 | 48 | 9 | 1842 | 2881 | 3380 | 4680 | 3695 | 5257 | **21912** |
| Cadmium | 1271 | 1590 | 1403 | 2420 | 4564 | 5347 | 7909 | 7880 | 13434 | 12150 | 12026 | 12306 | 10339 | **92639** |
| Cadmium dissolved | 72 | 110 | 148 | 142 | 238 | 208 | 225 | 242 | 943 | 1571 | 1566 | 5127 | 5022 | **15614** |
| Copper | 1261 | 1593 | 1405 | 2761 | 4933 | 5593 | 8188 | 8364 | 13559 | 12725 | 12114 | 12235 | 10472 | **95203** |
| Copper dissolved | 504 | 561 | 627 | 631 | 707 | 207 | 739 | 274 | 1589 | 1882 | 2113 | 5234 | 4989 | **20057** |
| DDD, p,p' | 2 | 1 | 12 | 40 | 10 | 10 | 10 | 2704 | 3351 | 4583 | 5130 | 4028 | 4396 | **24277** |
| DDE, p,p' | 18 | 145 | 128 | 202 | 802 | 1892 | 2420 | 3974 | 4841 | 4927 | 6054 | 4969 | 5271 | **35643** |
| DDT, o,p' | 11 | 130 | 118 | 116 | 788 | 1861 | 2381 | 3798 | 4622 | 4998 | 6059 | 4936 | 5143 | **34961** |
| DDT, p,p' | 13 | 42 | 29 | 109 | 542 | 955 | 1448 | 3529 | 4999 | 5916 | 5460 | 5147 | 5367 | **33556** |
| Desethylatrazine | 1203 | 1806 | 1237 | 1292 | 2107 | 2819 | 5052 | 7128 | 8516 | 8851 | 10137 | 10894 | 9475 | **70517** |
| Desisopropylatrazine | 567 | 581 | 622 | 682 | 659 | 1352 | 2486 | 6480 | 7794 | 7808 | 9488 | 8972 | 8876 | **56367** |
| Di (2-ethylhexyl) phthalate (DEHP) | 0 | 0 | 0 | 0 | 0 | 4 | 18 | 550 | 891 | 1262 | 2322 | 1188 | 880 | **7115** |
| Dieldrin | 3 | 392 | 300 | 367 | 1643 | 2539 | 2895 | 4388 | 6507 | 6222 | 6785 | 5160 | 5463 | **42664** |
| Dichloromethane | 626 | 368 | 361 | 435 | 989 | 1921 | 1804 | 1913 | 3556 | 3062 | 3316 | 4540 | 2820 | **25711** |
| Diuron | 1430 | 1910 | 860 | 1008 | 2948 | 4456 | 5728 | 7446 | 9051 | 8582 | 9380 | 8722 | 8370 | **69891** |
| Endrin | 5 | 132 | 155 | 192 | 1019 | 1930 | 2398 | 4007 | 4930 | 4926 | 6004 | 4869 | 5682 | **36249** |
| Fluoranthene | 259 | 523 | 131 | 192 | 1013 | 1304 | 2597 | 2536 | 3825 | 3895 | 4245 | 4591 | 3841 | **28952** |
| Gamma-HCH (Lindane) | 999 | 1030 | 742 | 887 | 1890 | 3261 | 3972 | 5013 | 7169 | 7065 | 7338 | 6082 | 6450 | **51898** |
| Hexachlorobenzene (HCB) | 661 | 315 | 511 | 586 | 904 | 2602 | 2729 | 3006 | 6327 | 5610 | 6488 | 4883 | 4732 | **39354** |
| Hexachlorobutadiene (HCBD) | 0 | 242 | 107 | 94 | 775 | 1676 | 2597 | 2263 | 4136 | 4097 | 4318 | 3929 | 3242 | **27476** |
| Chlorfenvinphos | 200 | 723 | 251 | 268 | 1159 | 1723 | 3277 | 4897 | 5589 | 5284 | 6275 | 5826 | 6643 | **42115** |
| Chloroalkanes C10-13 | 0 | 0 | 0 | 0 | 0 | 0 | 310 | 246 | 1 | 813 | 1853 | 2342 | 1728 | **7293** |
| Chlorpyrifos | 50 | 0 | 4 | 303 | 361 | 1763 | 3645 | 5002 | 6145 | 5835 | 7169 | 7660 | 7018 | **44955** |
| Chromium | 451 | 1129 | 821 | 1735 | 1884 | 3061 | 4781 | 5900 | 9839 | 11384 | 10859 | 12086 | 9090 | **73020** |
| Chromium dissolved | 60 | 110 | 147 | 142 | 238 | 208 | 220 | 160 | 897 | 1061 | 849 | 3722 | 4811 | **12625** |
| Indeno(1,2,3-cd)pyrene | 258 | 522 | 126 | 139 | 968 | 1288 | 2564 | 2533 | 3837 | 3896 | 4241 | 4664 | 3845 | **28881** |
| Isodrin | 0 | 129 | 117 | 98 | 1011 | 1902 | 2321 | 3384 | 4228 | 4404 | 5608 | 4325 | 5055 | **32582** |
| Isoproturon | 1446 | 1916 | 846 | 1243 | 3359 | 4620 | 5839 | 7460 | 9168 | 9034 | 9354 | 8701 | 8341 | **71327** |
| Lead | 1261 | 1589 | 1404 | 2759 | 4542 | 5343 | 7853 | 8233 | 13445 | 11937 | 11726 | 12470 | 9990 | **92552** |
| Lead dissolved | 60 | 110 | 148 | 142 | 238 | 208 | 225 | 247 | 944 | 1527 | 1511 | 4749 | 4993 | **15102** |
| Linuron | 993 | 778 | 264 | 366 | 1592 | 3446 | 3960 | 5892 | 7958 | 7508 | 8261 | 8069 | 7350 | **56437** |
| MCPA | 578 | 903 | 776 | 926 | 928 | 1768 | 2147 | 5473 | 6959 | 7361 | 7791 | 7472 | 7116 | **50198** |
| Mecoprop | 576 | 908 | 748 | 847 | 928 | 1799 | 2147 | 5891 | 7097 | 8087 | 8557 | 6753 | 7085 | **51423** |
| Mercury | 789 | 1150 | 647 | 1069 | 2159 | 3467 | 4071 | 3415 | 7618 | 7498 | 7150 | 8245 | 6027 | **53305** |
| Mercury dissolved | 0 | 5 | 8 | 0 | 0 | 0 | 0 | 0 | 891 | 1061 | 849 | 852 | 1020 | **4686** |
| Naphthalene | 297 | 318 | 287 | 286 | 840 | 1211 | 1879 | 3998 | 4334 | 4019 | 4472 | 4508 | 3430 | **29879** |
| Nickel | 1262 | 1603 | 1409 | 2746 | 4613 | 5484 | 8218 | 8742 | 14150 | 12824 | 12506 | 13313 | 10806 | **97676** |
| Nickel dissolved | 505 | 562 | 634 | 651 | 714 | 191 | 810 | 227 | 1594 | 1880 | 2113 | 5180 | 4977 | **20038** |
| Para-tert-octylphenol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 246 | 298 | 890 | 913 | 2142 | 2339 | **6828** |
| Pentachlorobenzene | 0 | 0 | 4 | 0 | 314 | 782 | 1345 | 826 | 2237 | 3478 | 4813 | 3659 | 3054 | **20512** |
| Pentachlorophenol | 668 | 845 | 622 | 713 | 1010 | 474 | 1666 | 1828 | 3747 | 2496 | 3622 | 2902 | 4911 | **25504** |
| Prometryn | 3 | 234 | 199 | 298 | 350 | 998 | 1643 | 5058 | 5609 | 6227 | 7196 | 6950 | 6337 | **41102** |
| Propazine | 12 | 265 | 201 | 301 | 436 | 1123 | 1810 | 5940 | 7247 | 6860 | 6991 | 6744 | 7245 | **45175** |
| Simazine | 1527 | 2004 | 1533 | 2023 | 4016 | 4616 | 6679 | 8700 | 10210 | 9918 | 10720 | 11313 | 9762 | **83021** |
| Terbuthylazine | 578 | 572 | 628 | 764 | 591 | 583 | 862 | 4319 | 5282 | 5598 | 7052 | 8020 | 6687 | **41536** |
| Terbutryn | 2 | 239 | 210 | 380 | 444 | 1087 | 1812 | 5245 | 5402 | 6038 | 2825 | 3027 | 6685 | **33396** |
| Tetrachloromethane | 309 | 654 | 439 | 726 | 961 | 995 | 2185 | 4079 | 4866 | 5558 | 5382 | 6349 | 5277 | **37780** |
| Trifluralin | 220 | 690 | 254 | 535 | 1755 | 2548 | 3117 | 4483 | 6373 | 6096 | 7005 | 7543 | 6514 | **47133** |
| Trichloromethane | 482 | 833 | 458 | 717 | 2210 | 2661 | 4042 | 4603 | 5795 | 5684 | 5662 | 7346 | 6209 | **46702** |
| Zinc | 1265 | 1611 | 1425 | 2889 | 5051 | 5742 | 8466 | 9408 | 14668 | 13221 | 12128 | 12117 | 10353 | **98344** |
| Zinc dissolved | 508 | 584 | 651 | 704 | 717 | 219 | 808 | 260 | 1584 | 1880 | 2163 | 5269 | 5075 | **20422** |
| **Total** | **31990** | **44734** | **32777** | **47542** | **92752** | **130059** | **191560** | **272673** | **389532** | **394759** | **424435** | **444396** | **412626** | **2909835** |

# Table 3.1.5 Available groundwater samples for countries within the 2002–2011 period

| Substance | AL | AT | BA | BE | BG | CY | CZ | DE | DK | EE | ES | FI | FR | GB | GR | HR | HU | CH | IE | IS | IT | LI | LT | LU | LV | ME | MK | MT | NL | NO | PL | PT | RO | RS | SE | SI | SK | TR | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-trichloroethane | 0 | 0 | 15 | 1058 | 0 | 0 | 0 | 1236 | 2463 | 0 | 0 | 0 | 7595 | 17474 | 0 | 124 | 0 | 971 | 677 | 0 | 1515 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 479 | 697 | 0 | 0 |
| 1,1,2,2-tetrachloroethene | 0 | 0 | 15 | 1444 | 216 | 642 | 3996 | 0 | 2462 | 0 | 0 | 0 | 8565 | 17969 | 0 | 94 | 0 | 945 | 677 | 0 | 1702 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 479 | 886 | 0 | 0 |
| 1,1,2-trichloroethene | 0 | 0 | 0 | 1448 | 208 | 642 | 3996 | 0 | 2461 | 0 | 0 | 0 | 8560 | 18103 | 0 | 0 | 0 | 945 | 677 | 0 | 1642 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 479 | 745 | 0 | 0 |
| 1,2-dichloroethane | 0 | 4926 | 0 | 1832 | 0 | 0 | 6817 | 207 | 7 | 0 | 0 | 0 | 7782 | 17005 | 0 | 114 | 0 | 0 | 677 | 11 | 1686 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 755 | 1028 | 0 | 0 |
| 2,4-D | 0 | 0 | 0 | 1601 | 69 | 0 | 3996 | 498 | 3185 | 0 | 0 | 0 | 20994 | 2482 | 0 | 0 | 0 | 346 | 1374 | 0 | 275 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 156 | 597 | 0 | 0 |
| 4-nonylphenol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3656 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 389 | 0 | 0 |
| Alachlor | 0 | 6023 | 0 | 1711 | 123 | 544 | 7093 | 6 | 0 | 0 | 0 | 0 | 25411 | 0 | 0 | 64 | 0 | 346 | 0 | 0 | 1197 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 875 | 954 | 0 | 0 |
| Aldrin | 0 | 1042 | 33 | 1733 | 405 | 0 | 4981 | 22 | 0 | 0 | 0 | 0 | 24577 | 9732 | 0 | 171 | 0 | 0 | 0 | 0 | 211 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 200 | 0 | 345 | 437 | 0 | 0 |
| Alpha-Endosulfan | 0 | 0 | 33 | 0 | 115 | 0 | 4979 | 22 | 0 | 0 | 0 | 0 | 22278 | 8516 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 29 | 0 | 0 | 0 | 612 | 0 | 0 | 0 |
| Alpha-HCH | 0 | 0 | 0 | 0 | 359 | 0 | 2726 | 87 | 0 | 0 | 0 | 0 | 21160 | 1843 | 0 | 124 | 0 | 0 | 0 | 0 | 80 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 200 | 0 | 56 | 0 | 0 | 0 |
| Anthracene | 0 | 0 | 0 | 1216 | 0 | 0 | 6817 | 38 | 0 | 0 | 0 | 0 | 9075 | 4387 | 0 | 86 | 0 | 0 | 400 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 1672 | 0 | 0 |
| Arsenic | 0 | 0 | 29 | 1920 | 586 | 678 | 3996 | 1625 | 4571 | 96 | 0 | 0 | 9641 | 20738 | 115 | 83 | 0 | 708 | 4319 | 0 | 1359 | 0 | 142 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 628 | 116 | 0 | 0 | 0 | 283 | 4456 | 0 | 0 |
| Arsenic dissolved | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 575 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 5202 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 0 | 0 |
| Atrazine | 0 | 6031 | 0 | 2890 | 389 | 414 | 7093 | 3630 | 5747 | 0 | 0 | 0 | 27965 | 19256 | 0 | 127 | 0 | 990 | 1397 | 0 | 1427 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 | 0 | 875 | 1080 | 0 | 0 |
| Bentazone | 0 | 1557 | 0 | 2351 | 0 | 0 | 3996 | 1964 | 5744 | 0 | 0 | 0 | 21784 | 14400 | 0 | 0 | 0 | 402 | 1390 | 0 | 559 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 334 | 472 | 0 | 0 |
| Benzene | 0 | 0 | 0 | 1845 | 0 | 0 | 6817 | 118 | 2422 | 33 | 0 | 0 | 7542 | 18033 | 0 | 68 | 0 | 822 | 676 | 11 | 1209 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 532 | 730 | 0 | 0 |
| Benzo(a)pyrene | 0 | 0 | 0 | 2963 | 0 | 0 | 6817 | 93 | 1 | 0 | 0 | 0 | 10694 | 5508 | 0 | 86 | 0 | 0 | 400 | 11 | 204 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 1849 | 0 | 0 |
| Benzo(b)fluoranthene | 0 | 0 | 0 | 2961 | 0 | 0 | 6817 | 94 | 0 | 0 | 0 | 0 | 10695 | 1417 | 0 | 86 | 0 | 0 | 0 | 11 | 78 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 1672 | 0 | 0 |
| Benzo(g,h,i)perylene | 0 | 0 | 0 | 2962 | 0 | 0 | 6817 | 94 | 1 | 0 | 0 | 0 | 10695 | 5502 | 0 | 86 | 0 | 0 | 0 | 11 | 78 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 1672 | 0 | 0 |
| Benzo(k)fluoranthene | 0 | 0 | 0 | 2962 | 0 | 0 | 6817 | 94 | 0 | 0 | 0 | 0 | 10695 | 5519 | 0 | 86 | 0 | 0 | 0 | 11 | 78 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 1672 | 0 | 0 |
| Beta-HCH | 0 | 0 | 0 | 0 | 337 | 0 | 2726 | 87 | 0 | 0 | 0 | 0 | 17248 | 1001 | 0 | 100 | 0 | 0 | 0 | 0 | 21 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 200 | 0 | 56 | 0 | 0 | 0 |
| Cadmium | 0 | 4337 | 81 | 2999 | 758 | 672 | 7091 | 2840 | 4184 | 91 | 0 | 0 | 10261 | 41677 | 78 | 66 | 0 | 706 | 3722 | 5 | 2007 | 0 | 24 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 180 | 102 | 0 | 43 | 0 | 901 | 5353 | 0 | 0 |
| Cadmium dissolved | 0 | 0 | 0 | 0 | 121 | 0 | 0 | 1642 | 0 | 0 | 0 | 0 | 0 | 6220 | 0 | 172 | 0 | 0 | 5220 | 11 | 780 | 0 | 142 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 590 | 0 | 0 | 253 | 116 | 0 | 0 | 0 | 0 |
| Copper | 59 | 4337 | 186 | 3018 | 885 | 711 | 7091 | 2063 | 4187 | 0 | 0 | 0 | 11469 | 43777 | 300 | 72 | 0 | 515 | 3718 | 12 | 1430 | 0 | 23 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 180 | 251 | 0 | 42 | 0 | 901 | 5693 | 0 | 0 |
| Copper dissolved | 0 | 0 | 0 | 0 | 131 | 0 | 0 | 1553 | 3172 | 0 | 0 | 0 | 0 | 6223 | 0 | 190 | 0 | 0 | 5219 | 4 | 737 | 0 | 142 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 590 | 2 | 0 | 253 | 116 | 0 | 0 | 0 | 16 |
| DDD, p,p' | 0 | 0 | 0 | 0 | 253 | 0 | 2726 | 0 | 0 | 0 | 0 | 0 | 18209 | 2674 | 0 | 82 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 129 | 0 | 56 | 0 | 0 | 0 |
| DDE, p,p' | 0 | 0 | 0 | 752 | 405 | 0 | 5384 | 0 | 0 | 0 | 0 | 0 | 19800 | 8647 | 0 | 82 | 0 | 0 | 0 | 0 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 56 | 48 | 0 | 0 |
| DDT, o,p' | 0 | 0 | 0 | 0 | 374 | 0 | 5384 | 22 | 0 | 0 | 0 | 0 | 19795 | 8579 | 0 | 20 | 0 | 0 | 0 | 0 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 | 0 | 264 | 0 | 0 | 0 |
| DDT, p,p' | 0 | 0 | 0 | 314 | 405 | 0 | 5384 | 22 | 0 | 0 | 0 | 0 | 19807 | 5158 | 0 | 82 | 0 | 0 | 1413 | 0 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 200 | 0 | 56 | 453 | 0 | 0 |
| Desethylatrazine | 0 | 6031 | 0 | 2406 | 3 | 0 | 3996 | 2250 | 5733 | 0 | 0 | 0 | 27796 | 14443 | 0 | 0 | 0 | 847 | 0 | 0 | 1353 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 564 | 849 | 0 | 0 |
| Desisopropylatrazine | 0 | 0 | 0 | 2386 | 3 | 0 | 3787 | 2134 | 5744 | 0 | 0 | 0 | 23891 | 14456 | 0 | 0 | 0 | 847 | 0 | 0 | 102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 564 | 683 | 0 | 0 |
| Di (2-ethylhexyl) phthalate (DEHP) | 0 | 0 | 29 | 0 | 0 | 0 | 1825 | 0 | 1992 | 0 | 0 | 0 | 2984 | 131 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 152 | 0 | 0 |
| Dieldrin | 0 | 0 | 33 | 1731 | 385 | 0 | 4981 | 22 | 0 | 0 | 0 | 0 | 22149 | 9787 | 0 | 166 | 0 | 0 | 1413 | 0 | 212 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 200 | 0 | 345 | 437 | 0 | 0 |
| Dichloromethane | 0 | 4926 | 0 | 0 | 0 | 0 | 6817 | 1909 | 5 | 0 | 0 | 0 | 7330 | 302 | 0 | 110 | 0 | 0 | 0 | 11 | 1353 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 755 | 838 | 0 | 0 |
| Diuron | 0 | 1091 | 0 | 2884 | 5 | 0 | 6542 | 3300 | 3115 | 0 | 0 | 0 | 27692 | 17558 | 0 | 0 | 0 | 813 | 1396 | 0 | 275 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 338 | 682 | 0 | 0 |
| Endrin | 0 | 0 | 33 | 1707 | 376 | 0 | 4981 | 22 | 0 | 0 | 0 | 0 | 19210 | 8533 | 0 | 165 | 0 | 0 | 0 | 0 | 80 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 200 | 0 | 105 | 437 | 0 | 0 |
| Fluoranthene | 0 | 0 | 0 | 2979 | 0 | 0 | 6817 | 94 | 1 | 0 | 0 | 0 | 10650 | 5439 | 0 | 86 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 1849 | 0 | 0 |
| Gamma-HCH (Lindane) | 0 | 1042 | 0 | 1824 | 437 | 0 | 5660 | 1391 | 0 | 0 | 0 | 0 | 26904 | 9281 | 0 | 94 | 0 | 0 | 1413 | 0 | 45 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 29 | 0 | 200 | 0 | 105 | 594 | 0 | 0 |
| Hexachlorobenzene (HCB) | 0 | 1042 | 0 | 868 | 222 | 0 | 5094 | 22 | 0 | 0 | 0 | 0 | 21240 | 8541 | 0 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 200 | 0 | 20 | 499 | 0 | 0 |
| Hexachlorobutadiene (HCBD) | 0 | 0 | 0 | 402 | 0 | 0 | 4494 | 30 | 0 | 0 | 0 | 0 | 11926 | 8157 | 0 | 6 | 0 | 0 | 0 | 0 | 714 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 701 | 697 | 0 | 0 |
| Chlorfenvinphos | 0 | 0 | 0 | 1973 | 9 | 412 | 0 | 6 | 0 | 0 | 0 | 0 | 20949 | 16292 | 0 | 68 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 794 | 330 | 0 | 0 |
| Chloroalkanes C10-13 | 0 | 0 | 0 | 0 | 0 | 0 | 3071 | 0 | 0 | 0 | 0 | 0 | 4222 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chlorpyrifos | 0 | 0 | 0 | 0 | 151 | 542 | 7093 | 28 | 0 | 0 | 0 | 0 | 20488 | 15152 | 0 | 68 | 0 | 0 | 0 | 0 | 849 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 437 | 0 | 0 |
| Chromium | 60 | 0 | 138 | 1920 | 345 | 680 | 3996 | 1550 | 1168 | 0 | 0 | 0 | 6979 | 41916 | 0 | 66 | 0 | 516 | 3675 | 0 | 2093 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 628 | 22 | 0 | 0 | 116 | 370 | 4456 | 0 | 0 |
| Chromium dissolved | 0 | 0 | 0 | 85 | 0 | 0 | 0 | 489 | 0 | 0 | 0 | 0 | 0 | 5983 | 0 | 172 | 0 | 0 | 5178 | 0 | 0 | 0 | 142 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 0 | 16 |
| Indeno(1,2,3-cd)pyrene | 0 | 0 | 0 | 2957 | 1 | 0 | 6817 | 68 | 1 | 0 | 0 | 0 | 10695 | 5476 | 0 | 86 | 0 | 0 | 0 | 11 | 78 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 1672 | 0 | 0 |
| Isodrin | 0 | 0 | 0 | 0 | 186 | 0 | 4981 | 22 | 0 | 0 | 0 | 0 | 18197 | 8496 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 410 | 0 | 0 |
| Isoproturon | 0 | 1054 | 0 | 2868 | 0 | 0 | 7092 | 3745 | 3136 | 0 | 0 | 0 | 27671 | 17531 | 0 | 0 | 0 | 813 | 1397 | 0 | 275 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 583 | 954 | 0 | 0 |
| Lead | 60 | 4337 | 46 | 3013 | 820 | 662 | 7091 | 1182 | 4185 | 91 | 0 | 0 | 9067 | 43774 | 258 | 66 | 0 | 707 | 3721 | 12 | 2155 | 0 | 22 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 180 | 114 | 0 | 43 | 0 | 901 | 5693 | 0 | 0 |
| Lead dissolved | 0 | 0 | 0 | 0 | 126 | 0 | 0 | 1504 | 0 | 0 | 0 | 0 | 0 | 6182 | 0 | 172 | 0 | 0 | 5219 | 4 | 457 | 0 | 142 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 590 | 2 | 0 | 253 | 116 | 0 | 0 | 0 | 0 |
| Linuron | 0 | 1055 | 0 | 2631 | 0 | 0 | 6542 | 508 | 7 | 0 | 0 | 0 | 24919 | 17459 | 0 | 0 | 0 | 0 | 0 | 0 | 698 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 583 | 0 | 0 | 0 |
| MCPA | 0 | 0 | 0 | 1592 | 0 | 0 | 3996 | 528 | 3135 | 0 | 0 | 0 | 21191 | 14395 | 0 | 0 | 0 | 400 | 1394 | 0 | 275 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 412 | 623 | 0 | 0 |
| Mecoprop | 0 | 0 | 0 | 1415 | 0 | 0 | 2160 | 1963 | 5744 | 0 | 0 | 0 | 20294 | 15479 | 0 | 0 | 0 | 277 | 1394 | 0 | 275 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 190 | 0 | 0 | 0 |
| Mercury | 0 | 4331 | 81 | 2768 | 501 | 674 | 7092 | 730 | 159 | 91 | 0 | 0 | 6495 | 15534 | 0 | 66 | 0 | 411 | 2722 | 12 | 1973 | 0 | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 487 | 39 | 0 | 35 | 0 | 901 | 5693 | 0 | 0 |
| Mercury dissolved | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 172 | 0 | 0 | 4221 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 127 | 0 | 0 | 0 | 0 | 0 |
| Naphthalene | 0 | 0 | 0 | 972 | 0 | 0 | 6790 | 37 | 2007 | 0 | 0 | 0 | 8705 | 7974 | 0 | 68 | 0 | 341 | 400 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1672 | 0 | 0 |
| Nickel | 60 | 4337 | 53 | 3023 | 763 | 740 | 7092 | 2885 | 4596 | 0 | 0 | 0 | 12630 | 43457 | 227 | 66 | 0 | 514 | 3642 | 5 | 2181 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 180 | 223 | 0 | 43 | 0 | 869 | 5693 | 0 | 0 |
| Nickel dissolved | 0 | 0 | 0 | 0 | 126 | 0 | 0 | 1595 | 3475 | 0 | 0 | 0 | 0 | 6215 | 0 | 172 | 0 | 0 | 5145 | 11 | 478 | 0 | 142 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 590 | 2 | 0 | 253 | 116 | 0 | 0 | 0 | 0 |
| Para-tert-octylphenol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6302 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 456 | 0 | 0 |
| Pentachlorobenzene | 0 | 0 | 0 | 0 | 0 | 0 | 4913 | 0 | 0 | 0 | 0 | 0 | 15174 | 155 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 204 | 0 | 0 |
| Pentachlorophenol | 0 | 0 | 0 | 2001 | 0 | 0 | 2147 | 31 | 3164 | 0 | 0 | 0 | 8206 | 6987 | 0 | 126 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 705 | 0 | 0 |
| Prometryn | 0 | 0 | 0 | 1659 | 147 | 0 | 3996 | 261 | 0 | 0 | 0 | 0 | 16007 | 16963 | 0 | 0 | 0 | 0 | 0 | 0 | 211 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 564 | 848 | 0 | 0 |
| Propazine | 0 | 0 | 0 | 2177 | 378 | 396 | 0 | 1846 | 0 | 0 | 0 | 0 | 20919 | 17250 | 0 | 0 | 0 | 813 | 0 | 0 | 144 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 | 0 | 564 | 0 | 0 | 0 |
| Simazine | 0 | 6031 | 0 | 2891 | 387 | 420 | 7093 | 3920 | 5675 | 0 | 0 | 0 | 27869 | 18844 | 0 | 115 | 0 | 929 | 163 | 0 | 1456 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 200 | 0 | 875 | 1079 | 0 | 0 |
| Terbuthylazine | 0 | 0 | 0 | 2363 | 25 | 0 | 3996 | 2243 | 3211 | 0 | 0 | 0 | 24176 | 0 | 0 | 0 | 0 | 929 | 0 | 0 | 1403 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 564 | 848 | 0 | 0 |
| Terbutryn | 0 | 0 | 0 | 1659 | 150 | 0 | 0 | 531 | 0 | 0 | 0 | 0 | 10824 | 17014 | 0 | 0 | 0 | 1081 | 0 | 0 | 442 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 396 | 848 | 0 | 0 |
| Tetrachloromethane | 0 | 0 | 0 | 1068 | 6 | 0 | 3996 | 131 | 2463 | 0 | 0 | 0 | 7608 | 18026 | 0 | 132 | 0 | 971 | 0 | 0 | 1068 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 161 | 748 | 0 | 0 |
| Trifluralin | 0 | 0 | 0 | 2194 | 146 | 544 | 7093 | 168 | 0 | 0 | 0 | 0 | 24057 | 9658 | 0 | 0 | 0 | 0 | 0 | 0 | 868 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 794 | 437 | 0 | 0 |
| Trichloromethane | 0 | 0 | 0 | 1827 | 0 | 0 | 6817 | 2311 | 2342 | 0 | 0 | 0 | 9873 | 17762 | 0 | 103 | 0 | 971 | 0 | 11 | 1621 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 434 | 846 | 0 | 0 |
| Zinc | 60 | 4337 | 186 | 3032 | 933 | 109 | 7092 | 3309 | 4282 | 0 | 0 | 0 | 11714 | 44884 | 1098 | 96 | 0 | 615 | 3818 | 12 | 1475 | 0 | 23 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 142 | 211 | 0 | 1 | 0 | 901 | 5689 | 0 | 0 |
| Zinc dissolved | 0 | 0 | 0 | 0 | 135 | 0 | 0 | 1801 | 3238 | 0 | 0 | 0 | 0 | 6190 | 0 | 172 | 0 | 0 | 5318 | 4 | 691 | 0 | 142 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 590 | 2 | 0 | 247 | 116 | 0 | 0 | 0 | 16 |

Note: The figures for Austria represent the number of sampling sites to avoid bias due to risk-based monitoring frequency. Therefore the exact number of samples is not known for Austria. Contrary to the WISE-SoE dataset definition, Austrian data were reported as stations' annual averages without a specification of how many samples had been used for the annual average calculations.

## Table 3.1.6 Available groundwater stations with data within the 2002–2011 period

| Substance | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-trichloroethane | 572 | 812 | 811 | 1811 | 3127 | 3549 | 3074 | 3196 | 3624 | 3384 |
| 1,1,2,2-tetrachloroethene | 623 | 814 | 814 | 1796 | 3034 | 3631 | 3706 | 3895 | 4333 | 4265 |
| 1,1,2-trichloroethene | 623 | 814 | 814 | 1811 | 3073 | 3493 | 3726 | 3894 | 4276 | 4221 |
| 1,2-dichloroethane | 648 | 1247 | 1708 | 2672 | 3201 | 4260 | 3575 | 3830 | 4334 | 3879 |
| 2,4-D | 612 | 558 | 471 | 623 | 1521 | 1884 | 2017 | 2397 | 2335 | 3389 |
| 4-nonylphenol | 5 | 4 | 45 | 134 | 108 | 203 | 188 | 60 | 243 | 789 |
| Alachlor | 934 | 917 | 1160 | 1340 | 1808 | 2746 | 2628 | 3045 | 3545 | 2948 |
| Aldrin | 462 | 1259 | 2136 | 1647 | 2427 | 2949 | 2869 | 2956 | 2382 | 2401 |
| Alpha-Endosulfan | 91 | 806 | 1230 | 1519 | 2048 | 2648 | 2507 | 2698 | 1871 | 2065 |
| Alpha-HCH | 35 | 47 | 54 | 10 | 808 | 1427 | 1808 | 2082 | 2310 | 2424 |
| Anthracene | 39 | 349 | 332 | 989 | 1190 | 1869 | 1697 | 2145 | 2062 | 2364 |
| Arsenic | 1221 | 1360 | 1274 | 2000 | 1719 | 4508 | 4776 | 5056 | 5577 | 4515 |
| Arsenic dissolved | 72 | 114 | 110 | 114 | 104 | 209 | 216 | 213 | 273 | 773 |
| Atrazine | 1876 | 2998 | 3170 | 4295 | 5295 | 5949 | 5574 | 5772 | 6089 | 5482 |
| Bentazone | 963 | 1026 | 2223 | 1977 | 3788 | 4092 | 4324 | 4458 | 4525 | 4310 |
| Benzene | 633 | 1391 | 1360 | 2383 | 3077 | 3791 | 3240 | 3359 | 3799 | 3709 |
| Benzo(a)pyrene | 138 | 654 | 795 | 1507 | 1392 | 2182 | 1828 | 2285 | 2301 | 2438 |
| Benzo(b)fluoranthene | 25 | 469 | 420 | 769 | 802 | 1795 | 1342 | 1566 | 2231 | 2438 |
| Benzo(g,h,i)perylene | 108 | 599 | 774 | 1478 | 1360 | 2181 | 1826 | 2073 | 2231 | 2438 |
| Benzo(k)fluoranthene | 111 | 600 | 773 | 1483 | 1361 | 2180 | 1823 | 2073 | 2231 | 2440 |
| Beta-HCH | 35 | 47 | 44 | 9 | 814 | 1139 | 1485 | 1801 | 1230 | 2234 |
| Cadmium | 1731 | 2946 | 3152 | 4383 | 4207 | 7101 | 5877 | 6122 | 6336 | 5819 |
| Cadmium dissolved | 72 | 114 | 110 | 114 | 137 | 245 | 564 | 831 | 3130 | 2813 |
| Copper | 1908 | 3109 | 3350 | 4465 | 3994 | 7044 | 5893 | 5923 | 6006 | 5735 |
| Copper dissolved | 552 | 579 | 109 | 620 | 164 | 873 | 880 | 1365 | 3249 | 2771 |
| DDD, p,p' | 31 | 10 | 10 | 10 | 1532 | 1732 | 2326 | 1864 | 1319 | 1509 |
| DDE, p,p' | 177 | 481 | 1170 | 1390 | 2141 | 2379 | 2514 | 2635 | 2100 | 2254 |
| DDT, o,p' | 100 | 467 | 1165 | 1365 | 2140 | 2382 | 2578 | 2644 | 2080 | 2135 |
| DDT, p,p' | 99 | 251 | 421 | 568 | 1931 | 2384 | 2726 | 2077 | 2207 | 2310 |
| Desethylatrazine | 1222 | 1623 | 2136 | 3227 | 4689 | 4939 | 5252 | 5387 | 5824 | 5184 |
| Desisopropylatrazine | 612 | 629 | 1215 | 1992 | 4080 | 4309 | 4481 | 4772 | 4593 | 4613 |
| Di (2-ethylhexyl) phthalate (DEHP) | 0 | 0 | 4 | 18 | 403 | 481 | 618 | 1220 | 838 | 731 |
| Dieldrin | 309 | 1153 | 1538 | 1532 | 2330 | 2963 | 2965 | 3020 | 2199 | 2243 |
| Dichloromethane | 432 | 863 | 1211 | 1018 | 1198 | 2534 | 1746 | 1932 | 2497 | 2097 |
| Diuron | 954 | 1895 | 3064 | 3480 | 4259 | 4324 | 4051 | 4637 | 4381 | 4080 |
| Endrin | 137 | 683 | 1198 | 1370 | 2198 | 2531 | 2610 | 2760 | 2133 | 2351 |
| Fluoranthene | 157 | 646 | 794 | 1504 | 1382 | 2180 | 1828 | 2074 | 2196 | 2436 |
| Gamma-HCH (Lindane) | 805 | 1355 | 2259 | 2141 | 2701 | 3217 | 3349 | 3247 | 2675 | 2766 |
| Hexachlorobenzene (HCB) | 542 | 694 | 1797 | 1585 | 1958 | 2974 | 2794 | 2767 | 2025 | 2027 |
| Hexachlorobutadiene (HCBD) | 79 | 544 | 1008 | 1444 | 1458 | 2360 | 2215 | 2175 | 1937 | 1635 |
| Chlorfenvinphos | 251 | 611 | 1123 | 1798 | 2822 | 2910 | 2870 | 2971 | 2742 | 3030 |
| Chloroalkanes C10-13 | 0 | 0 | 0 | 134 | 108 | 1 | 202 | 809 | 923 | 924 |
| Chlorpyrifos | 303 | 361 | 1149 | 1988 | 2988 | 3265 | 3238 | 3480 | 3708 | 3482 |
| Chromium | 1067 | 1264 | 1649 | 2832 | 2730 | 4776 | 4849 | 4964 | 5929 | 4654 |
| Chromium dissolved | 72 | 114 | 110 | 114 | 102 | 209 | 216 | 224 | 2197 | 2670 |
| Indeno(1,2,3-cd)pyrene | 108 | 594 | 773 | 1472 | 1353 | 2176 | 1824 | 2073 | 2231 | 2437 |
| Isodrin | 83 | 677 | 1186 | 1318 | 1942 | 2237 | 2359 | 2583 | 1855 | 2028 |
| Isoproturon | 1201 | 2253 | 3142 | 3515 | 4261 | 4441 | 4433 | 4631 | 4364 | 4066 |
| Lead | 1906 | 2877 | 3148 | 4330 | 3970 | 7008 | 5440 | 5844 | 6276 | 5584 |
| Lead dissolved | 72 | 114 | 110 | 114 | 137 | 245 | 536 | 794 | 2922 | 2806 |
| Linuron | 355 | 818 | 2198 | 2176 | 3040 | 3820 | 3724 | 3988 | 3972 | 3514 |
| MCPA | 846 | 887 | 1603 | 1853 | 3282 | 3308 | 3526 | 3536 | 3393 | 3352 |
| Mecoprop | 806 | 887 | 1629 | 1853 | 3582 | 3780 | 4229 | 4172 | 3297 | 3268 |
| Mercury | 788 | 1396 | 2381 | 2329 | 2217 | 4586 | 4143 | 4064 | 4935 | 4092 |
| Mercury dissolved | 0 | 0 | 0 | 0 | 0 | 209 | 216 | 224 | 403 | 349 |
| Naphthalene | 263 | 693 | 725 | 1183 | 2724 | 3029 | 2207 | 2338 | 2247 | 2179 |
| Nickel | 1913 | 2963 | 3272 | 4523 | 4386 | 7228 | 6024 | 6167 | 6807 | 5916 |
| Nickel dissolved | 571 | 581 | 115 | 697 | 142 | 874 | 877 | 1372 | 3310 | 2773 |
| Para-tert-octylphenol | 0 | 0 | 0 | 0 | 108 | 247 | 259 | 334 | 838 | 918 |
| Pentachlorobenzene | 0 | 310 | 314 | 565 | 400 | 1034 | 1477 | 1776 | 1112 | 868 |
| Pentachlorophenol | 673 | 851 | 383 | 1102 | 1267 | 2154 | 1564 | 2211 | 1838 | 2376 |
| Prometryn | 249 | 340 | 879 | 1327 | 2829 | 2929 | 3398 | 3529 | 3446 | 3318 |
| Propazine | 252 | 426 | 916 | 1363 | 3456 | 3696 | 3577 | 3329 | 3274 | 3363 |
| Simazine | 1877 | 2982 | 3143 | 4295 | 5298 | 5786 | 5642 | 5759 | 6073 | 5415 |
| Terbuthylazine | 644 | 561 | 531 | 681 | 2232 | 2189 | 2409 | 2791 | 3400 | 2754 |
| Terbutryn | 282 | 375 | 915 | 1370 | 2872 | 2962 | 3134 | 2013 | 2052 | 3027 |
| Tetrachloromethane | 587 | 779 | 767 | 1772 | 3035 | 3454 | 3423 | 3369 | 3794 | 3838 |
| Trifluralin | 516 | 1086 | 1481 | 1527 | 2234 | 2913 | 3002 | 3067 | 3395 | 2975 |
| Trichloromethane | 576 | 1556 | 1585 | 2743 | 3339 | 4016 | 3516 | 3614 | 4374 | 4120 |
| Zinc | 1936 | 3148 | 3454 | 4628 | 4693 | 7700 | 6191 | 5886 | 5938 | 5658 |
| Zinc dissolved | 592 | 583 | 115 | 690 | 163 | 872 | 878 | 1393 | 3289 | 2816 |

## Table 3.1.7 Available groundwater stations with data for countries within the 2002–2011 period

| Substance | AL | AT | BA | BE | BG | CY | CZ | DE | DK | EE | ES | FI | FR | GB | GR | HR | HU | CH | IE | IS | IT | LI | LT | LU | LV | ME | MK | MT | NL | NO | PL | PT | RO | RS | SE | SI | SK | TR | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-trichloroethane | 0 | 0 | 15 | 387 | 0 | 0 | 0 | 614 | 895 | 0 | 0 | 0 | 1538 | 2816 | 0 | 19 | 0 | 42 | 213 | 0 | 792 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 194 | 0 | 0 |
| 1,1,2,2-tetrachloroethene | 0 | 0 | 15 | 393 | 101 | 99 | 691 | 0 | 895 | 0 | 0 | 0 | 1581 | 2906 | 0 | 20 | 0 | 41 | 213 | 0 | 874 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 256 | 0 | 0 |
| 1,1,2-trichloroethene | 0 | 0 | 0 | 395 | 101 | 99 | 691 | 0 | 895 | 0 | 0 | 0 | 1581 | 2914 | 0 | 0 | 0 | 41 | 213 | 0 | 837 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 199 | 0 | 0 |
| 1,2-dichloroethane | 0 | 677 | 0 | 424 | 0 | 0 | 723 | 57 | 6 | 0 | 0 | 0 | 1405 | 2840 | 0 | 17 | 0 | 0 | 213 | 4 | 881 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 74 | 258 | 0 | 0 |
| 2,4-D | 0 | 0 | 0 | 192 | 39 | 0 | 691 | 128 | 858 | 0 | 0 | 0 | 1623 | 1260 | 0 | 0 | 0 | 42 | 145 | 0 | 143 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 194 | 0 | 0 |
| 4-nonylphenol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 992 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 162 | 0 | 0 |
| Alachlor | 0 | 682 | 0 | 138 | 55 | 100 | 723 | 6 | 0 | 0 | 0 | 0 | 1761 | 0 | 0 | 18 | 0 | 42 | 0 | 0 | 620 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 270 | 0 | 0 |
| Aldrin | 0 | 626 | 33 | 148 | 160 | 0 | 717 | 22 | 0 | 0 | 0 | 0 | 1729 | 2397 | 0 | 24 | 0 | 0 | 0 | 0 | 107 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 71 | 0 | 75 | 144 | 0 | 0 |
| Alpha-Endosulfan | 0 | 0 | 33 | 0 | 60 | 0 | 717 | 22 | 0 | 0 | 0 | 0 | 1630 | 2191 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 8 | 0 | 0 | 0 | 73 | 0 | 0 | 0 |
| Alpha-HCH | 0 | 0 | 0 | 0 | 157 | 0 | 688 | 63 | 0 | 0 | 0 | 0 | 1673 | 998 | 0 | 24 | 0 | 0 | 0 | 0 | 37 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 71 | 0 | 29 | 0 | 0 | 0 |
| Anthracene | 0 | 0 | 0 | 391 | 0 | 0 | 723 | 7 | 0 | 0 | 0 | 0 | 1241 | 1422 | 0 | 18 | 0 | 0 | 212 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 348 | 0 | 0 |
| Arsenic | 0 | 0 | 16 | 388 | 102 | 100 | 691 | 669 | 943 | 87 | 0 | 0 | 1659 | 2748 | 79 | 19 | 0 | 42 | 217 | 0 | 830 | 0 | 117 | 0 | 89 | 0 | 0 | 0 | 0 | 0 | 169 | 115 | 0 | 0 | 0 | 47 | 495 | 0 | 0 |
| Arsenic dissolved | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 479 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 220 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 0 | 0 | 0 | 0 |
| Atrazine | 0 | 682 | 0 | 441 | 157 | 100 | 723 | 923 | 931 | 0 | 0 | 0 | 1859 | 3184 | 0 | 19 | 0 | 42 | 147 | 0 | 757 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 0 | 76 | 270 | 0 | 0 |
| Bentazone | 0 | 639 | 0 | 396 | 0 | 0 | 691 | 607 | 930 | 0 | 0 | 0 | 1672 | 2848 | 0 | 0 | 0 | 42 | 147 | 0 | 315 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 177 | 0 | 0 |
| Benzene | 0 | 0 | 0 | 426 | 0 | 0 | 723 | 31 | 893 | 33 | 0 | 0 | 1144 | 2957 | 0 | 15 | 0 | 42 | 213 | 4 | 615 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | 204 | 0 | 0 |
| Benzo(a)pyrene | 0 | 0 | 0 | 437 | 0 | 0 | 723 | 7 | 1 | 0 | 0 | 0 | 1284 | 1703 | 0 | 18 | 0 | 0 | 212 | 4 | 110 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 352 | 0 | 0 |
| Benzo(b)fluoranthene | 0 | 0 | 0 | 437 | 0 | 0 | 723 | 7 | 0 | 0 | 0 | 0 | 1284 | 710 | 0 | 18 | 0 | 0 | 0 | 4 | 40 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 348 | 0 | 0 |
| Benzo(g,h,i)perylene | 0 | 0 | 0 | 437 | 0 | 0 | 723 | 7 | 1 | 0 | 0 | 0 | 1284 | 1703 | 0 | 18 | 0 | 0 | 0 | 4 | 40 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 348 | 0 | 0 |
| Benzo(k)fluoranthene | 0 | 0 | 0 | 437 | 0 | 0 | 723 | 7 | 0 | 0 | 0 | 0 | 1284 | 1705 | 0 | 18 | 0 | 0 | 0 | 4 | 40 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 348 | 0 | 0 |
| Beta-HCH | 0 | 0 | 0 | 0 | 142 | 0 | 688 | 63 | 0 | 0 | 0 | 0 | 1474 | 766 | 0 | 20 | 0 | 0 | 0 | 0 | 20 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 71 | 0 | 29 | 0 | 0 | 0 |
| Cadmium | 0 | 672 | 36 | 437 | 115 | 100 | 723 | 903 | 915 | 82 | 0 | 0 | 1805 | 3158 | 67 | 28 | 0 | 42 | 212 | 3 | 1153 | 0 | 24 | 0 | 89 | 0 | 0 | 0 | 0 | 0 | 43 | 101 | 0 | 42 | 0 | 76 | 529 | 0 | 0 |
| Cadmium dissolved | 0 | 0 | 0 | 0 | 83 | 0 | 0 | 677 | 0 | 0 | 0 | 0 | 0 | 2084 | 0 | 30 | 0 | 0 | 220 | 4 | 420 | 0 | 117 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 131 | 0 | 0 | 71 | 64 | 0 | 0 | 0 | 0 |
| Copper | 13 | 672 | 48 | 438 | 189 | 125 | 723 | 780 | 915 | 0 | 0 | 0 | 1776 | 3324 | 231 | 28 | 0 | 42 | 212 | 5 | 741 | 0 | 23 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 43 | 128 | 0 | 41 | 0 | 76 | 529 | 0 | 0 |
| Copper dissolved | 0 | 0 | 0 | 0 | 90 | 0 | 0 | 637 | 761 | 0 | 0 | 0 | 0 | 2086 | 0 | 30 | 0 | 0 | 220 | 2 | 398 | 0 | 117 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 131 | 2 | 0 | 71 | 64 | 0 | 0 | 0 | 16 |
| DDD, p,p' | 0 | 0 | 0 | 0 | 111 | 0 | 688 | 0 | 0 | 0 | 0 | 0 | 1513 | 1133 | 0 | 24 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 67 | 0 | 29 | 0 | 0 | 0 |
| DDE, p,p' | 0 | 0 | 0 | 125 | 161 | 0 | 719 | 0 | 0 | 0 | 0 | 0 | 1563 | 2165 | 0 | 24 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 0 | 0 | 29 | 48 | 0 | 0 |
| DDT, o,p' | 0 | 0 | 0 | 0 | 161 | 0 | 719 | 22 | 0 | 0 | 0 | 0 | 1563 | 2163 | 0 | 5 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 0 | 47 | 0 | 0 | 0 |
| DDT, p,p' | 0 | 0 | 0 | 87 | 161 | 0 | 719 | 22 | 0 | 0 | 0 | 0 | 1556 | 1583 | 0 | 24 | 0 | 0 | 151 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 71 | 0 | 29 | 136 | 0 | 0 |
| Desethylatrazine | 0 | 682 | 0 | 398 | 3 | 0 | 691 | 683 | 930 | 0 | 0 | 0 | 1859 | 2649 | 0 | 0 | 0 | 42 | 0 | 0 | 723 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 270 | 0 | 0 |
| Desisopropylatrazine | 0 | 0 | 0 | 398 | 3 | 0 | 684 | 637 | 930 | 0 | 0 | 0 | 1727 | 2647 | 0 | 0 | 0 | 42 | 0 | 0 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 262 | 0 | 0 |
| Di (2-ethylhexyl) phthalate (DEHP) | 0 | 0 | 16 | 0 | 0 | 0 | 617 | 0 | 824 | 0 | 0 | 0 | 514 | 20 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | 0 | 0 |
| Dieldrin | 0 | 0 | 33 | 146 | 161 | 0 | 717 | 22 | 0 | 0 | 0 | 0 | 1625 | 2397 | 0 | 24 | 0 | 0 | 151 | 0 | 107 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 71 | 0 | 75 | 144 | 0 | 0 |
| Dichloromethane | 0 | 677 | 0 | 0 | 0 | 0 | 723 | 691 | 4 | 0 | 0 | 0 | 1388 | 111 | 0 | 17 | 0 | 0 | 0 | 4 | 714 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 74 | 251 | 0 | 0 |
| Diuron | 0 | 624 | 0 | 440 | 5 | 0 | 721 | 875 | 844 | 0 | 0 | 0 | 1859 | 3071 | 0 | 0 | 0 | 42 | 147 | 0 | 143 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 59 | 262 | 0 | 0 |
| Endrin | 0 | 0 | 33 | 143 | 161 | 0 | 717 | 22 | 0 | 0 | 0 | 0 | 1668 | 2189 | 0 | 24 | 0 | 0 | 0 | 0 | 37 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 71 | 0 | 48 | 144 | 0 | 0 |
| Fluoranthene | 0 | 0 | 0 | 437 | 0 | 0 | 723 | 7 | 1 | 0 | 0 | 0 | 1284 | 1697 | 0 | 18 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 352 | 0 | 0 |
| Gamma-HCH (Lindane) | 0 | 626 | 0 | 305 | 155 | 0 | 720 | 445 | 0 | 0 | 0 | 0 | 1856 | 2270 | 0 | 24 | 0 | 0 | 151 | 0 | 29 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 8 | 0 | 71 | 0 | 48 | 150 | 0 | 0 |
| Hexachlorobenzene (HCB) | 0 | 626 | 0 | 180 | 124 | 0 | 717 | 22 | 0 | 0 | 0 | 0 | 1633 | 2196 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 71 | 0 | 11 | 150 | 0 | 0 |
| Hexachlorobutadiene (HCBD) | 0 | 0 | 0 | 112 | 0 | 0 | 716 | 25 | 0 | 0 | 0 | 0 | 1163 | 2110 | 0 | 1 | 0 | 0 | 0 | 0 | 356 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 74 | 194 | 0 | 0 |
| Chlorfenvinphos | 0 | 0 | 0 | 157 | 9 | 100 | 0 | 6 | 0 | 0 | 0 | 0 | 1607 | 2876 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 0 | 0 | 74 | 131 | 0 | 0 |
| Chloroalkanes C10-13 | 0 | 0 | 0 | 0 | 0 | 0 | 620 | 0 | 0 | 0 | 0 | 0 | 481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chlorpyrifos | 0 | 0 | 0 | 0 | 56 | 100 | 723 | 28 | 0 | 0 | 0 | 0 | 1582 | 2842 | 0 | 18 | 0 | 0 | 0 | 0 | 456 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 144 | 0 | 0 |
| Chromium | 13 | 0 | 49 | 388 | 71 | 100 | 691 | 654 | 757 | 0 | 0 | 0 | 1609 | 3225 | 0 | 28 | 0 | 42 | 212 | 0 | 1139 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 169 | 22 | 0 | 0 | 64 | 74 | 495 | 0 | 0 |
| Chromium dissolved | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 412 | 0 | 0 | 0 | 0 | 0 | 2035 | 0 | 30 | 0 | 0 | 220 | 0 | 0 | 0 | 117 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 0 | 0 | 0 | 16 |
| Indeno(1,2,3-cd)pyrene | 0 | 0 | 0 | 437 | 1 | 0 | 723 | 6 | 1 | 0 | 0 | 0 | 1284 | 1698 | 0 | 18 | 0 | 0 | 0 | 4 | 40 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 348 | 0 | 0 |
| Isodrin | 0 | 0 | 0 | 0 | 83 | 0 | 717 | 22 | 0 | 0 | 0 | 0 | 1524 | 2240 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 133 | 0 | 0 |
| Isoproturon | 0 | 624 | 0 | 432 | 0 | 0 | 723 | 891 | 848 | 0 | 0 | 0 | 1859 | 3075 | 0 | 0 | 0 | 42 | 147 | 0 | 143 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | 270 | 0 | 0 |
| Lead | 13 | 672 | 16 | 437 | 143 | 100 | 723 | 435 | 915 | 82 | 0 | 0 | 1753 | 3317 | 181 | 28 | 0 | 42 | 212 | 5 | 1157 | 0 | 22 | 0 | 89 | 0 | 0 | 0 | 0 | 0 | 43 | 113 | 0 | 42 | 0 | 76 | 529 | 0 | 0 |
| Lead dissolved | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 618 | 0 | 0 | 0 | 0 | 0 | 2081 | 0 | 30 | 0 | 0 | 220 | 2 | 246 | 0 | 117 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 131 | 2 | 0 | 71 | 64 | 0 | 0 | 0 | 0 |
| Linuron | 0 | 624 | 0 | 380 | 0 | 0 | 721 | 122 | 6 | 0 | 0 | 0 | 1745 | 3070 | 0 | 0 | 0 | 0 | 0 | 0 | 369 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | 0 | 0 | 0 |
| MCPA | 0 | 0 | 0 | 191 | 0 | 0 | 691 | 156 | 848 | 0 | 0 | 0 | 1611 | 2849 | 0 | 0 | 0 | 42 | 147 | 0 | 143 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75 | 194 | 0 | 0 |
| Mecoprop | 0 | 0 | 0 | 118 | 0 | 0 | 685 | 607 | 930 | 0 | 0 | 0 | 1561 | 2988 | 0 | 0 | 0 | 41 | 147 | 0 | 143 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 0 |
| Mercury | 0 | 672 | 36 | 435 | 93 | 100 | 723 | 172 | 158 | 82 | 0 | 0 | 1743 | 2562 | 0 | 28 | 0 | 34 | 212 | 5 | 1237 | 0 | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 131 | 39 | 0 | 34 | 0 | 76 | 529 | 0 | 0 |
| Mercury dissolved | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 219 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 0 | 0 | 0 | 0 |
| Naphthalene | 0 | 0 | 0 | 220 | 0 | 0 | 723 | 6 | 884 | 0 | 0 | 0 | 1190 | 2434 | 0 | 15 | 0 | 42 | 212 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 348 | 0 | 0 |
| Nickel | 13 | 672 | 33 | 438 | 140 | 150 | 723 | 898 | 943 | 0 | 0 | 0 | 1812 | 3315 | 182 | 28 | 0 | 42 | 212 | 3 | 1164 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 43 | 170 | 0 | 42 | 0 | 76 | 529 | 0 | 0 |
| Nickel dissolved | 0 | 0 | 0 | 0 | 85 | 0 | 0 | 650 | 784 | 0 | 0 | 0 | 0 | 2087 | 0 | 30 | 0 | 0 | 220 | 4 | 246 | 0 | 117 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 131 | 2 | 0 | 71 | 64 | 0 | 0 | 0 | 0 |
| Para-tert-octylphenol | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1095 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 162 | 0 | 0 |
| Pentachlorobenzene | 0 | 0 | 0 | 0 | 0 | 0 | 716 | 0 | 0 | 0 | 0 | 0 | 1228 | 71 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81 | 0 | 0 |
| Pentachlorophenol | 0 | 0 | 0 | 212 | 0 | 0 | 710 | 28 | 916 | 0 | 0 | 0 | 1286 | 1628 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 183 | 0 | 0 |
| Prometryn | 0 | 0 | 0 | 119 | 60 | 0 | 691 | 79 | 0 | 0 | 0 | 0 | 1312 | 2903 | 0 | 0 | 0 | 0 | 0 | 0 | 111 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 270 | 0 | 0 |
| Propazine | 0 | 0 | 0 | 333 | 149 | 99 | 0 | 620 | 0 | 0 | 0 | 0 | 1590 | 2907 | 0 | 0 | 0 | 42 | 0 | 0 | 71 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 0 | 76 | 0 | 0 | 0 |
| Simazine | 0 | 682 | 0 | 441 | 157 | 100 | 723 | 928 | 924 | 0 | 0 | 0 | 1859 | 3122 | 0 | 18 | 0 | 42 | 90 | 0 | 758 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 0 | 76 | 270 | 0 | 0 |
| Terbuthylazine | 0 | 0 | 0 | 399 | 21 | 0 | 691 | 683 | 858 | 0 | 0 | 0 | 1745 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 734 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 270 | 0 | 0 |
| Terbutryn | 0 | 0 | 0 | 119 | 60 | 0 | 0 | 144 | 0 | 0 | 0 | 0 | 1482 | 2905 | 0 | 0 | 0 | 42 | 0 | 0 | 222 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 270 | 0 | 0 |
| Tetrachloromethane | 0 | 0 | 0 | 388 | 6 | 0 | 691 | 57 | 895 | 0 | 0 | 0 | 1537 | 2897 | 0 | 20 | 0 | 42 | 0 | 0 | 547 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 199 | 0 | 0 |
| Trifluralin | 0 | 0 | 0 | 213 | 55 | 100 | 723 | 72 | 0 | 0 | 0 | 0 | 1662 | 2395 | 0 | 0 | 0 | 0 | 0 | 0 | 456 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 74 | 144 | 0 | 0 |
| Trichloromethane | 0 | 0 | 0 | 423 | 0 | 0 | 723 | 782 | 882 | 0 | 0 | 0 | 1629 | 2887 | 0 | 20 | 0 | 42 | 0 | 4 | 828 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 256 | 0 | 0 |
| Zinc | 13 | 672 | 49 | 438 | 225 | 109 | 723 | 896 | 922 | 0 | 0 | 0 | 1776 | 3398 | 557 | 29 | 0 | 40 | 212 | 5 | 758 | 0 | 23 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 43 | 135 | 0 | 1 | 0 | 76 | 529 | 0 | 0 |
| Zinc dissolved | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 661 | 764 | 0 | 0 | 0 | 0 | 2084 | 0 | 30 | 0 | 0 | 220 | 2 | 376 | 0 | 117 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 131 | 2 | 0 | 71 | 64 | 0 | 0 | 0 | 16 |

## 3.2 *Marine environment*

The data on hazardous substances in biota and sediment from Transitional, Coastal and Marine (TCM) waters are collected through the Eionet Reportnet or ICES (that acts as a data centre for both HELCOM and OSPAR). The yearly compiled datasets are published in Waterbase. The most recent version of these datasets can be found here: http://www.eea.europa.eu/data-and-maps/data/waterbase-transitional-coastal-and-marine-waters-9

For general regional assessments, stations are assigned to the main regions of the North East Atlantic, Baltic Sea and Mediterranean, using only station coordinates. All biota stations with sufficient data for assessment are in coastal areas. The Baltic Sea has poor geographical coverage due to lack of defined assessment limits for commonly monitored species and tissues; most of the data used in assessments are from Kiel Bay and the Danish Belts. In the Mediterranean only the north-western part is covered, and only data for mussels are included in the assessment, because assessment limits for Mediterranean fish have not been established. An overview of data availability for the 1998–2010 period is provided in Table 3.2.1. Note that for the marine environment data was selected from the period 1998–2010 compared to the period 2002–2011 selected for the freshwater analysis.

**Table 3.2.1 Data availability for assessment of hazardous substances in marine biota for the 1998–2010 period**

| Data Provider | Number of time series per determinant | | | | | | |
|---|---|---|---|---|---|---|---|
| | Cadmium | Mercury | Lead | DDT (DDE, p,p') | HCB | Gamma HCH | PCB |
| Belgium | 3 | 4 | 3 | 4 | 4 | 4 | 4 |
| Croatia | 19 | 18 | 19 | 15 | | 19 | |
| Denmark | 31 | 37 | 31 | 35 | 37 | 37 | 37 |
| Estonia | | 3 | | | | | |
| Finland | | 6 | | | | | |
| France | 80 | 80 | 80 | 75 | | 74 | 77 |
| Iceland | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Ireland | 24 | 24 | 18 | 15 | 15 | 15 | 15 |
| Italy | | 55 | 55 | 39 | 25 | | 52 |
| Netherlands | 2 | 5 | 2 | 2 | 5 | 2 | 5 |
| Norway | 40 | 48 | 39 | 48 | 48 | 48 | 48 |
| Poland | 2 | 5 | 2 | 2 | 2 | 2 | 2 |
| Spain | 30 | 30 | 30 | 28 | 13 | 29 | 30 |
| Sweden | | 6 | | 2 | 2 | 2 | 2 |
| United Kingdom | 72 | 88 | 69 | 3 | | | 85 |
| Total | 315 | 421 | 360 | 280 | 163 | 244 | 369 |

Additionally the data availability for the 2002–2011 period was analysed although no assessment was done for this period. Number of measurements in sediments for individual substances are shown in figures 3.2.1–3.2.29, number of measurements in 3 fish species (Clupea harengus – Herring, Gadus morhua- Atlantic cod, Platichthys flesus – Flounder) and 1 respective 2 bivalve species (Mytilus edulis and galloprovincialis – Blue mussel and the related Mediterranean mussel) for individual substances are shown in figures 3.2.30 –3.2.100. It should be noted that tissue (e.g. muscle, liver) is not included in this overview due to the level of detail. It is however generally assumed that the countries are consistent in measuring the same tissue throughout the time series.

**Fig. 3.2.1 Number of measurements of aldrin in sediments divided by country submitting data to Eionet CDR or ICES.**

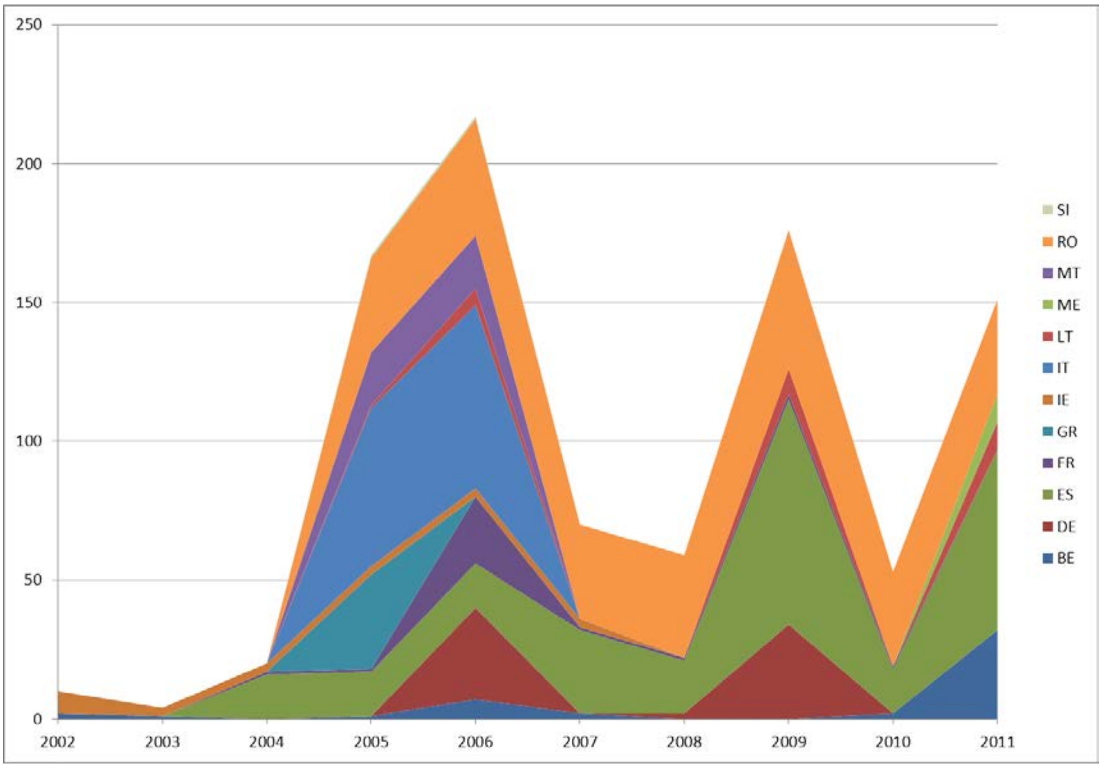



**Fig. 3.2.2 Number of measurements of anthracene in sediments divided by country submitting data to Eionet CDR or ICES.**

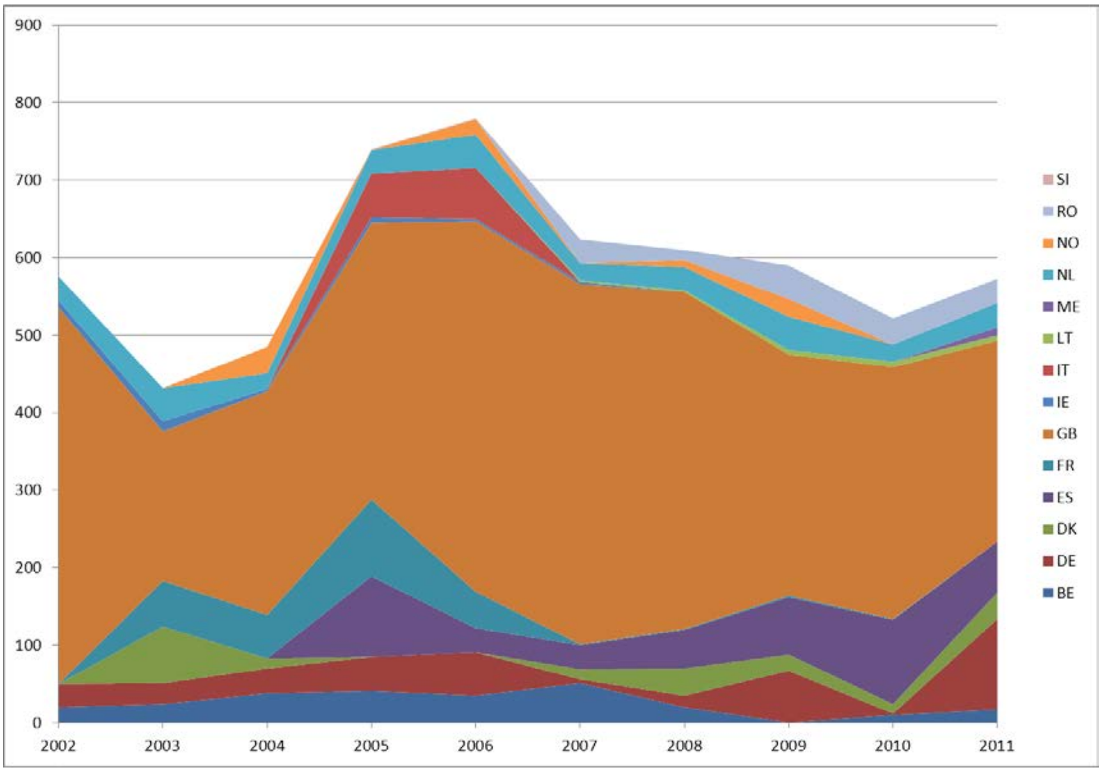


**Fig. 3.2.3 Number of measurements of benzo(a)pyrene in sediments divided by country submitting data to Eionet CDR or ICES.**

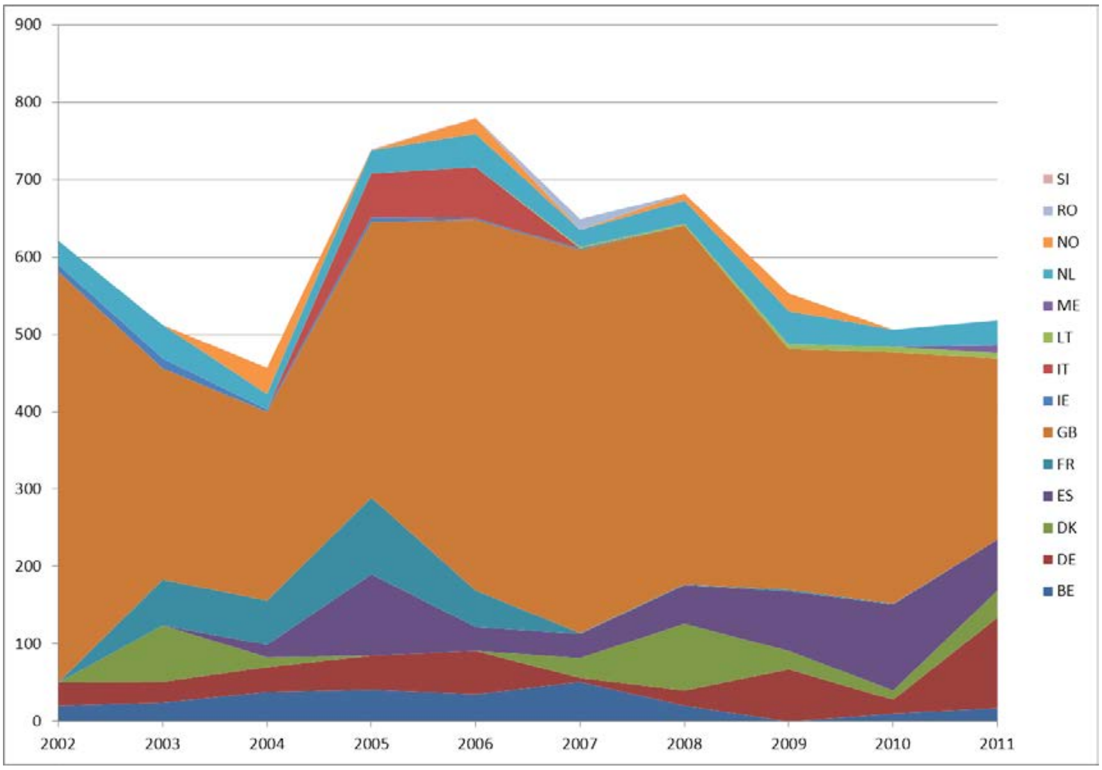



**Fig. 3.2.4 Number of measurements of benzo(b)fluoranthene in sediments divided by country submitting data to Eionet CDR or ICES.**

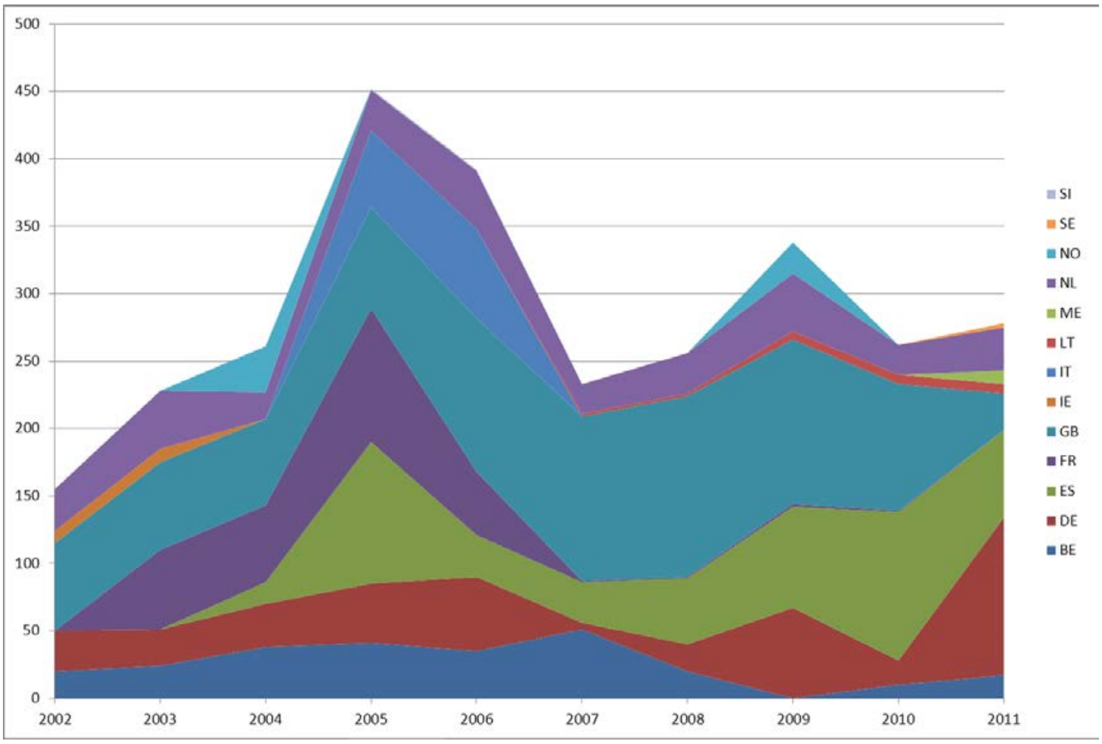


**Fig. 3.2.5 Number of measurements of benzo(g,h,i)perylene in sediments divided by country submitting data to Eionet CDR or ICES.**

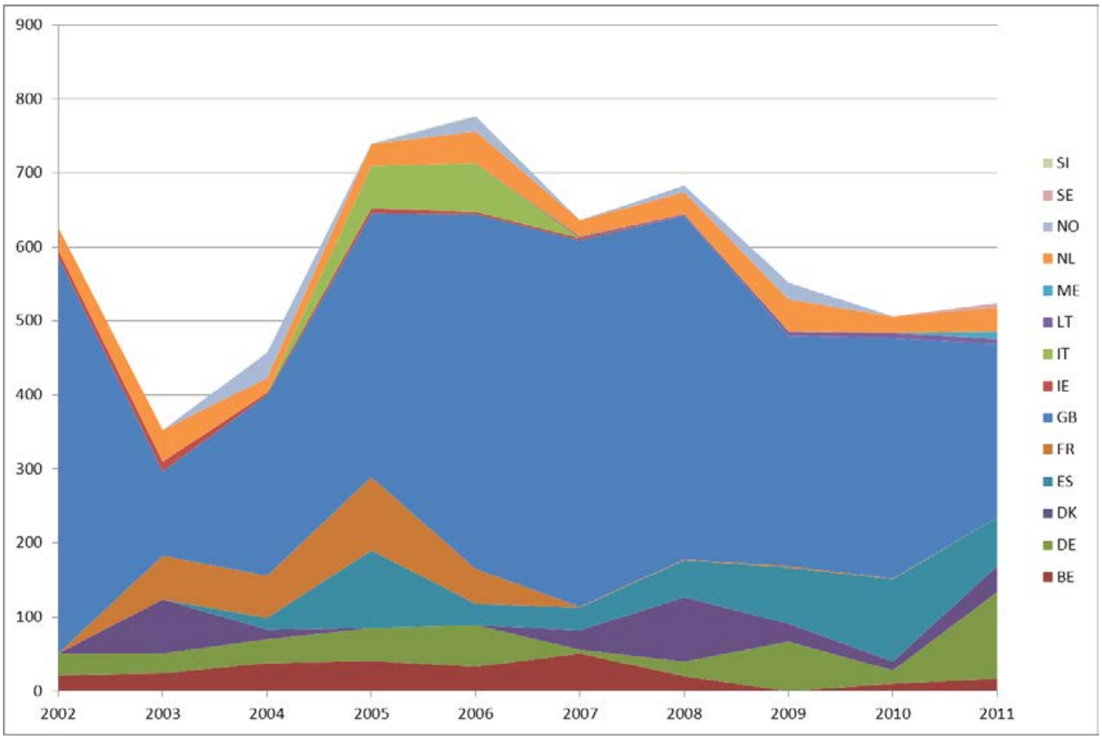



**Fig. 3.2.6 Number of measurements of benzo(k)fluoranthene in sediments divided by country submitting data to Eionet CDR or ICES.**

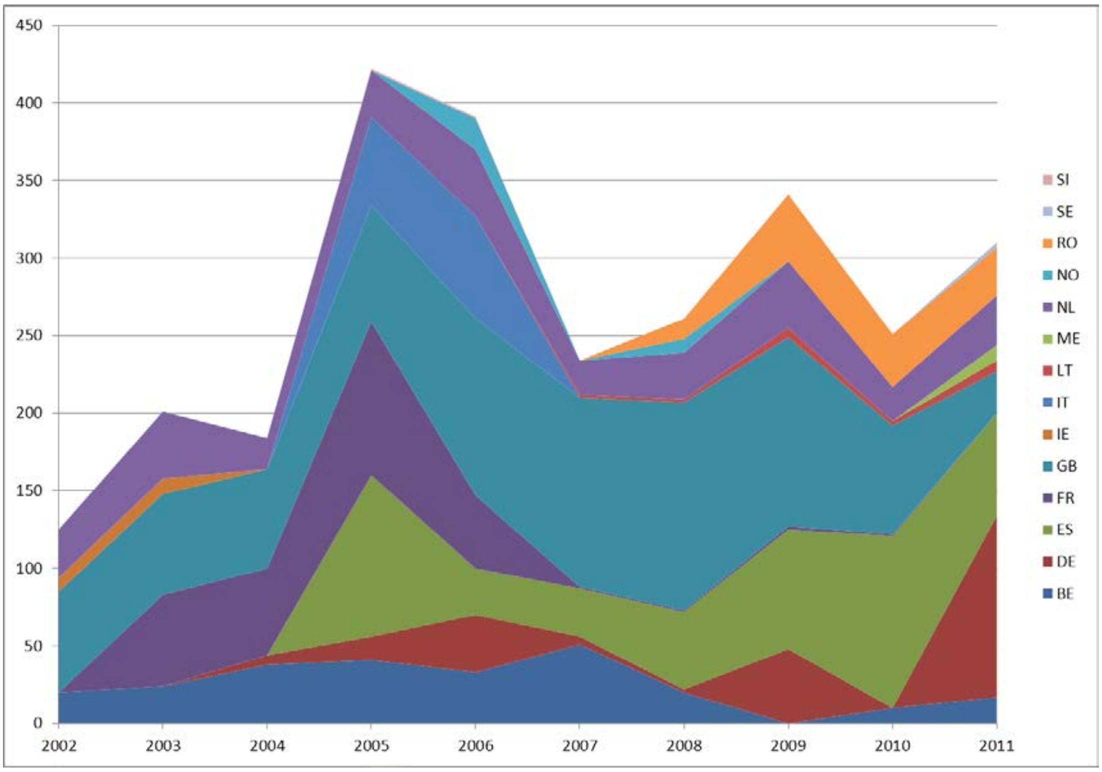


**Fig. 3.2.7 Number of measurements of cadmium in sediments divided by country submitting data to Eionet CDR or ICES.**

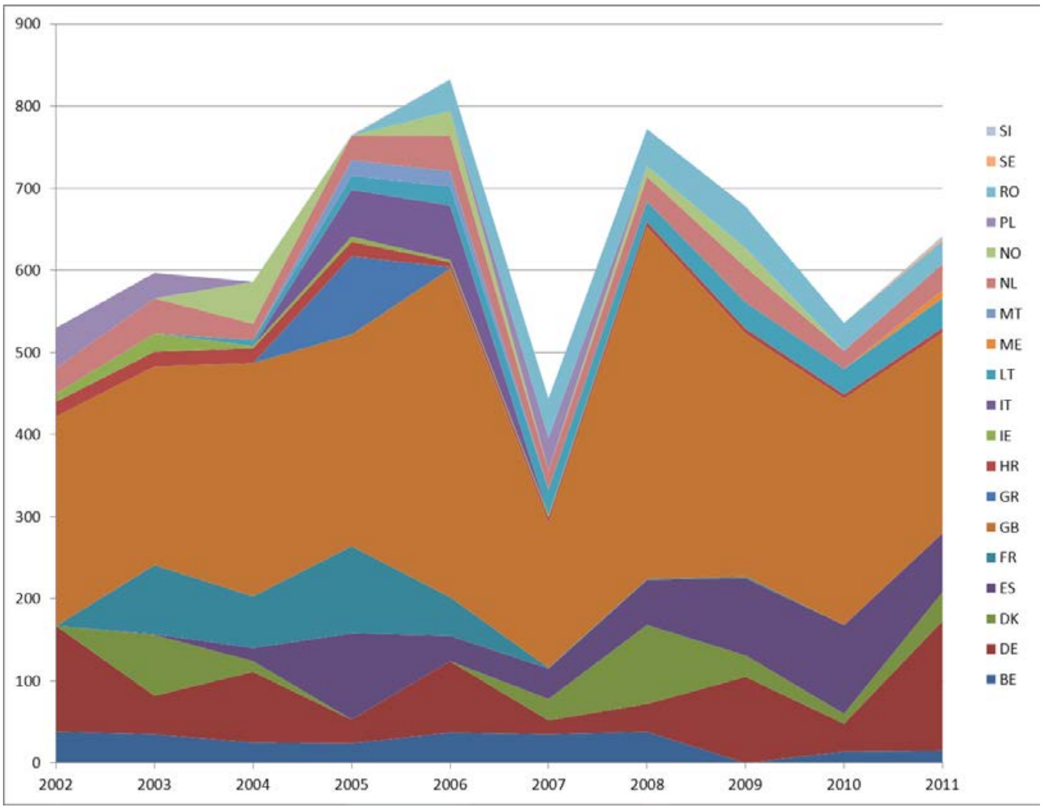



**Fig. 3.2.8 Number of measurements of chromium in sediments divided by country submitting data to Eionet CDR or ICES.**

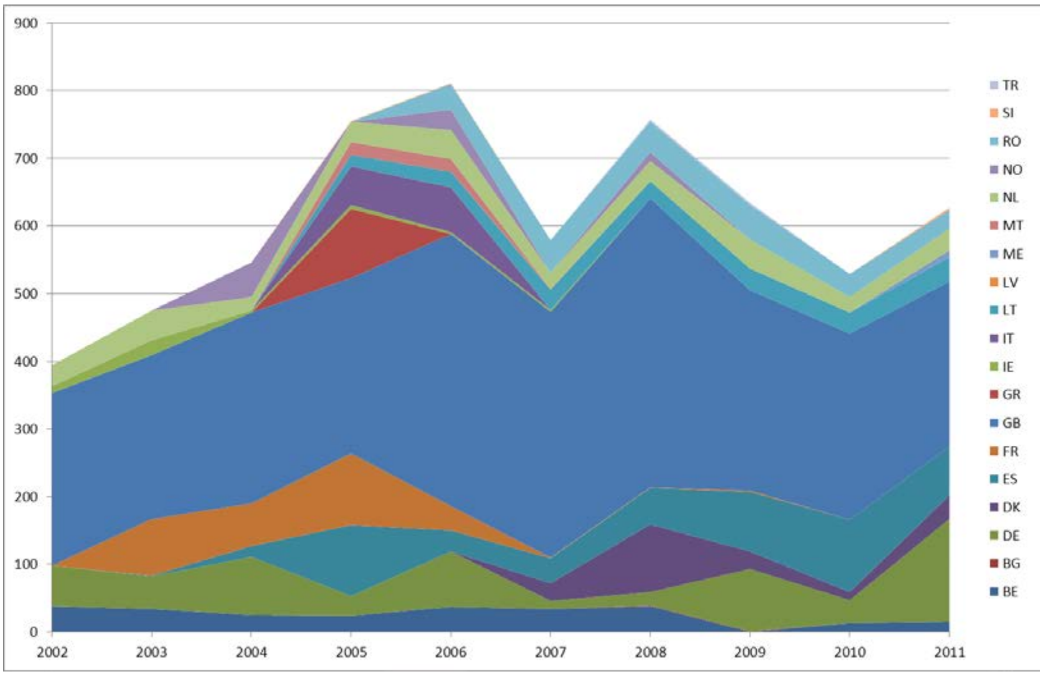


**Fig. 3.2.9 Number of measurements of chrysene in sediments divided by country submitting data to Eionet CDR or ICES.**

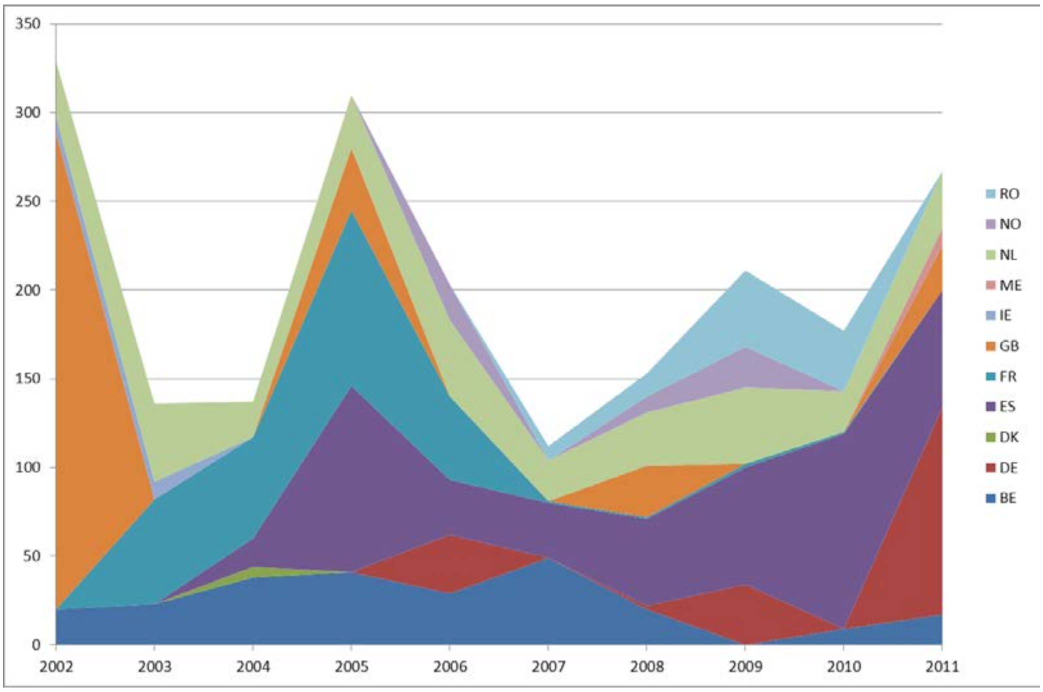



**Fig. 3.2.10 Number of measurements of copper in sediments divided by country submitting data to Eionet CDR or ICES.**

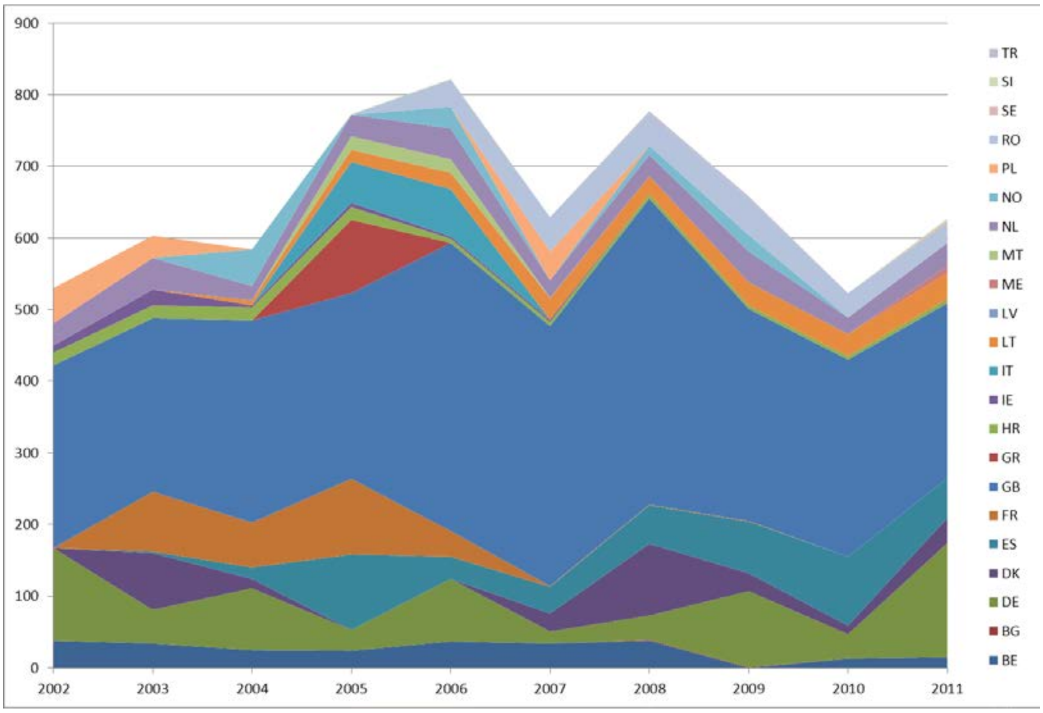


**Fig. 3.2.11 Number of measurements of DDT o,p' in sediments divided by country submitting data to Eionet CDR or ICES.**

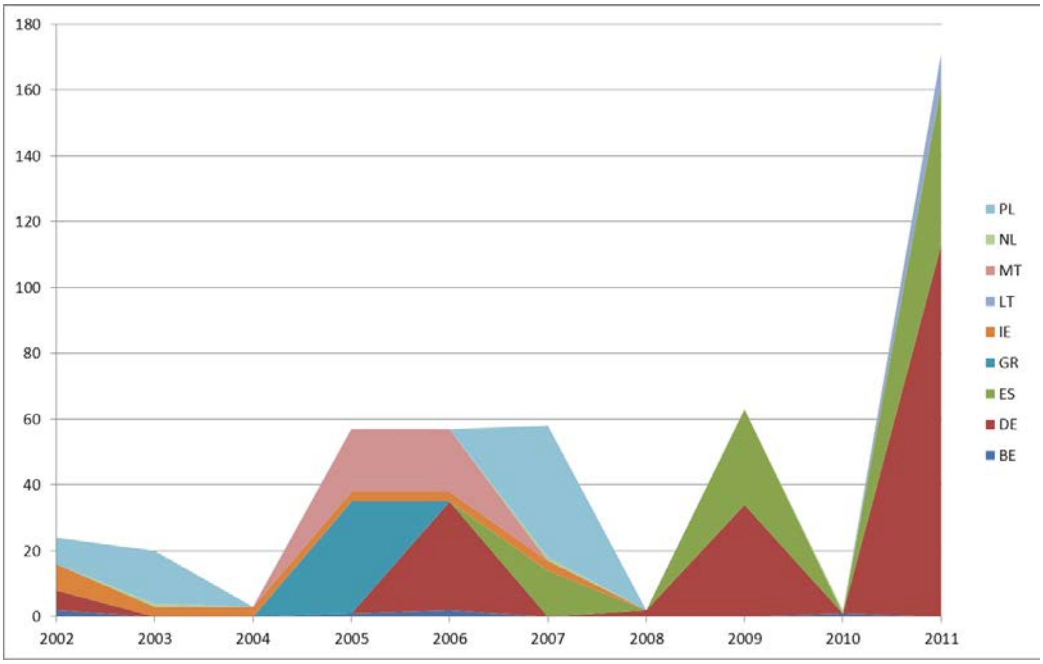



**Fig. 3.2.12 Number of measurements of DDT p,p' in sediments divided by country submitting data to Eionet CDR or ICES.**

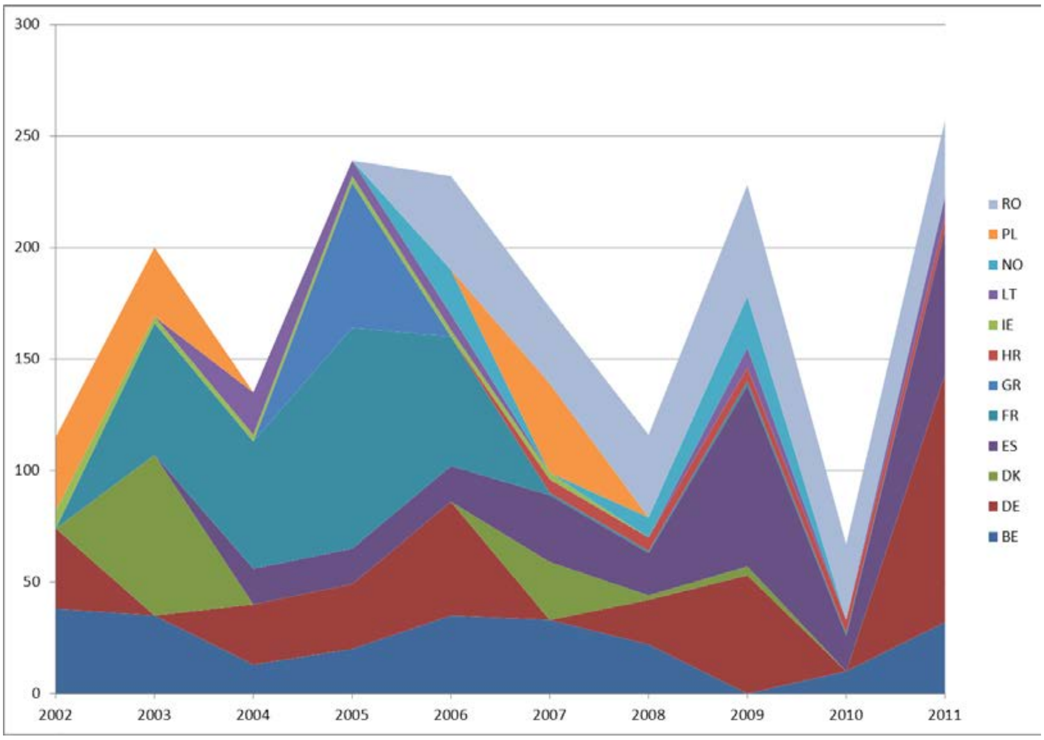


**Fig. 3.2.13 Number of measurements of fluoranthene in sediments divided by country submitting data to Eionet CDR or ICES.**

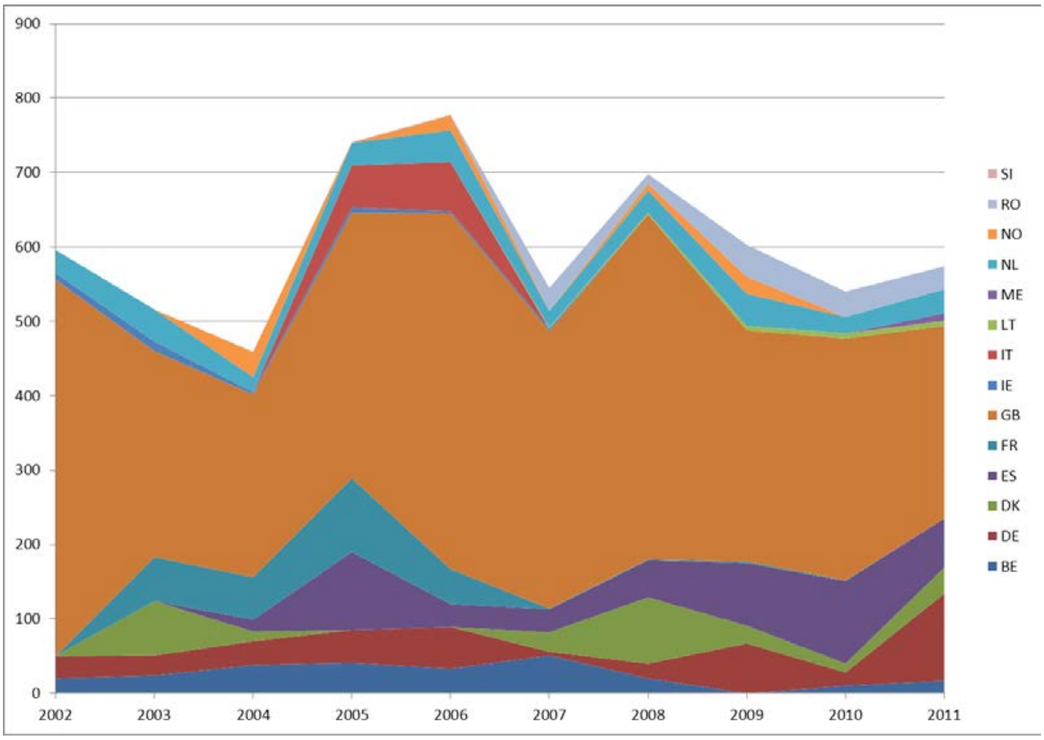



**Fig. 3.2.14 Number of measurements of gamma-HCH in sediments divided by country submitting data to Eionet CDR or ICES.**

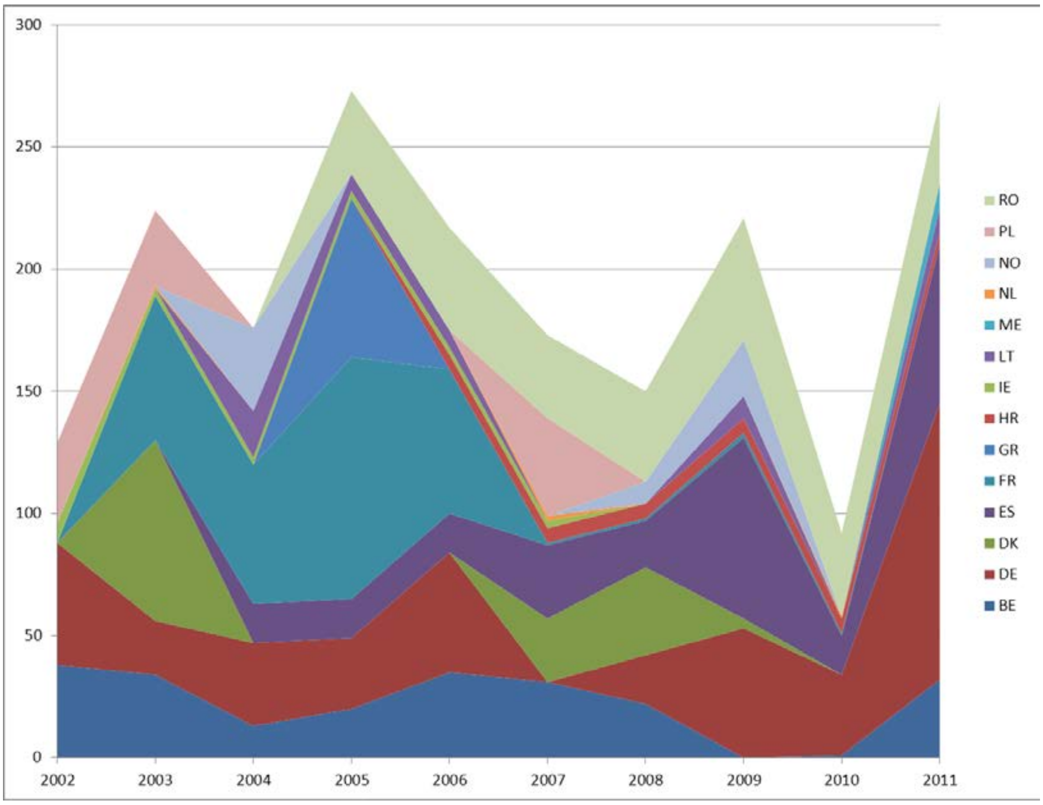


**Fig. 3.2.15 Number of measurements of hexachlorobenzene in sediments divided by country submitting data to Eionet CDR or ICES.**

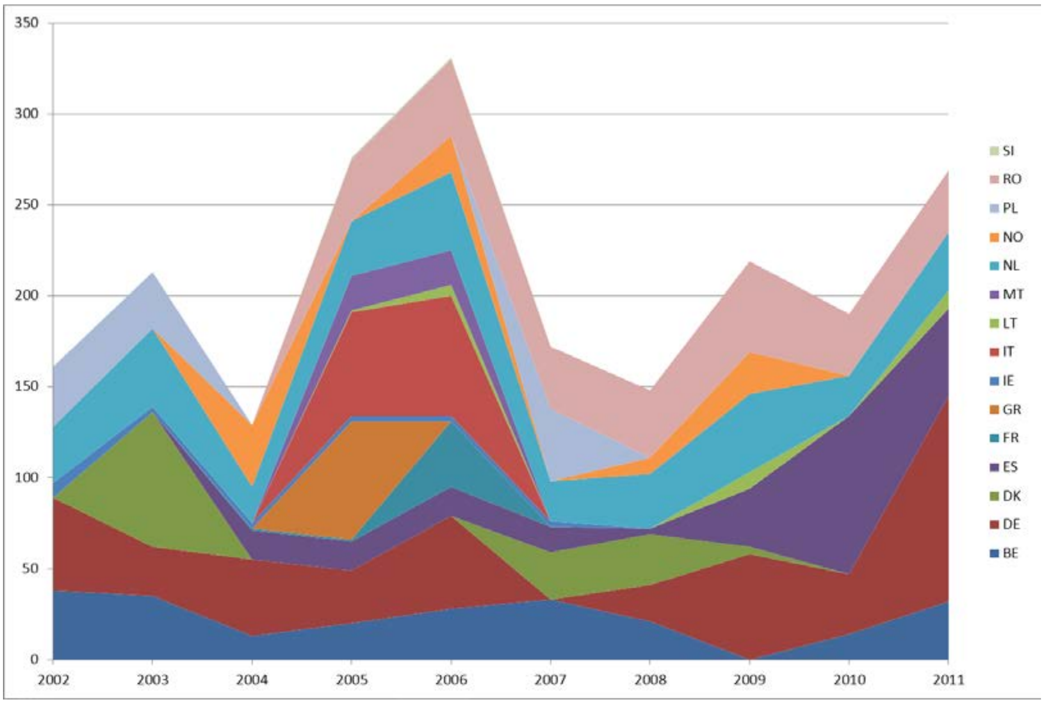



**Fig. 3.2.16 Number of measurements of lead in sediments divided by country submitting data to Eionet CDR or ICES.**

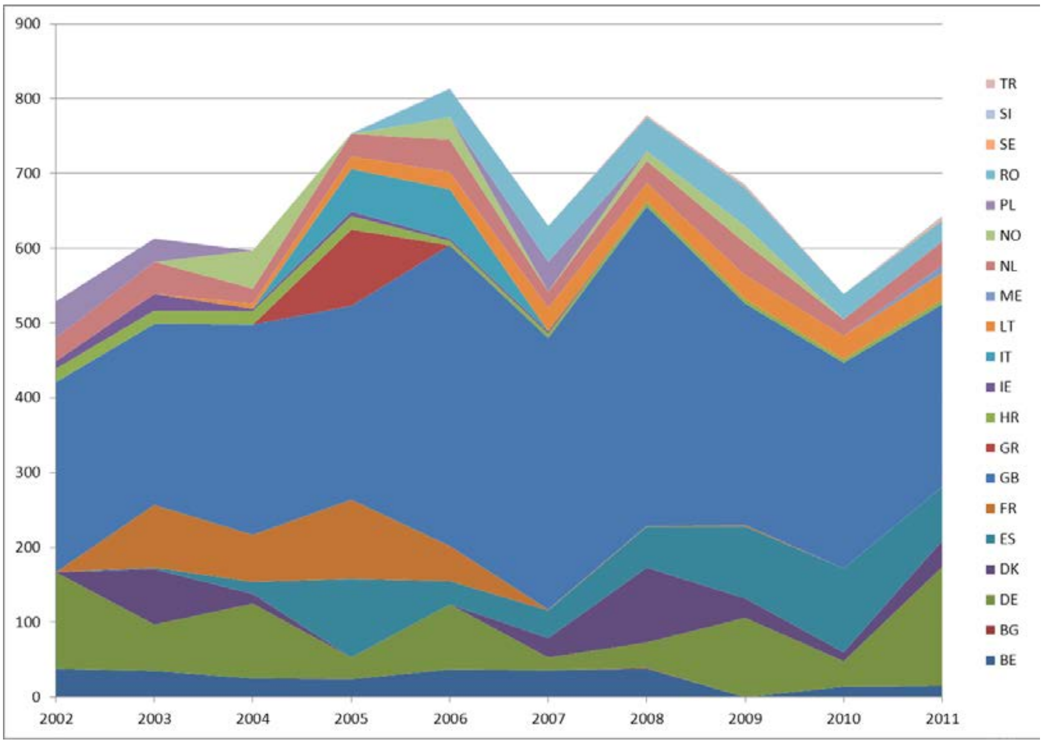


**Fig. 3.2.17 Number of measurements of mercury in sediments divided by country submitting data to Eionet CDR or ICES.**

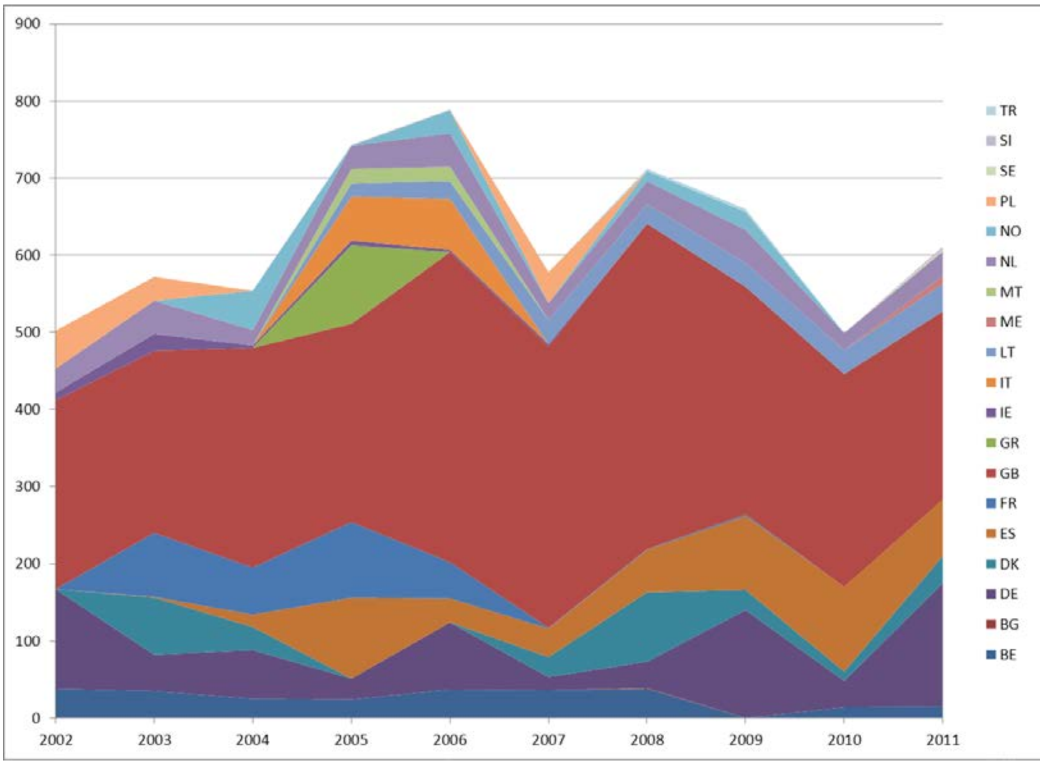



**Fig. 3.2.18 Number of measurements of naphtalene in sediments divided by country submitting data to Eionet CDR or ICES.**

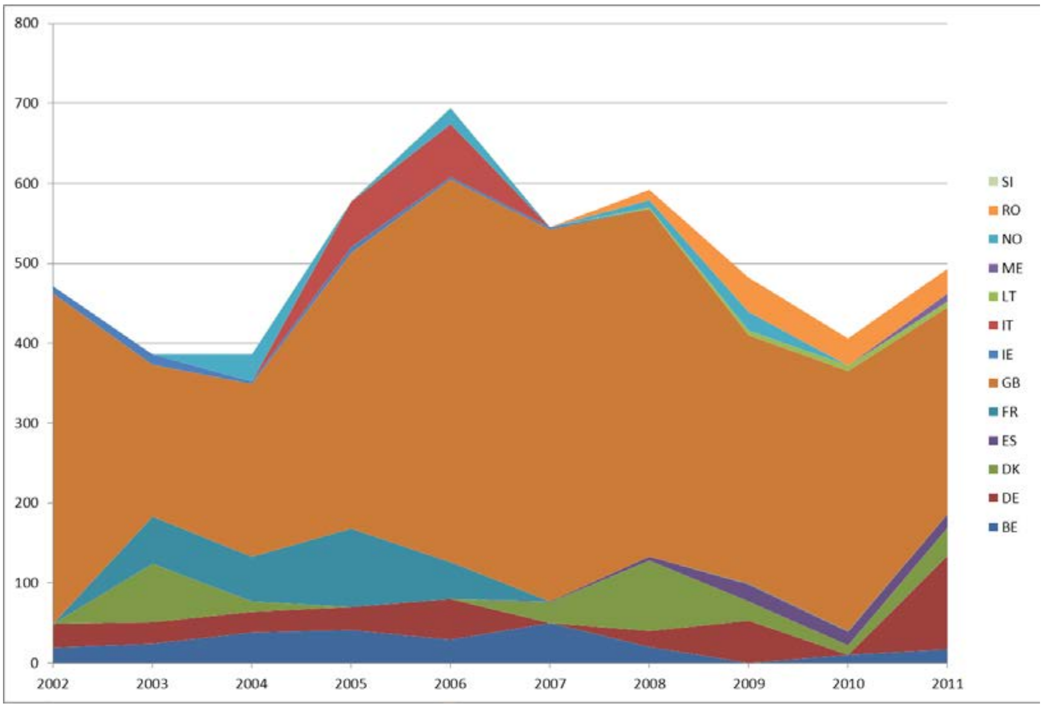


**Fig. 3.2.19 Number of measurements of nickel in sediments divided by country submitting data to Eionet CDR or ICES.**

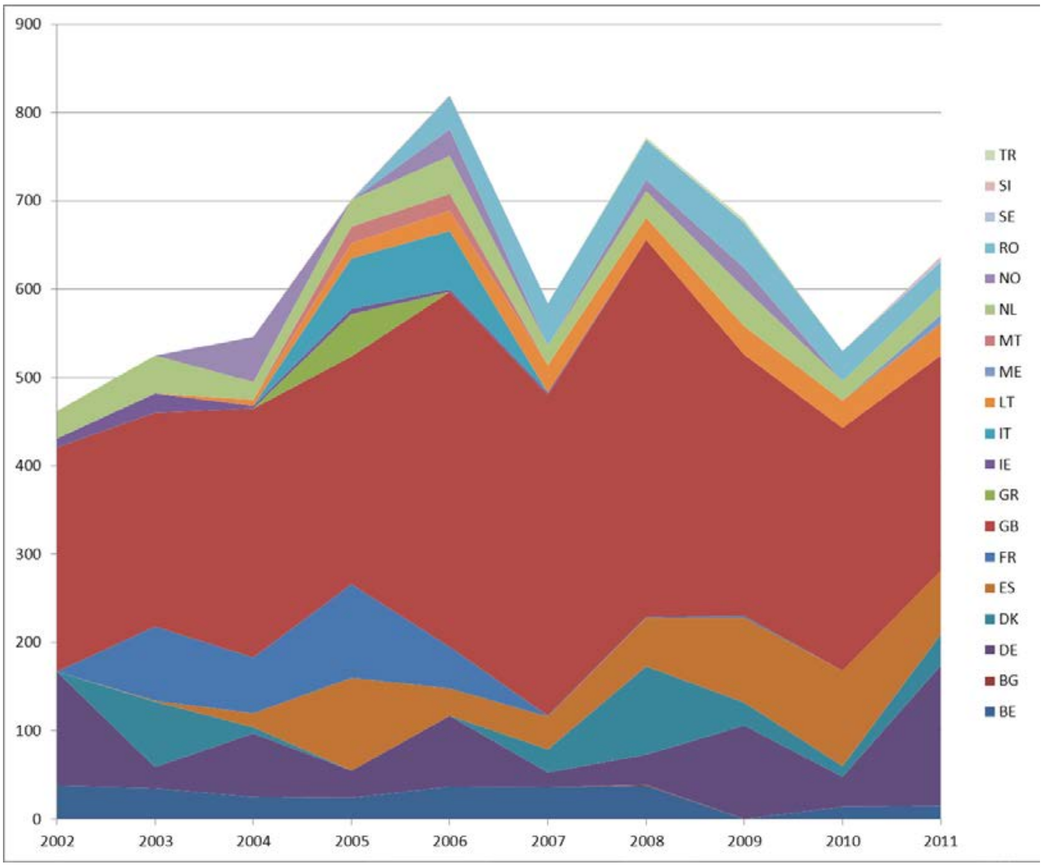



**Fig. 3.2.20 Number of measurements of PCB28 in sediments divided by country submitting data to Eionet CDR or ICES.**

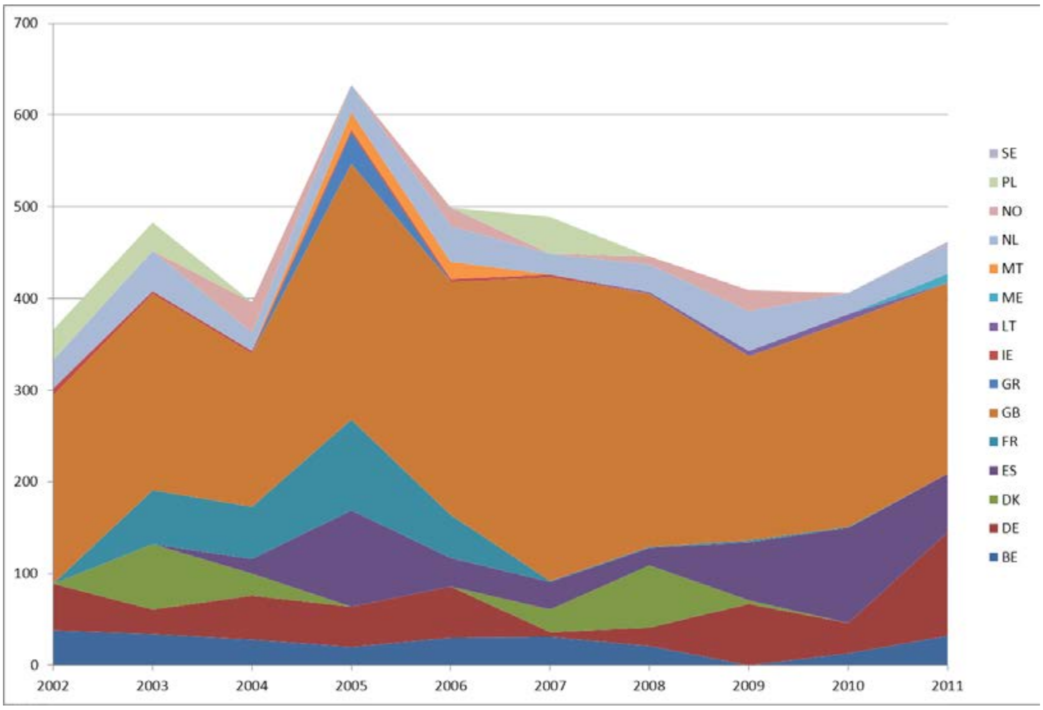


**Fig. 3.2.21 Number of measurements of PCB52 in sediments divided by country submitting data to Eionet CDR or ICES.**

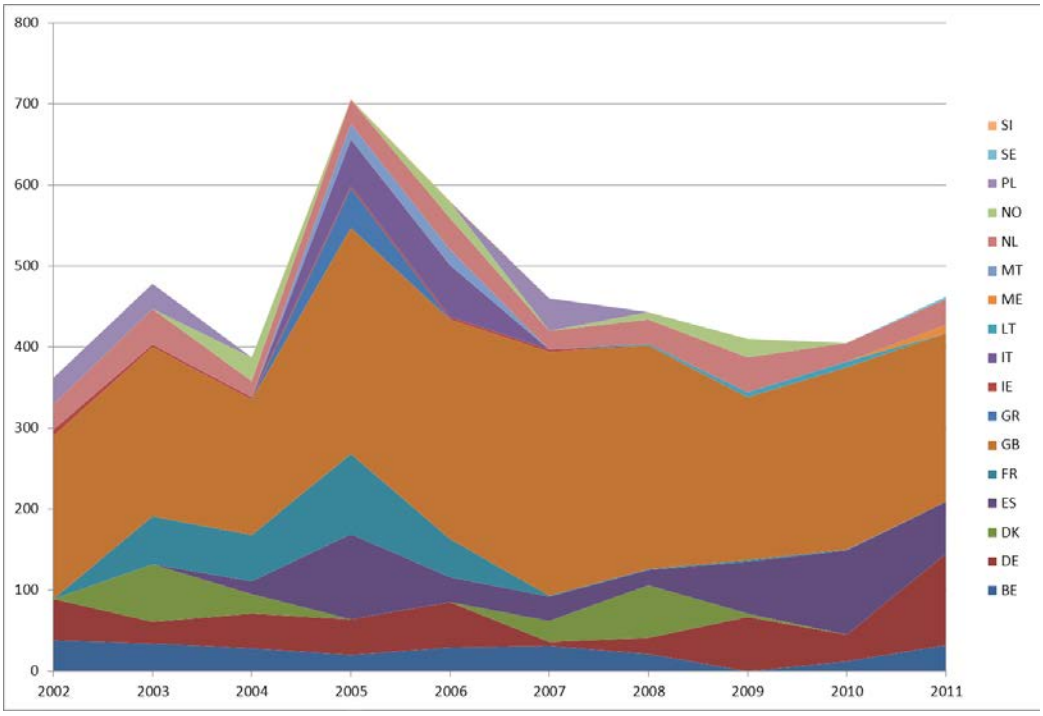



**Fig. 3.2.22 Number of measurements of PCB101 in sediments divided by country submitting data to Eionet CDR or ICES.**

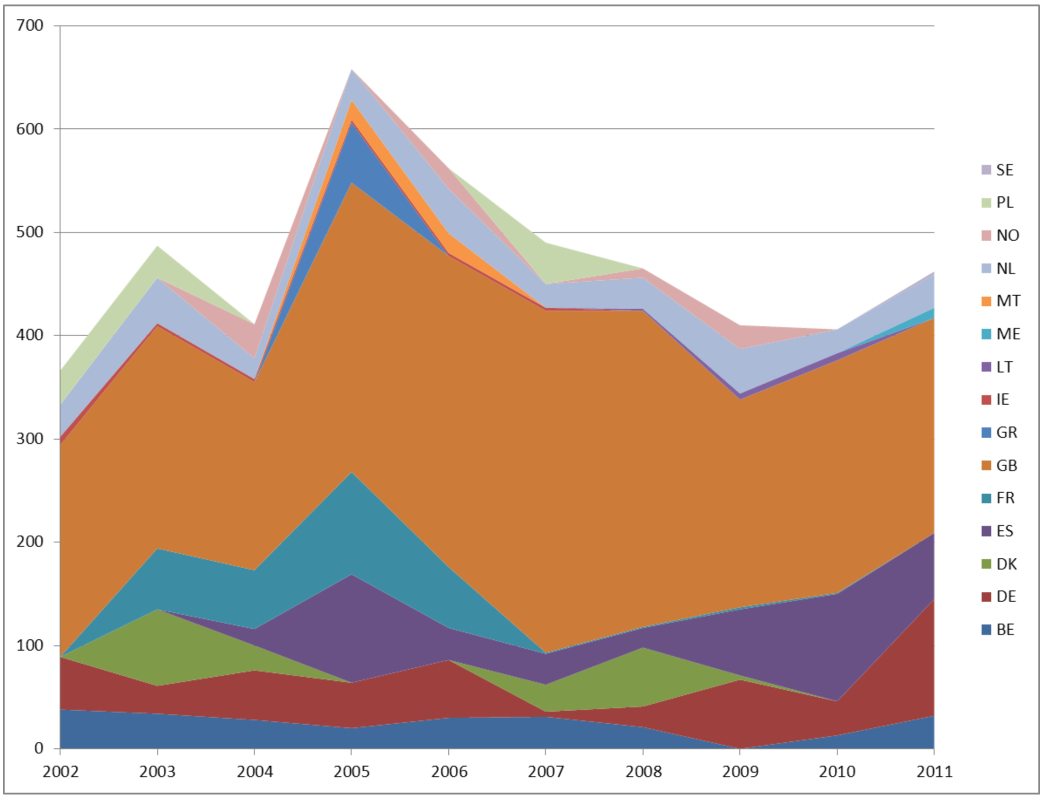


**Fig. 3.2.23 Number of measurements of PCB118 in sediments divided by country submitting data to Eionet CDR or ICES.**

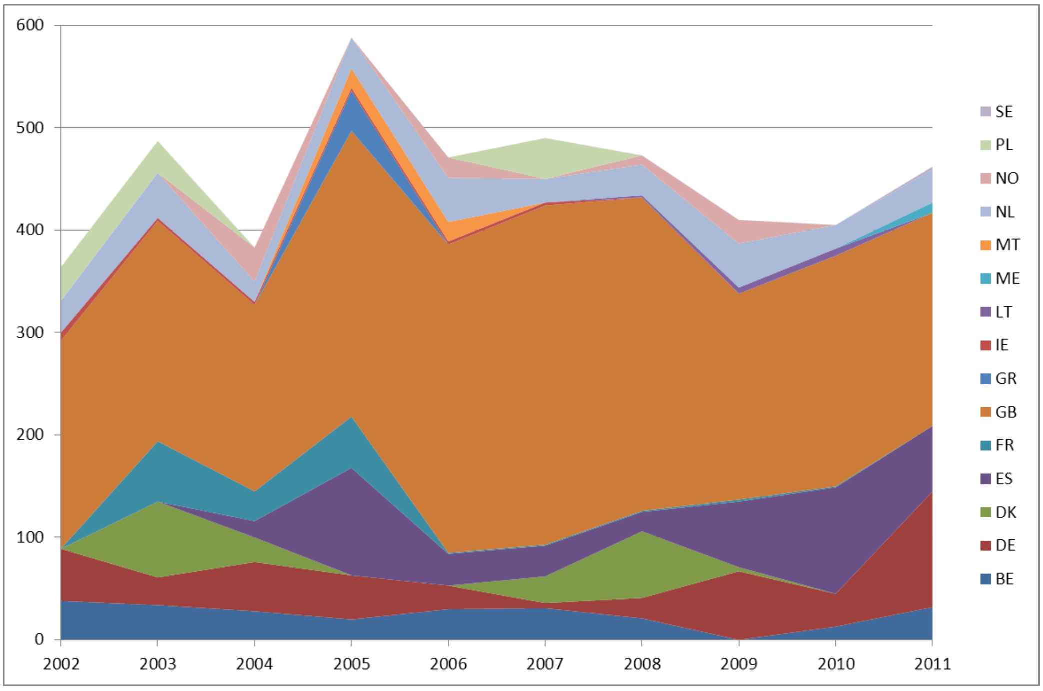



**Fig. 3.2.24 Number of measurements of PCB138 in sediments divided by country submitting data to Eionet CDR or ICES.**

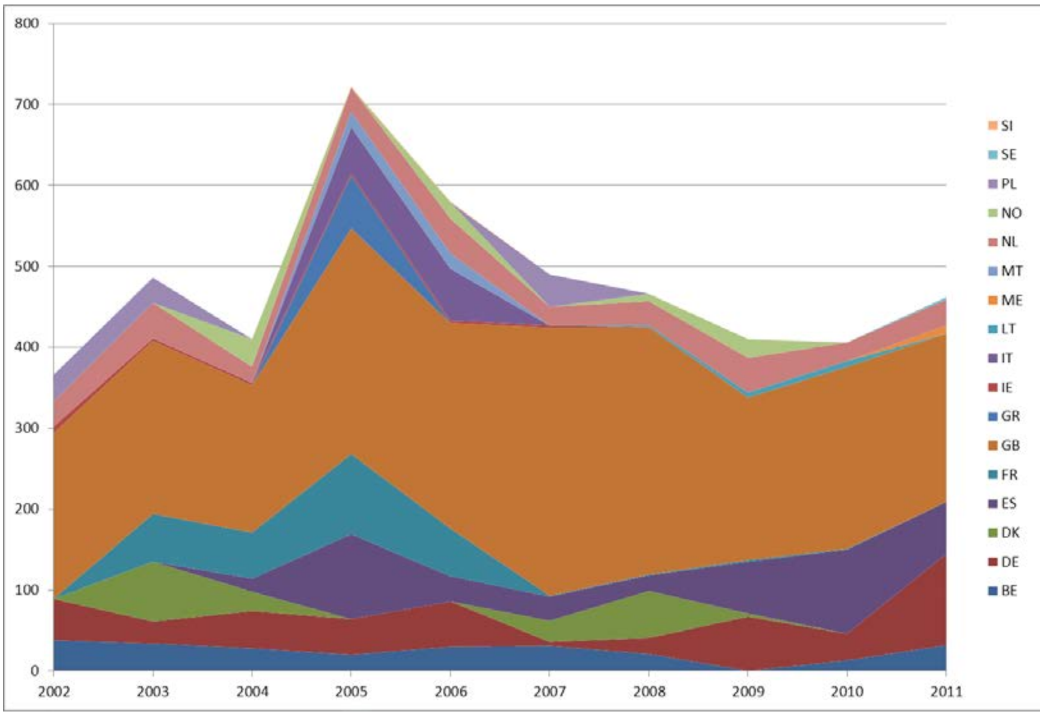


**Fig. 3.2.25 Number of measurements of PCB153 in sediments divided by country submitting data to Eionet CDR or ICES.**

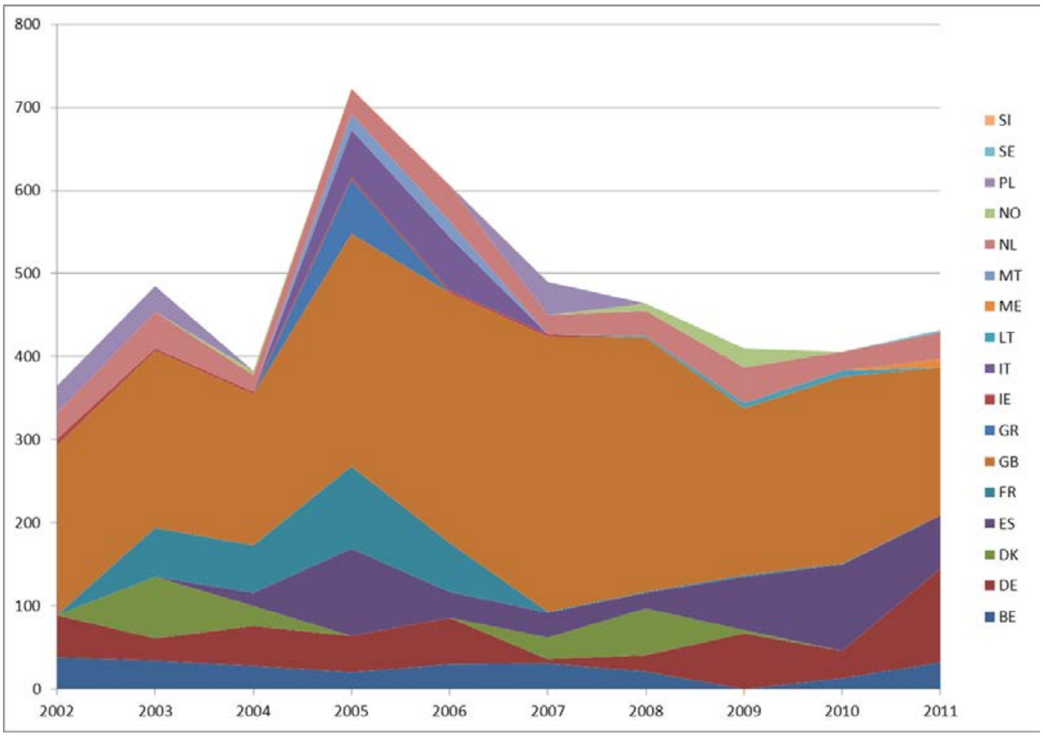



**Fig. 3.2.26 Number of measurements of PCB180 in sediments divided by country submitting data to Eionet CDR or ICES.**

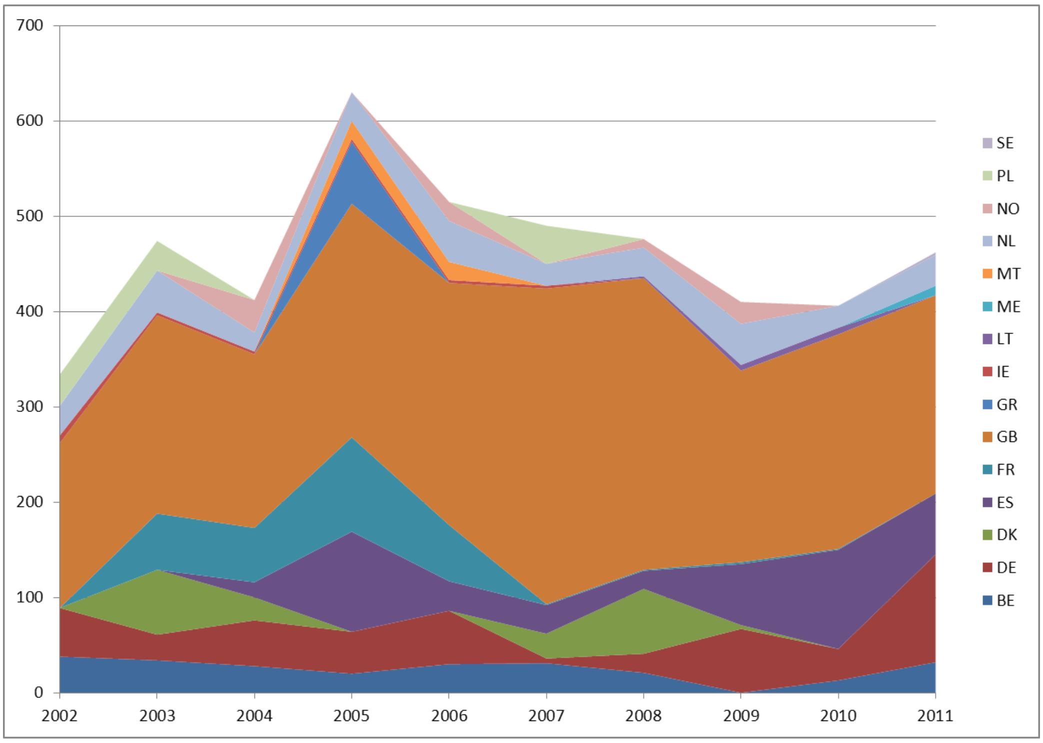


**Fig. 3.2.27 Number of measurements of phenanthrene in sediments divided by country submitting data to Eionet CDR or ICES.**

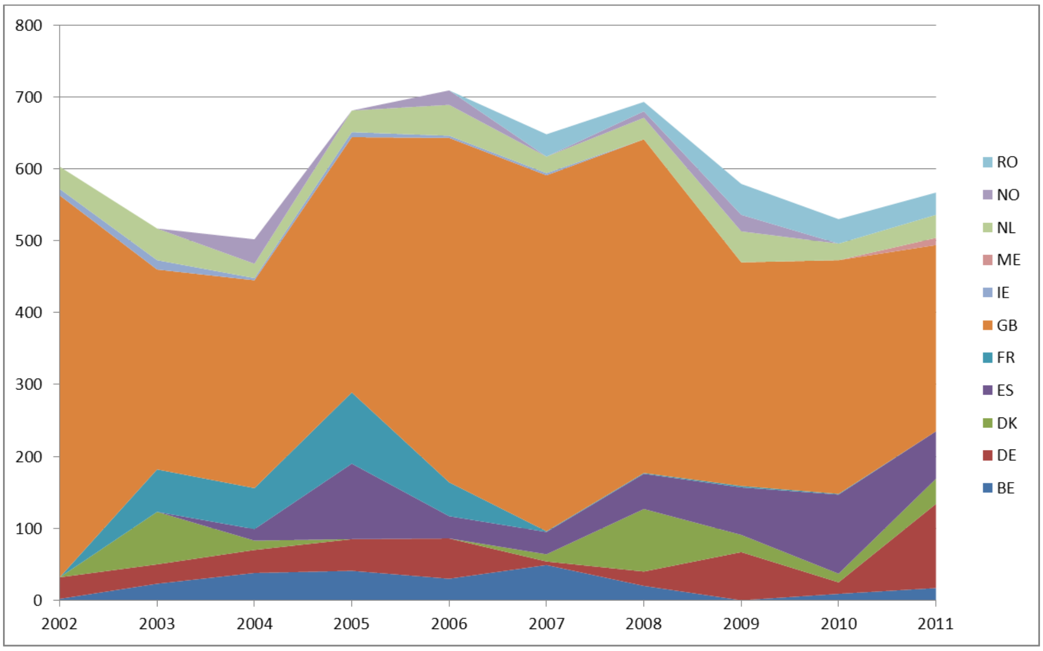



**Fig. 3.2.28 Number of measurements of pyrene in sediments divided by country submitting data to Eionet CDR or ICES.**

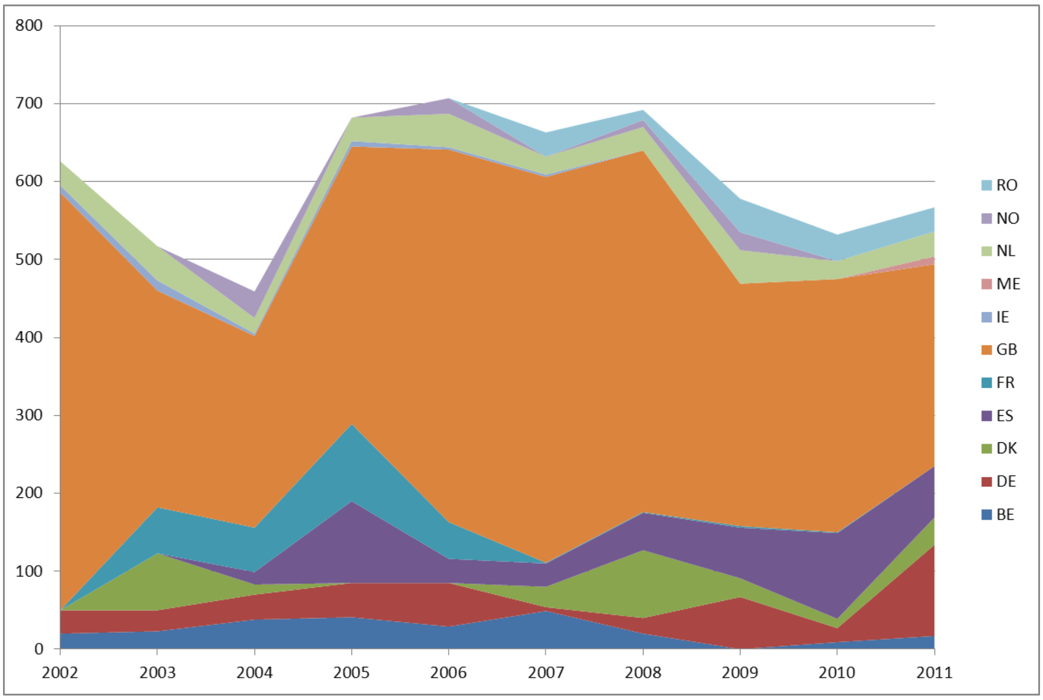


**Fig. 3.2.29 Number of measurements of zinc in sediments divided by country submitting data to Eionet CDR or ICES.**

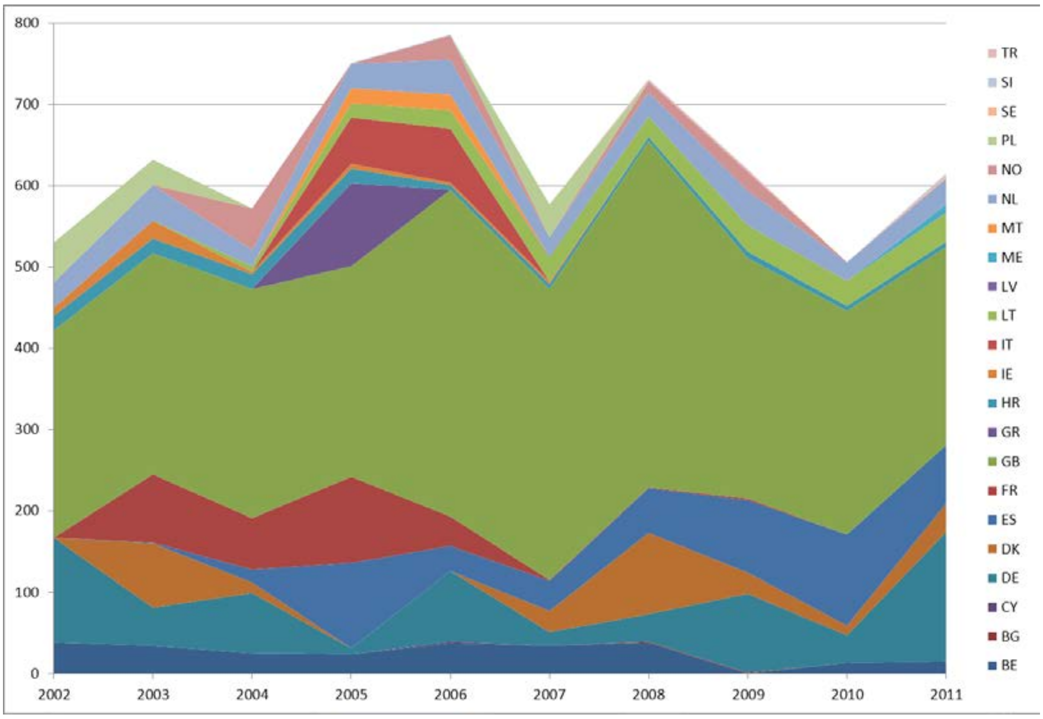



**Fig. 3.2.30 Number of measurements of alpha-HCH in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

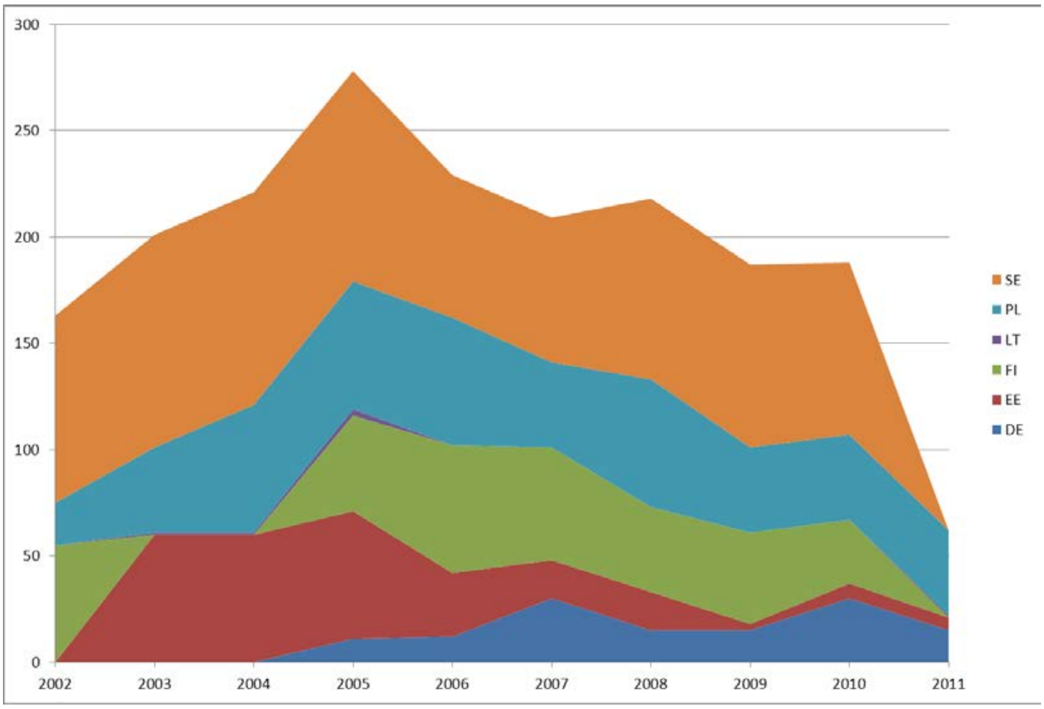


**Fig. 3.2.31 Number of measurements of cadmium in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

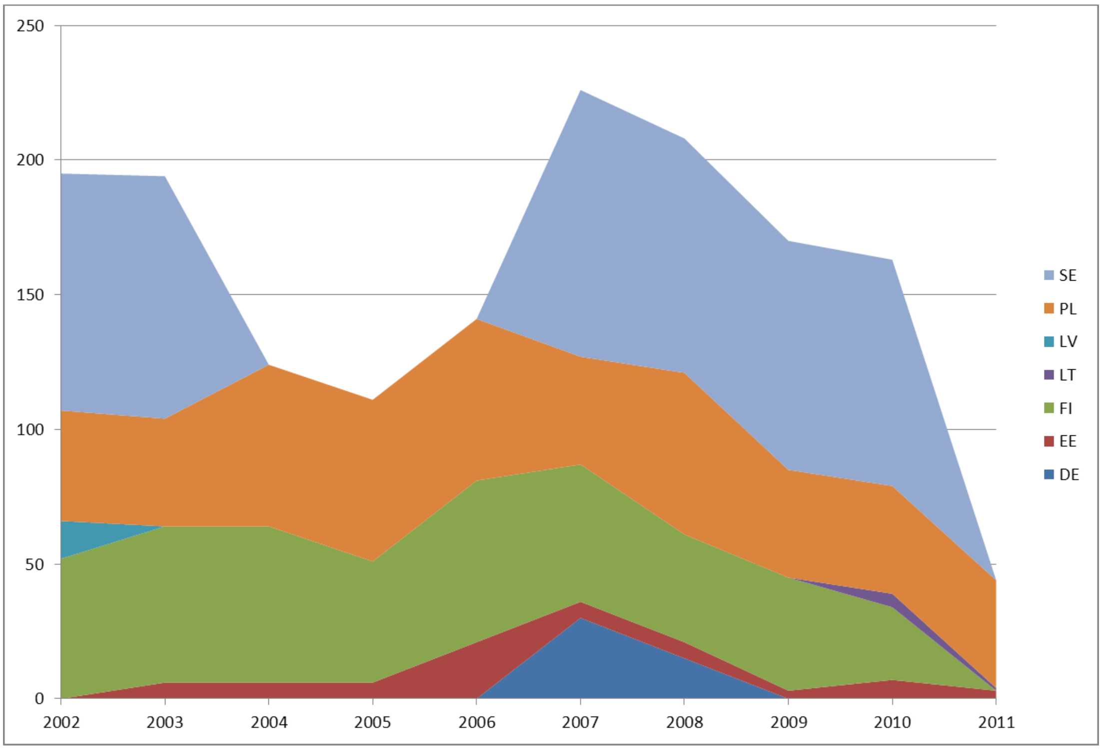



**Fig. 3.2.32 Number of measurements of copper in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

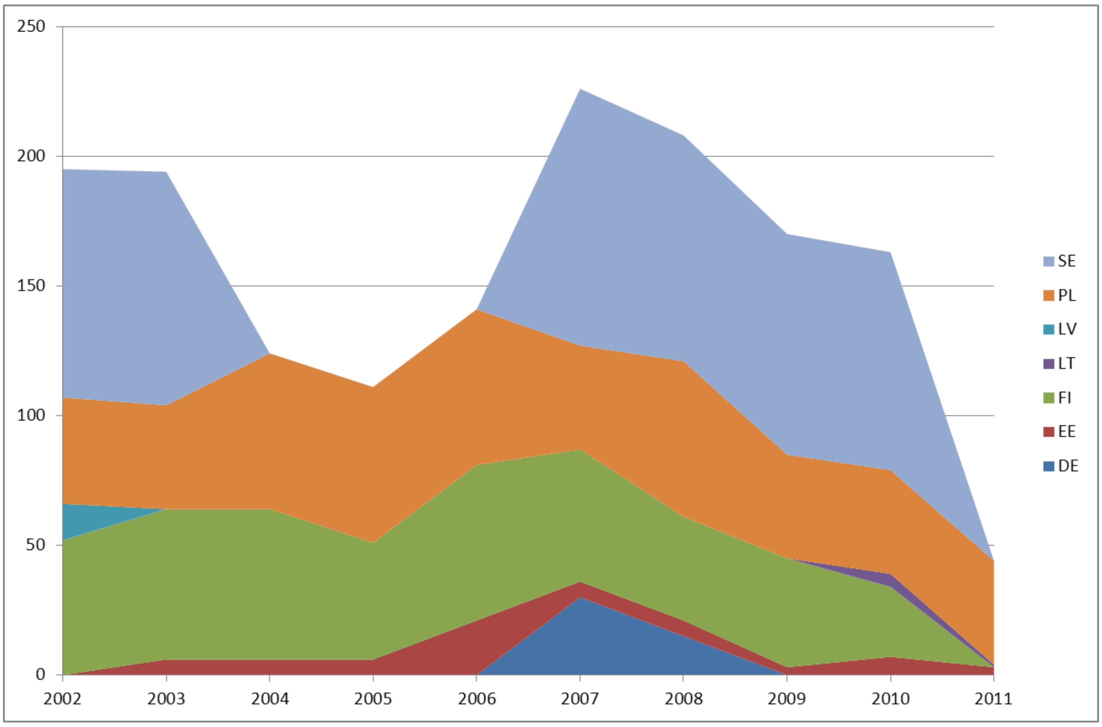


**Fig. 3.2.33 Number of measurements of DDD p,p' in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

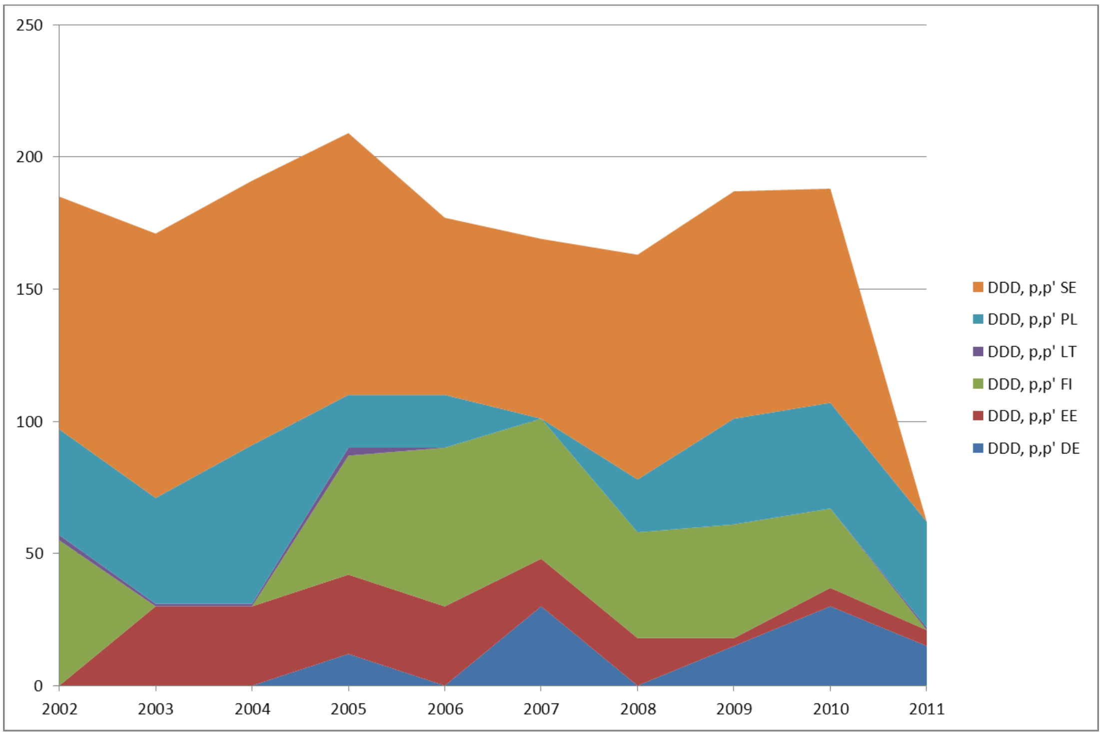



**Fig. 3.2.34 Number of measurements of DDE p,p' in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

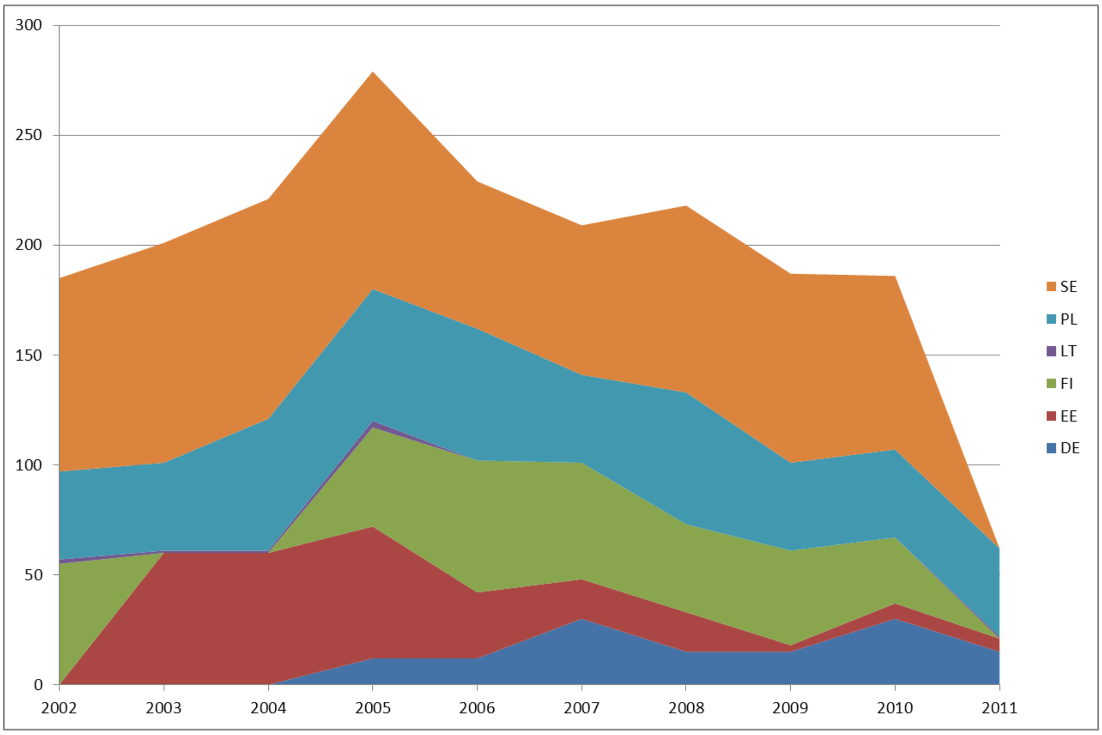


**Fig. 3.2.35 Number of measurements of DDT p,p' in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

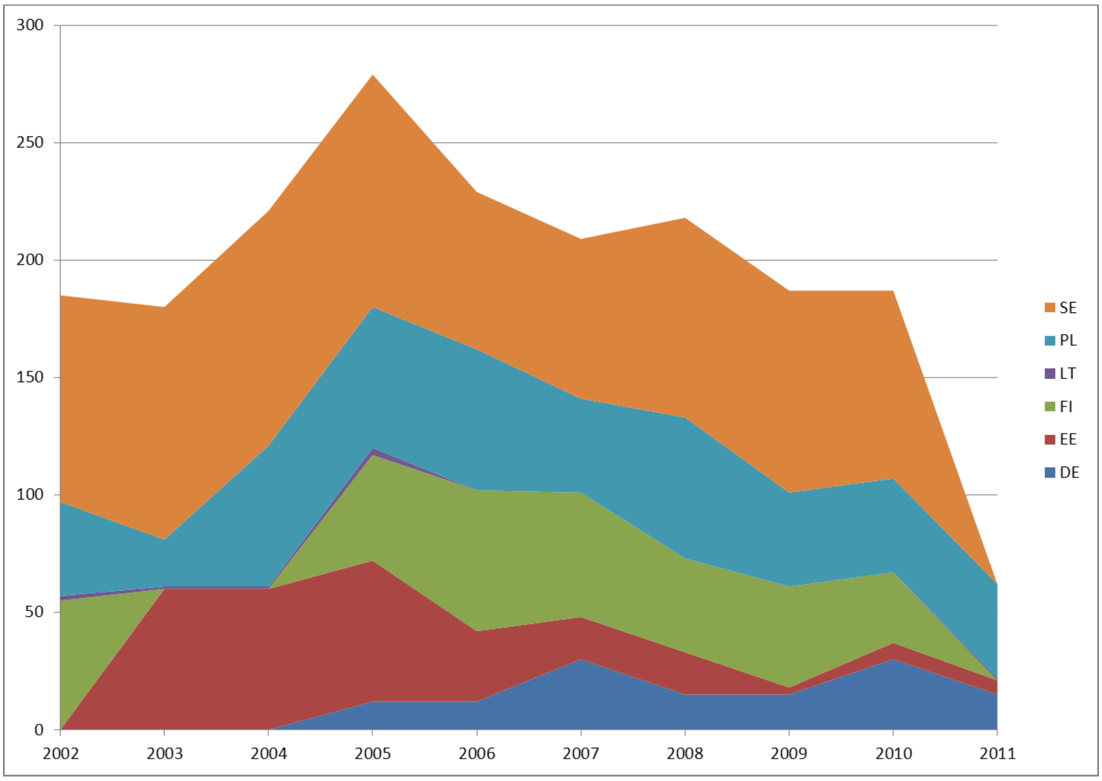



**Fig. 3.2.36 Number of measurements of gamma-HCH in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

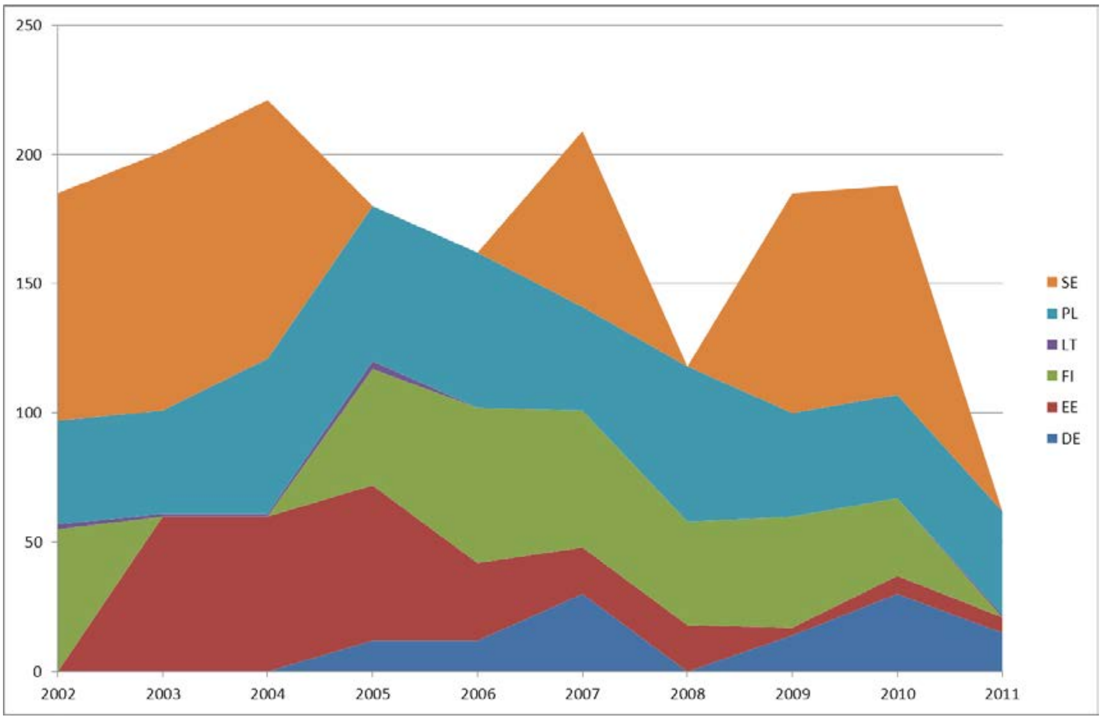


**Fig. 3.2.37 Number of measurements of hexachlorobenzene in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

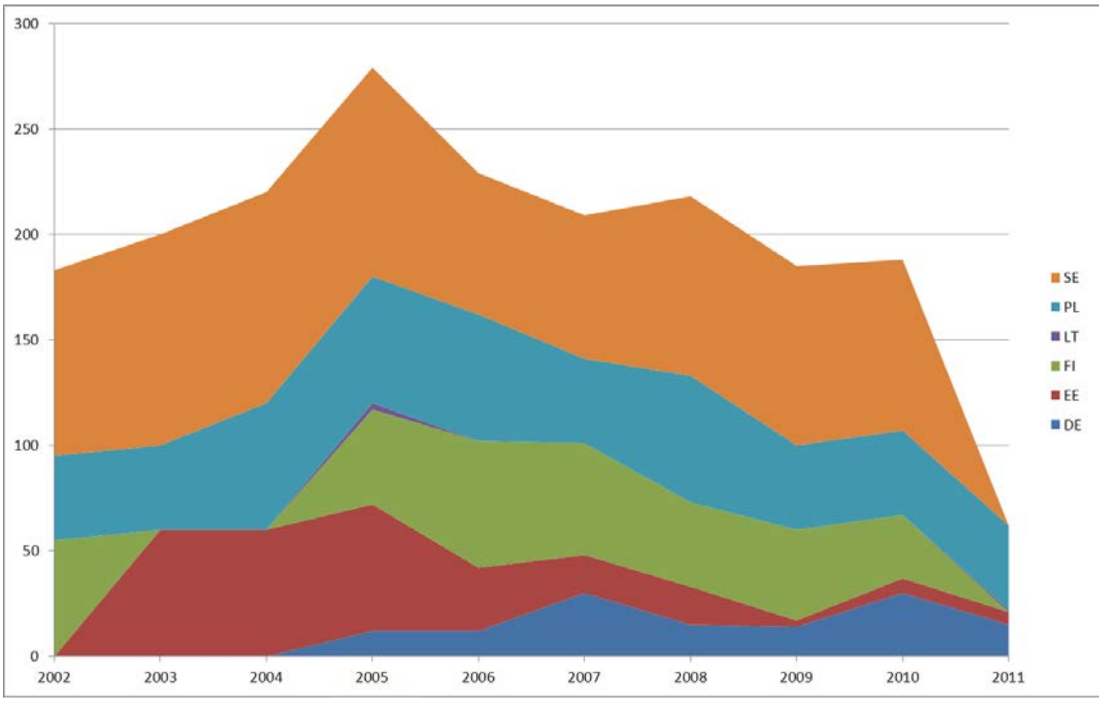



**Fig. 3.2.38 Number of measurements of lead in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

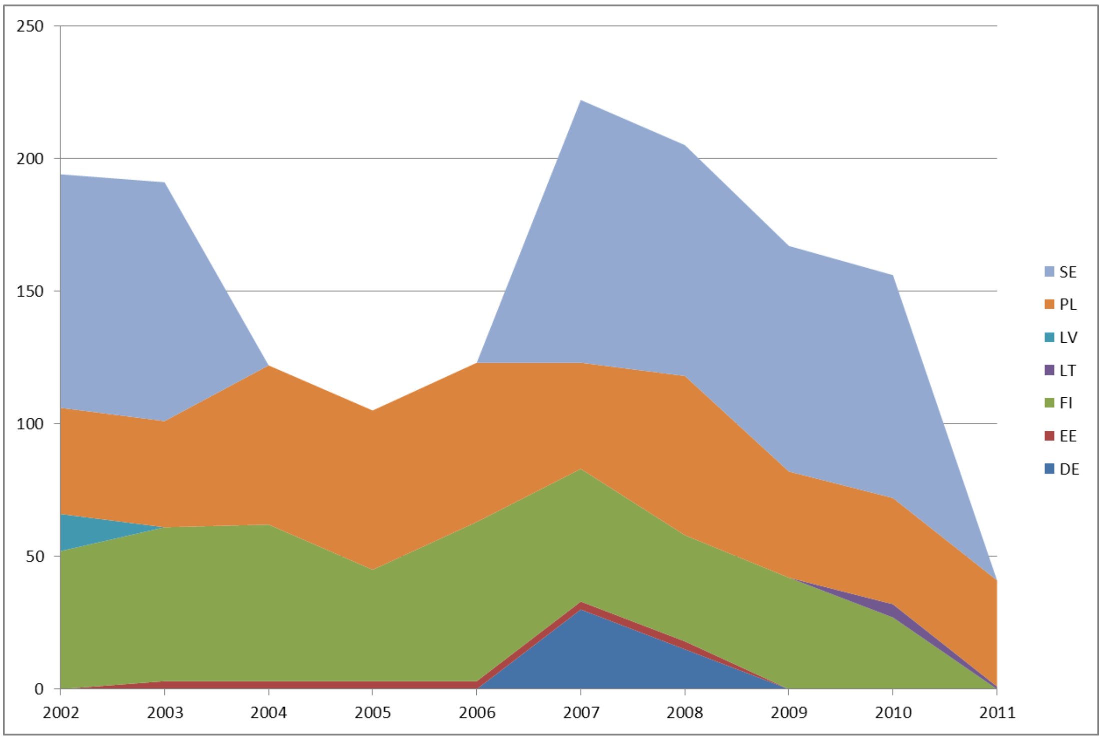


**Fig. 3.2.39 Number of measurements of mercury in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

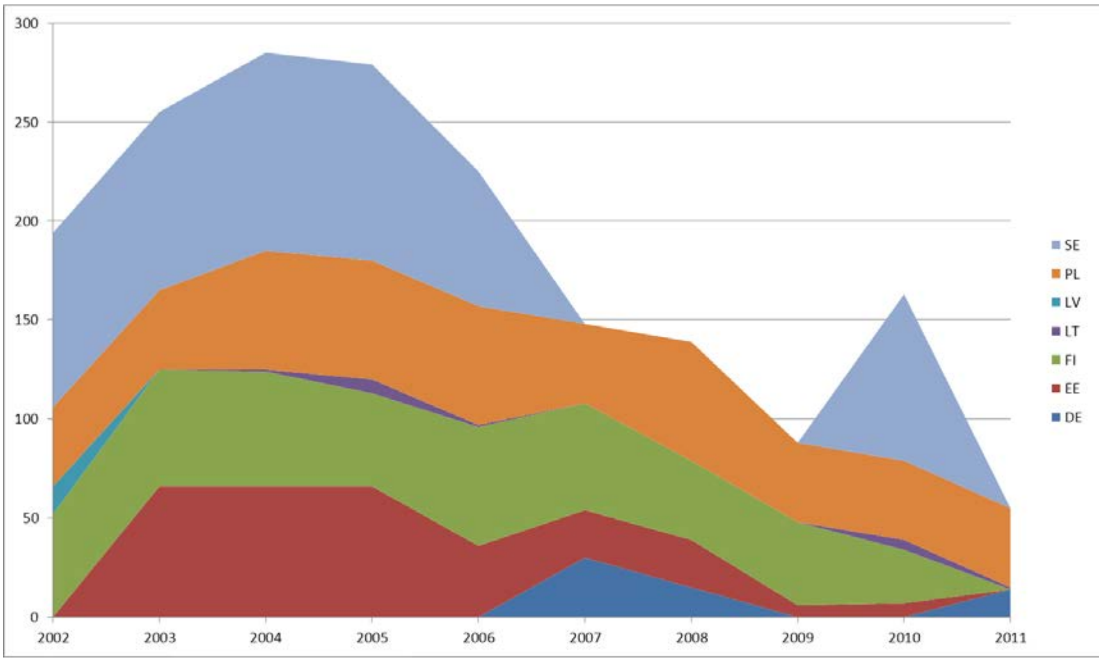



**Fig. 3.2.40 Number of measurements of PCB52 in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

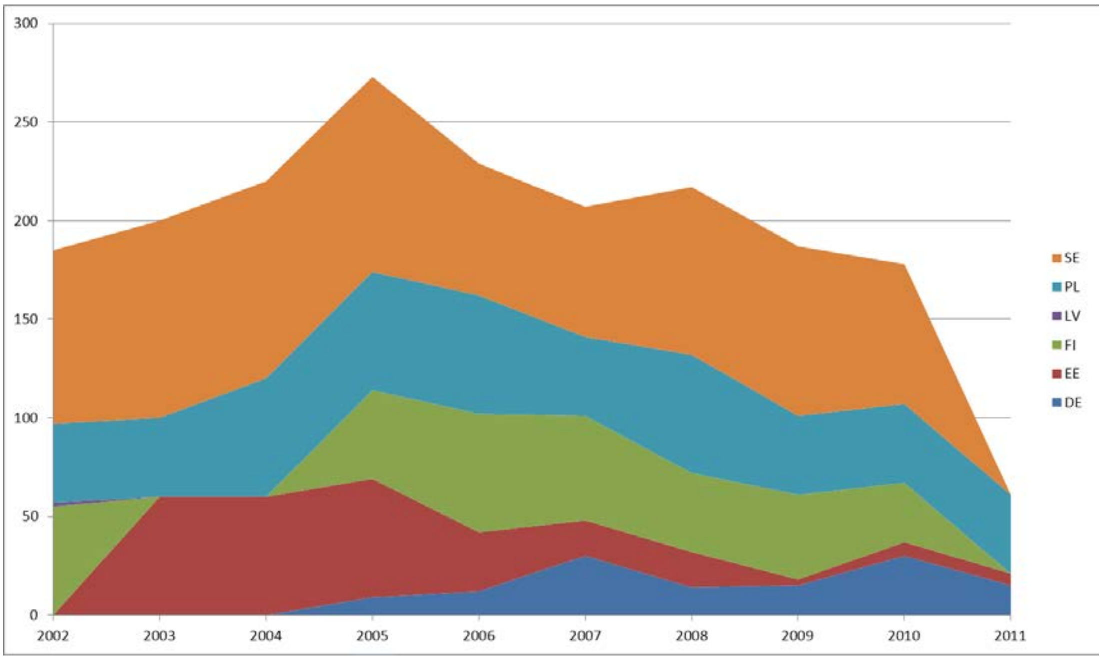


**Fig. 3.2.41 Number of measurements of PCB101 in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

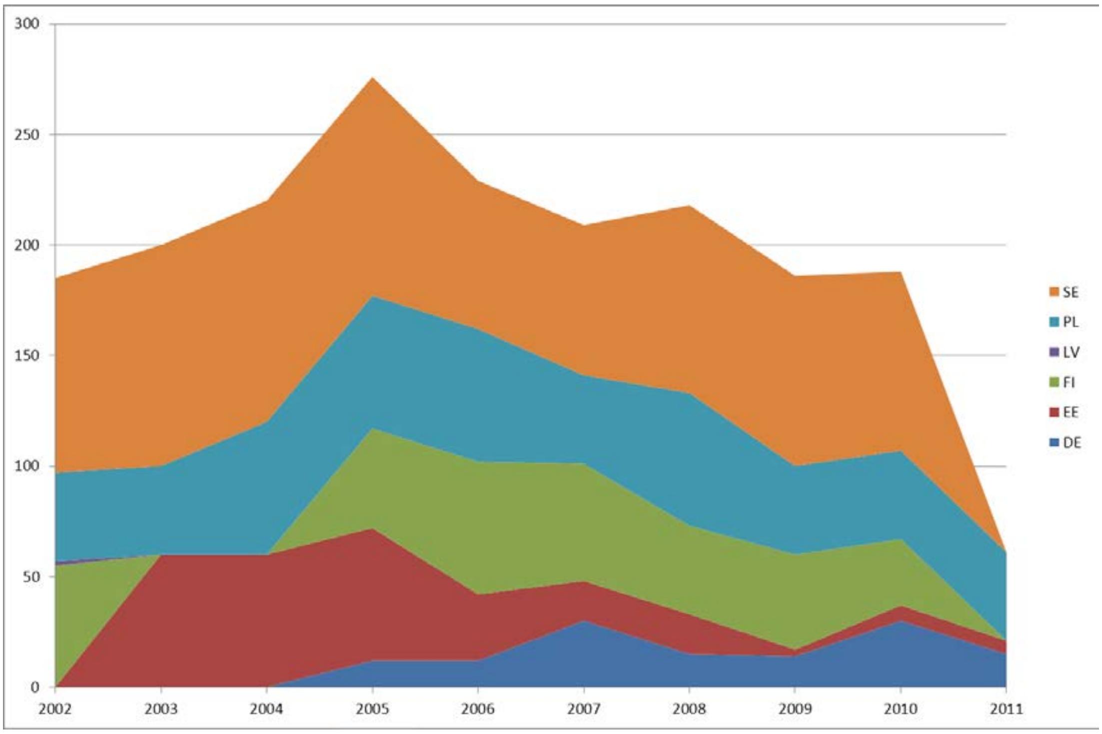



**Fig. 3.2.42 Number of measurements of PCB118 in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

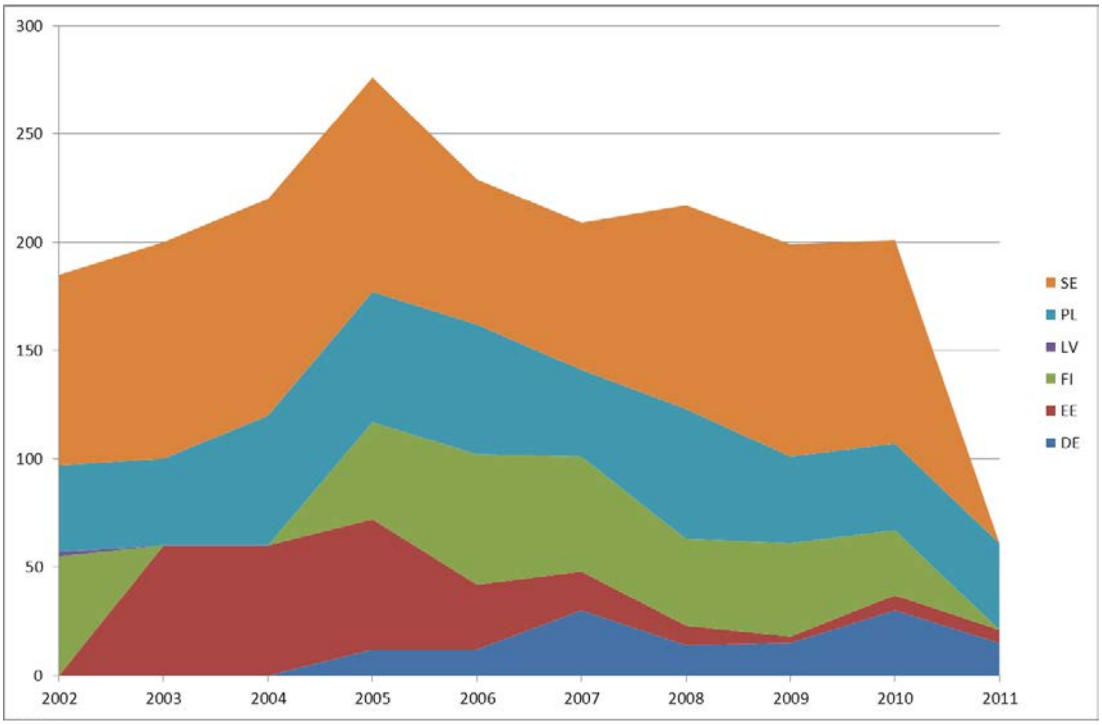


**Fig. 3.2.43 Number of measurements of PCB138 in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

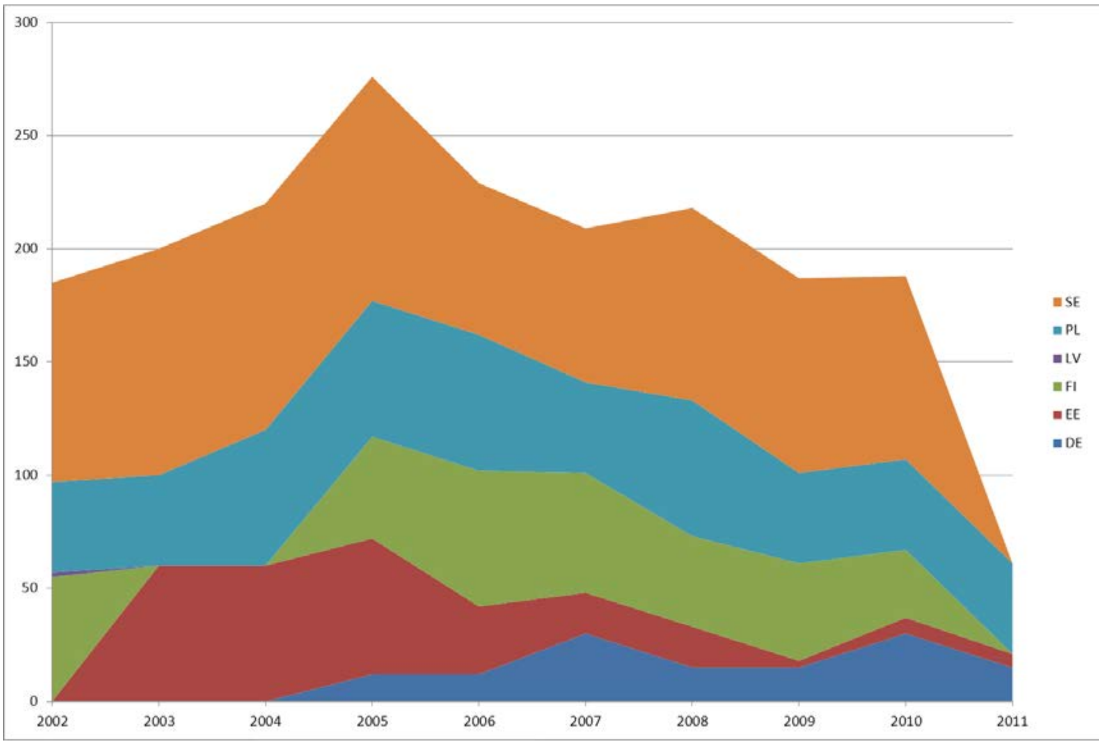



**Fig. 3.2.44 Number of measurements of PCB153 in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

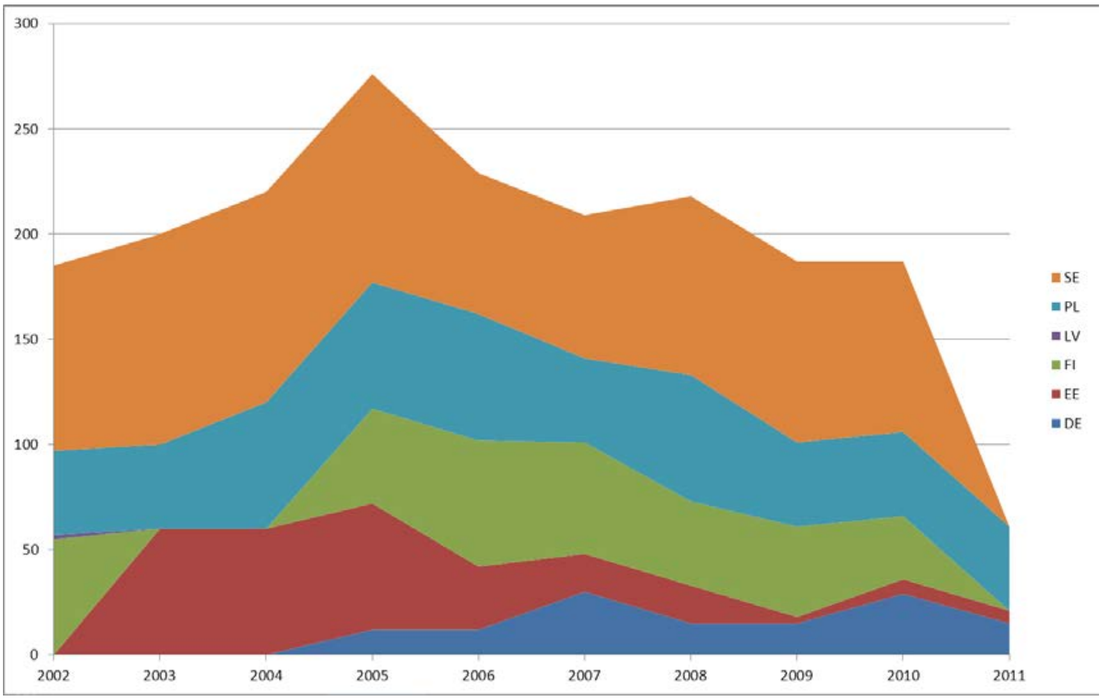


**Fig. 3.2.45 Number of measurements of PCB180 in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

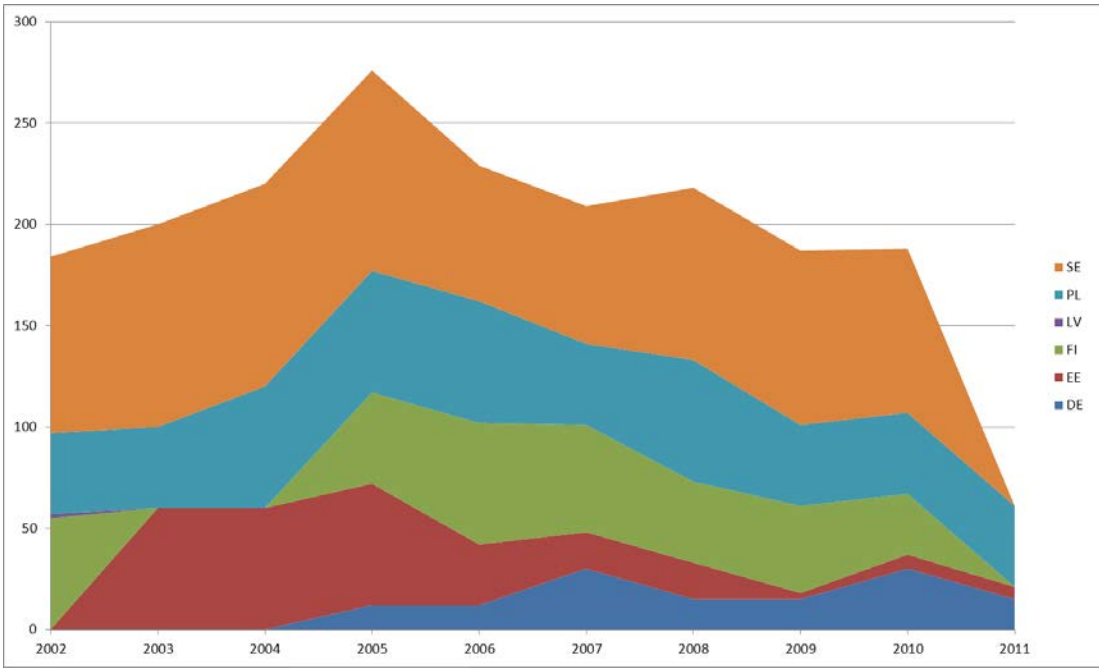



**Fig. 3.2.46 Number of measurements of zinc in biota [Clupea] divided by country submitting data to Eionet CDR or ICES.**

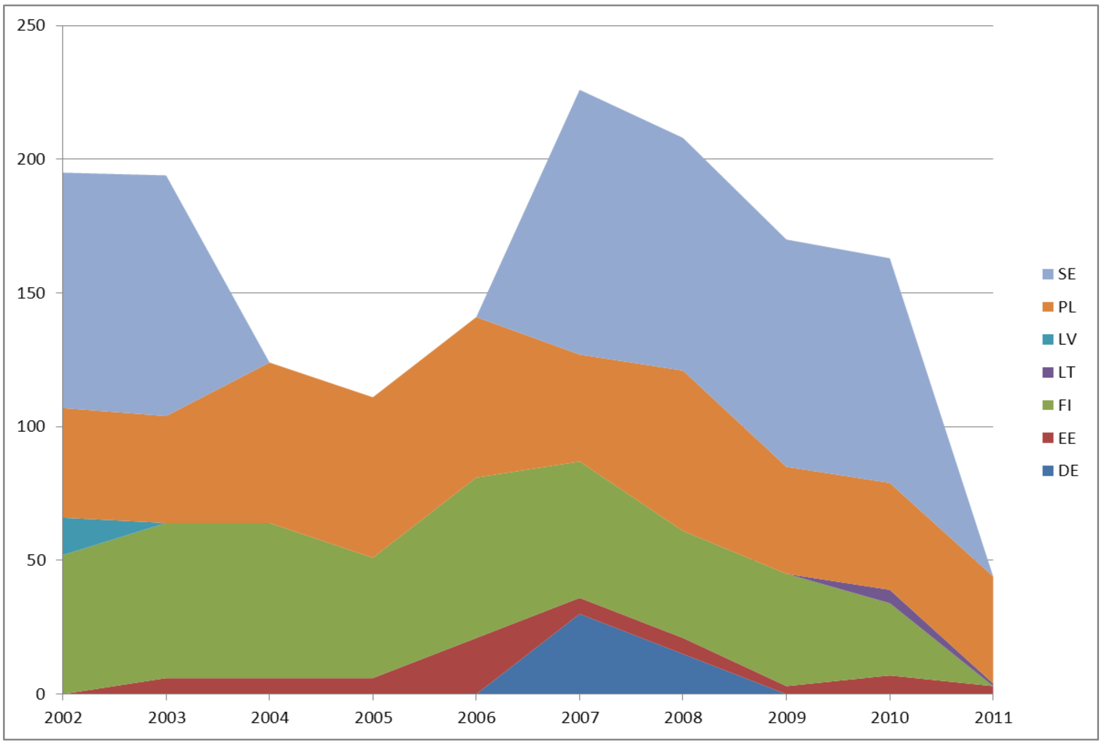


**Fig. 3.2.47 Number of measurements of alpha-HCH in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

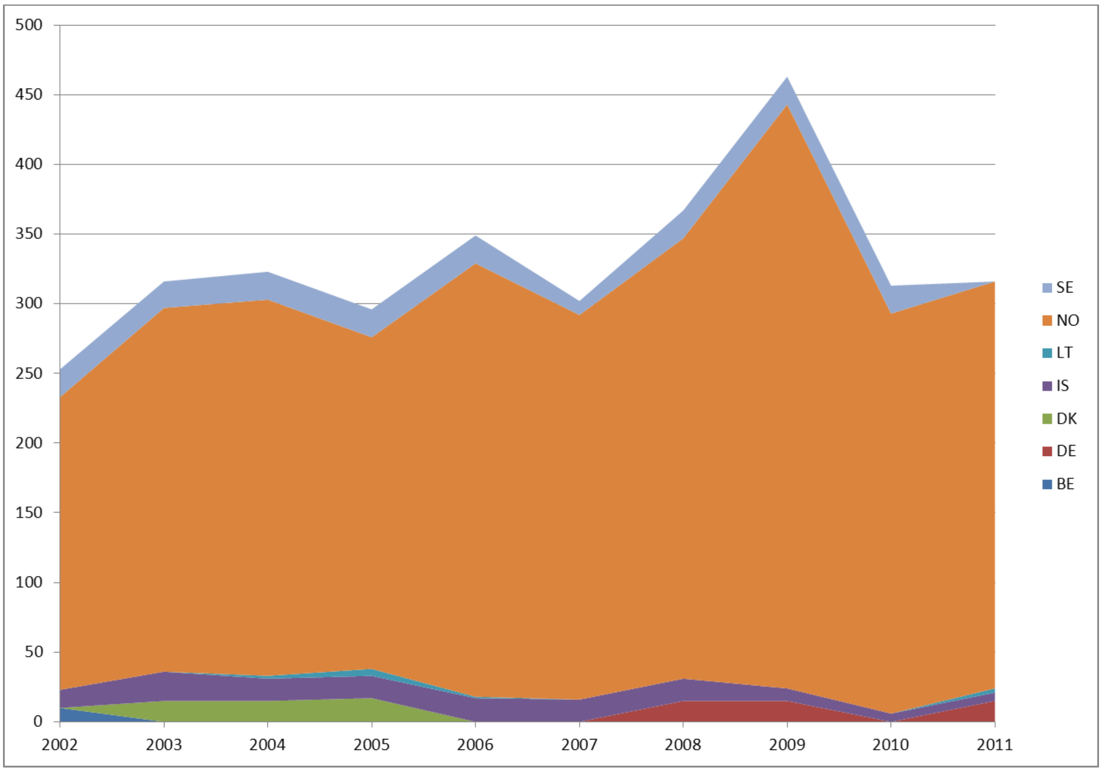



**Fig. 3.2.48 Number of measurements of cadmium in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

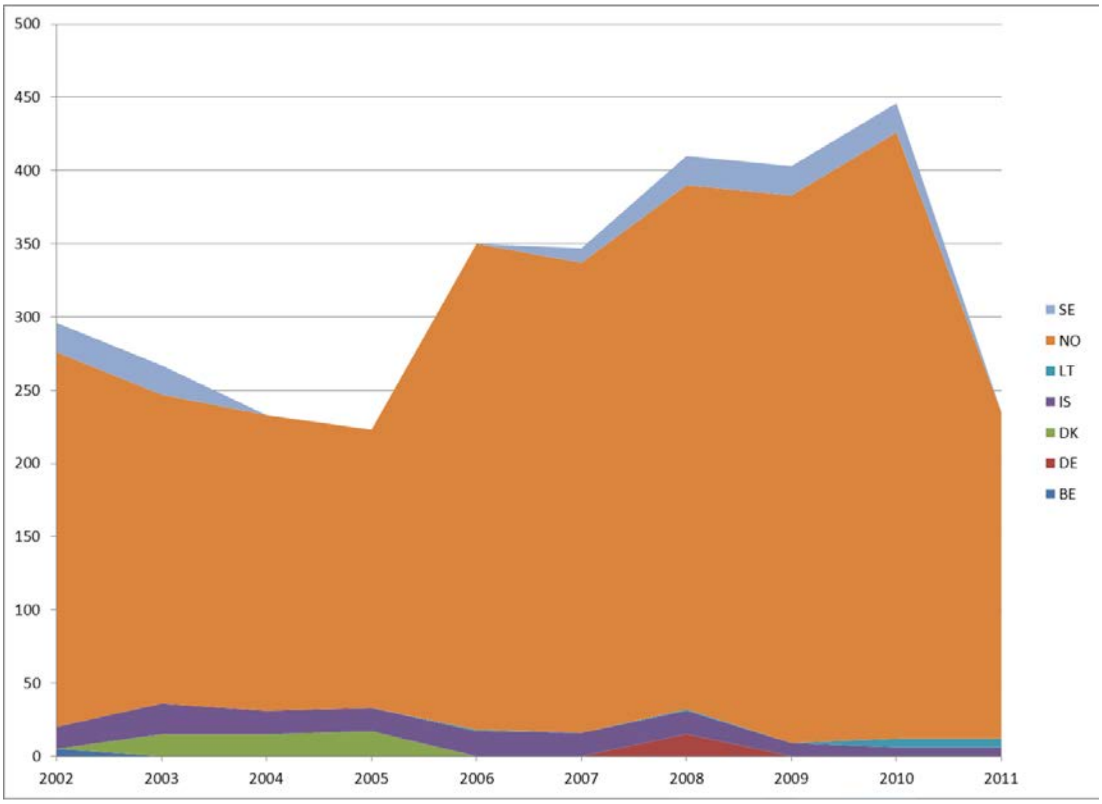


**Fig. 3.2.49 Number of measurements of copper in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

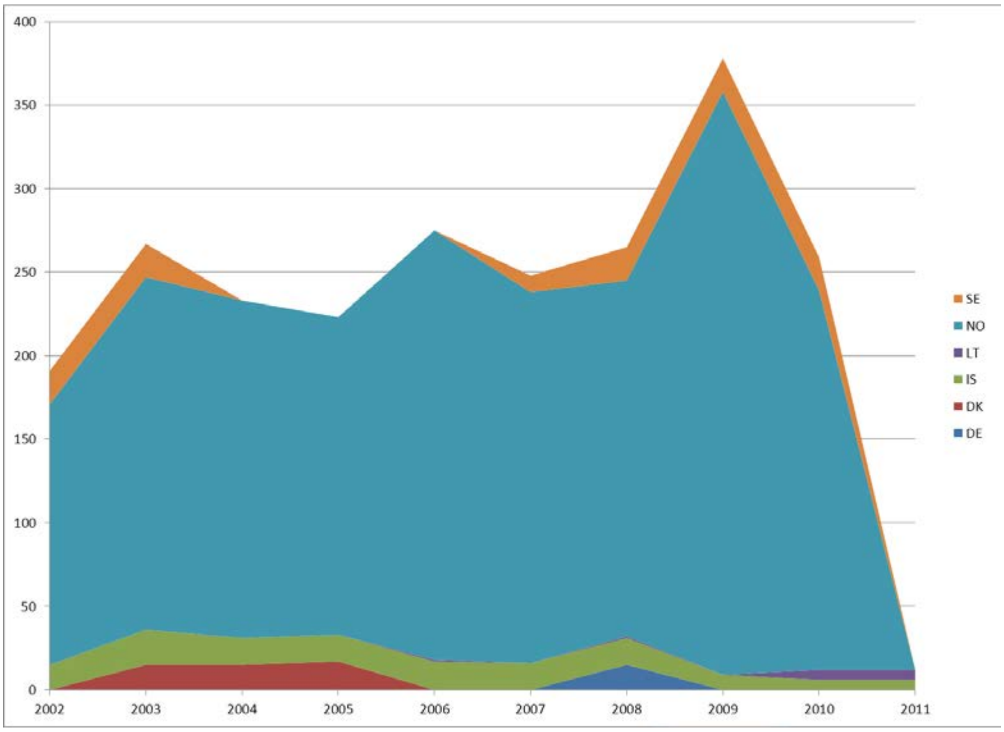



**Fig. 3.2.50 Number of measurements of DDD p,p' in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

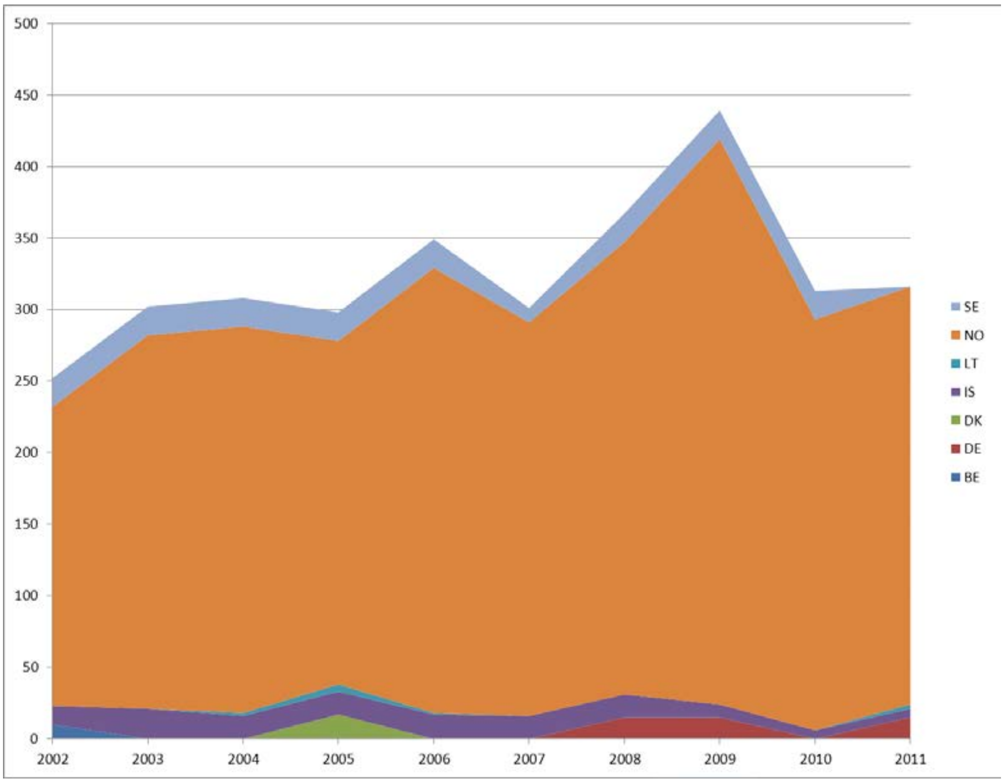


**Fig. 3.2.51 Number of measurements of DDE p,p' in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

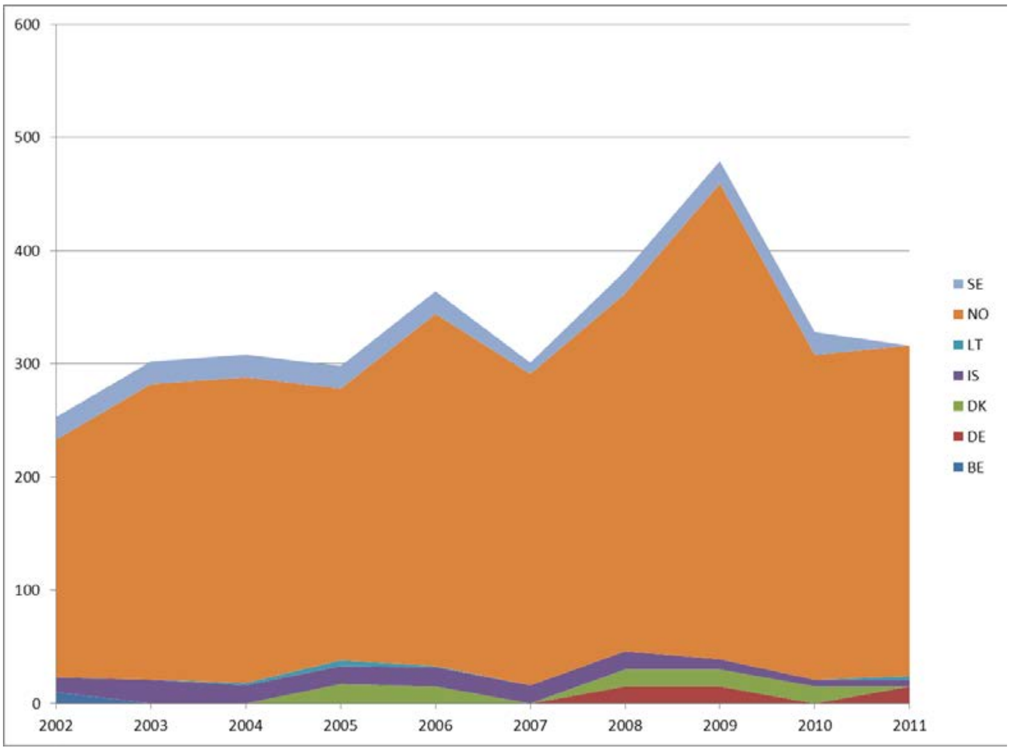



**Fig. 3.2.52 Number of measurements of DDT p,p' in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

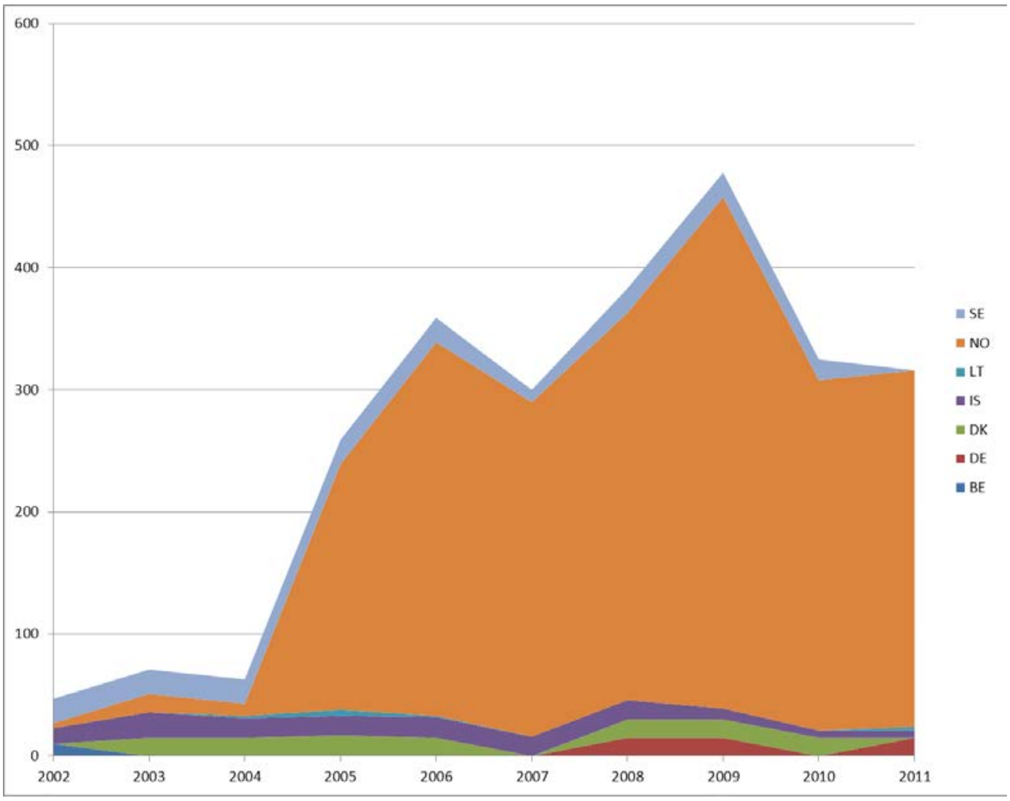


**Fig. 3.2.53 Number of measurements of gamma-HCH in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

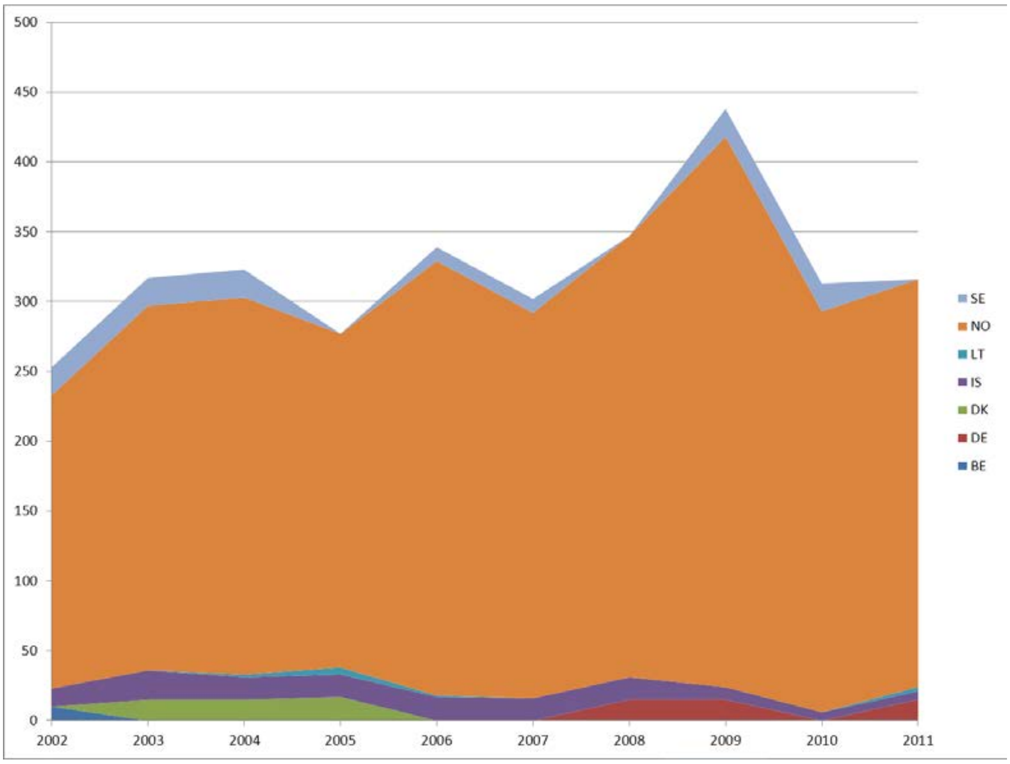



**Fig. 3.2.54 Number of measurements of hexachlorobenzene in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

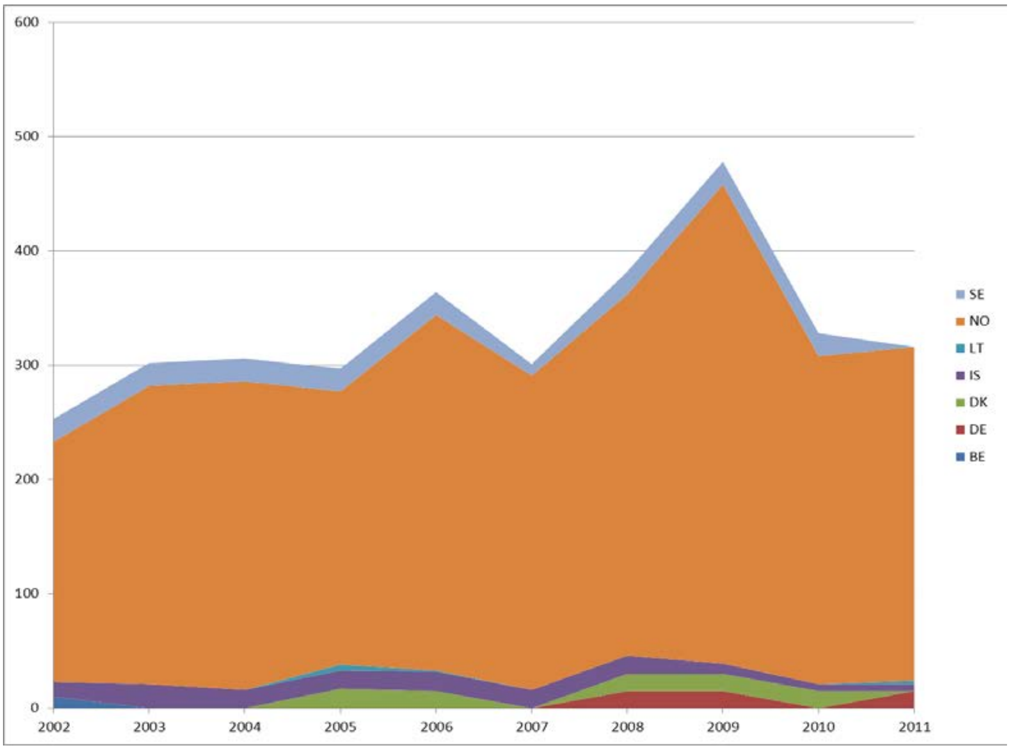


**Fig. 3.2.55 Number of measurements of lead in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

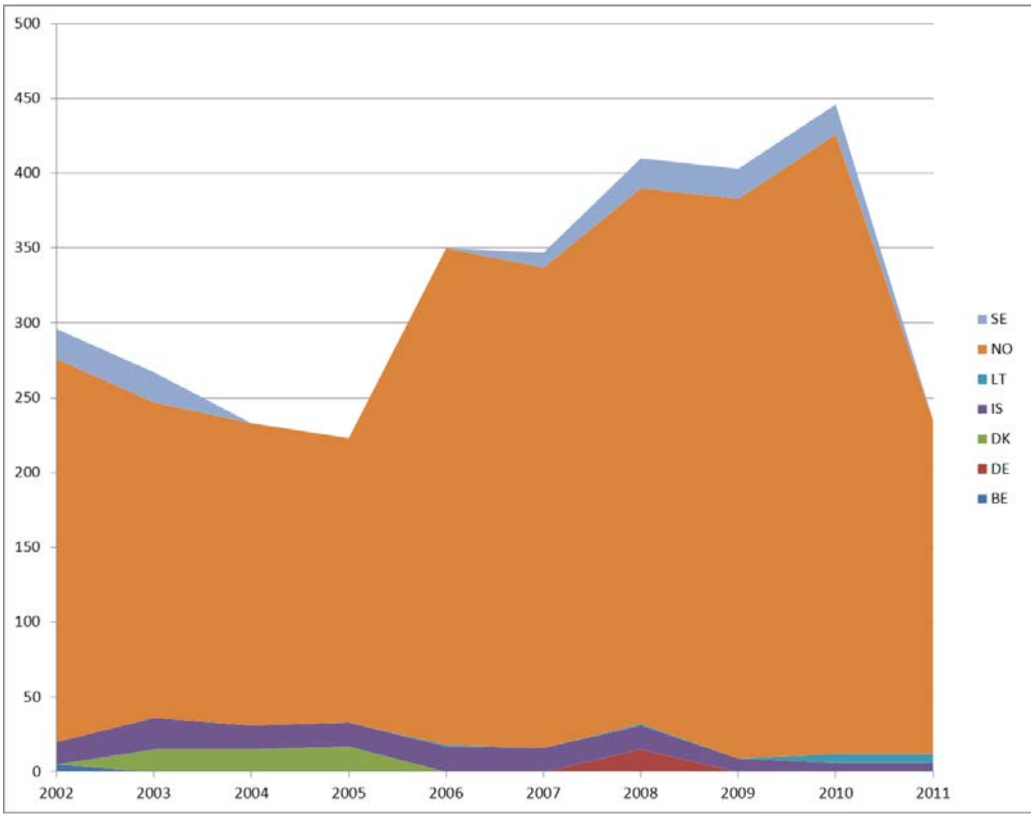



**Fig. 3.2.56 Number of measurements of mercury in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

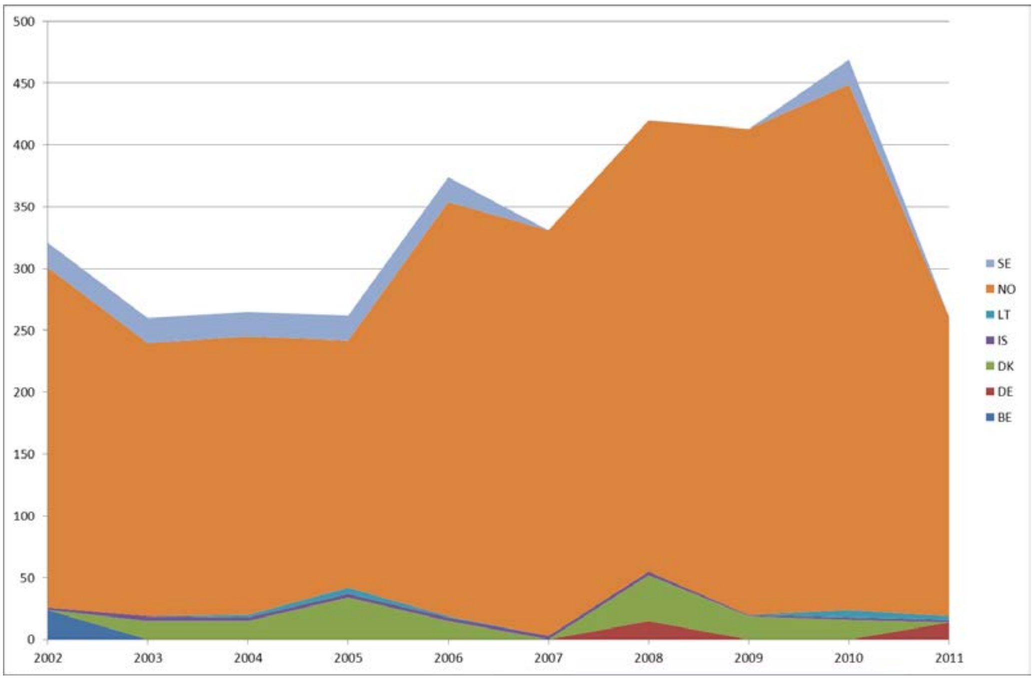


**Fig. 3.2.57 Number of measurements of PCB28 in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

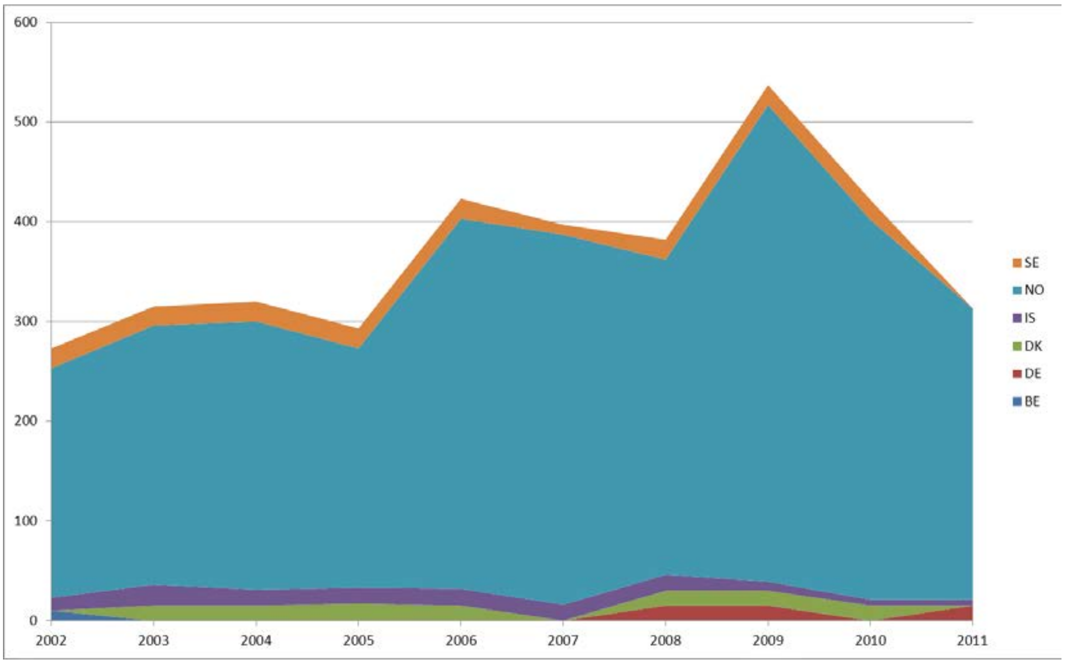



**Fig. 3.2.58 Number of measurements of PCB52 in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

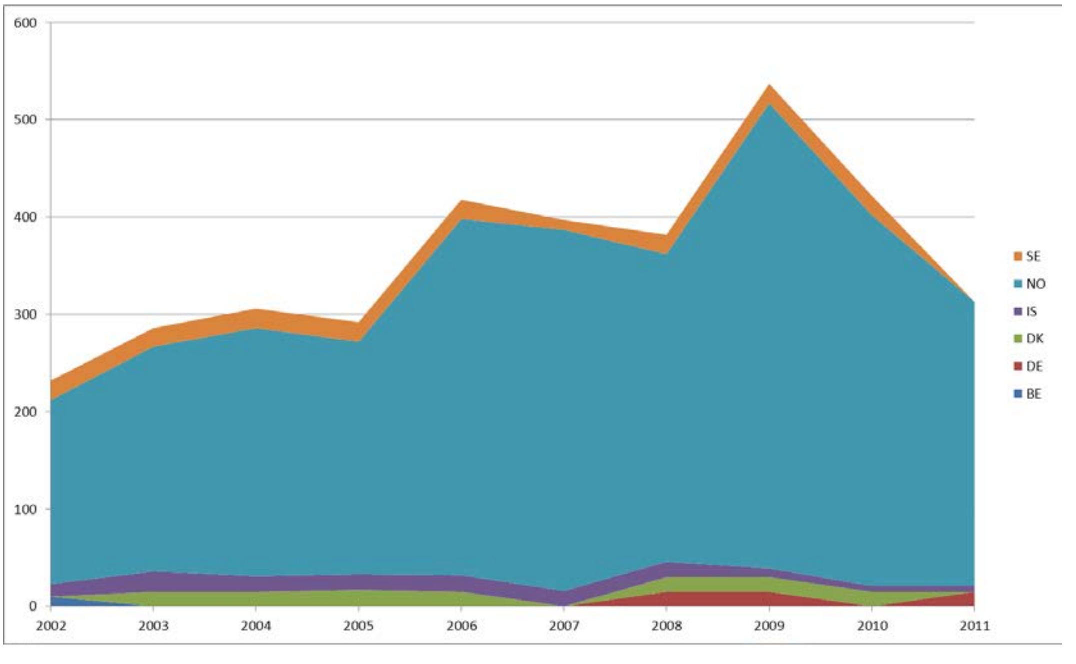


**Fig. 3.2.59 Number of measurements of PCB101 in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

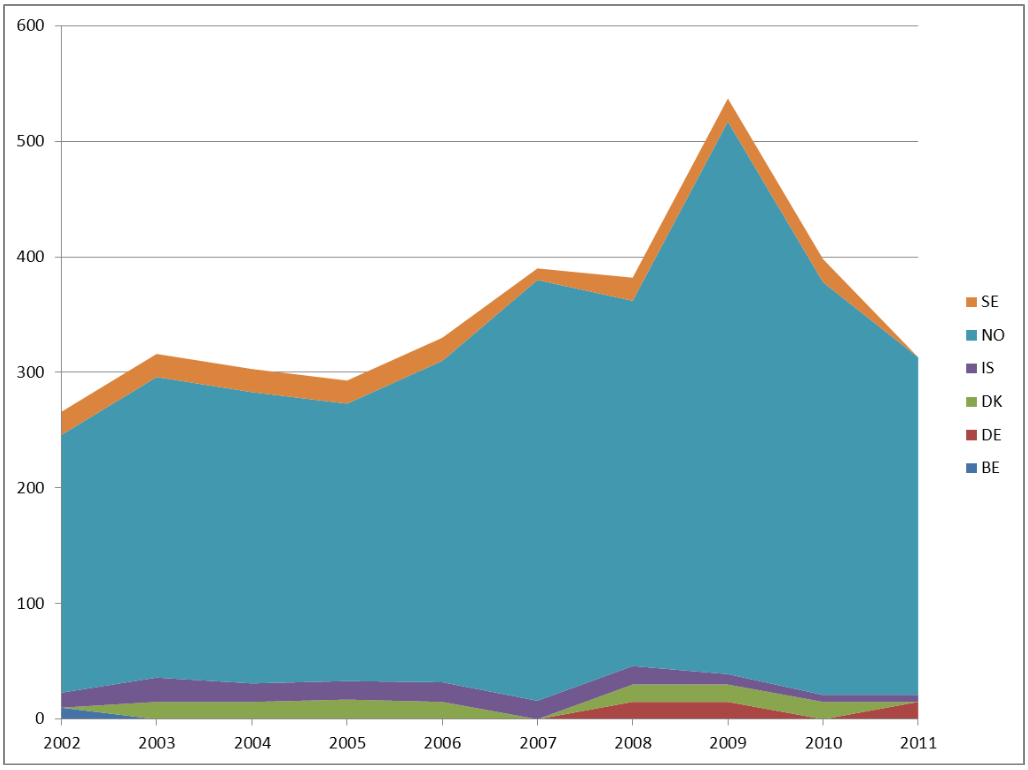



**Fig. 3.2.60 Number of measurements of PCB118 in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

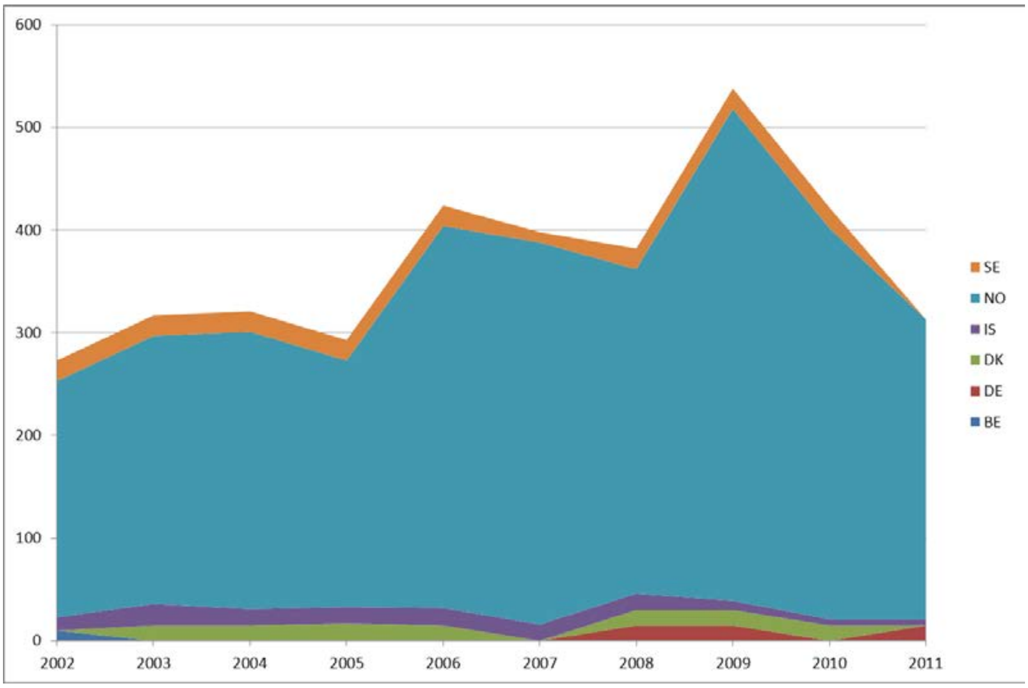


**Fig. 3.2.61 Number of measurements of PCB138 in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

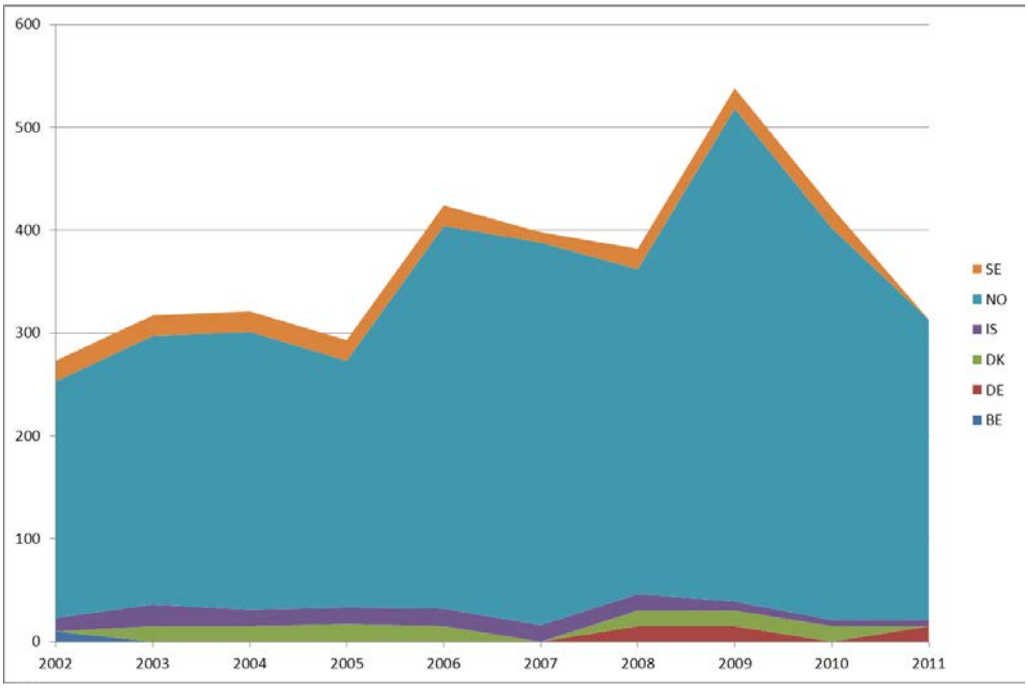



**Fig. 3.2.62 Number of measurements of PCB153 in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

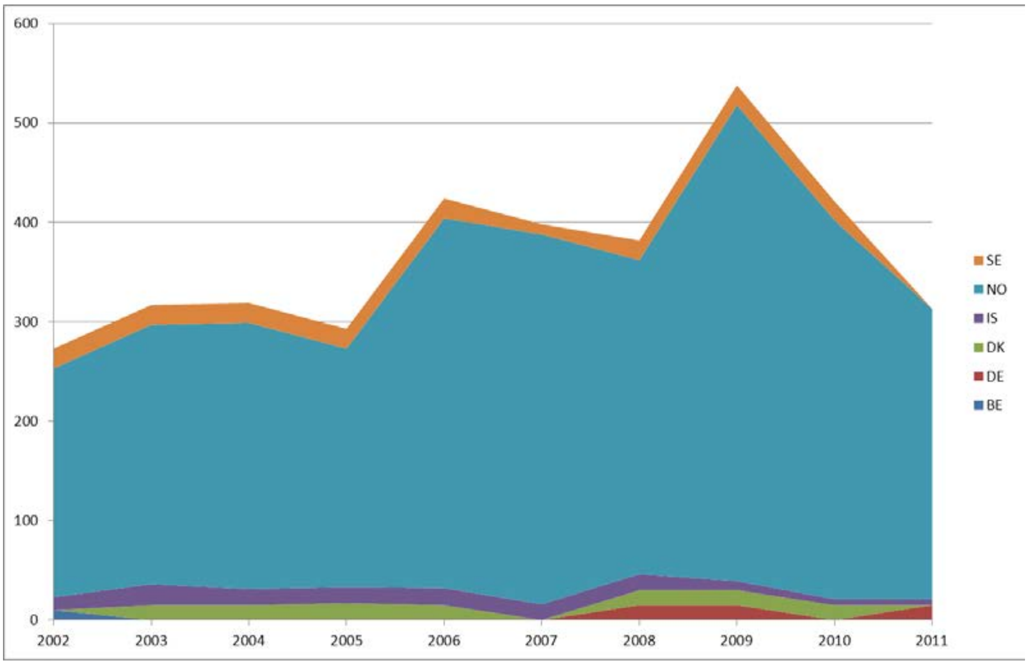


**Fig. 3.2.63 Number of measurements of PCB180 in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

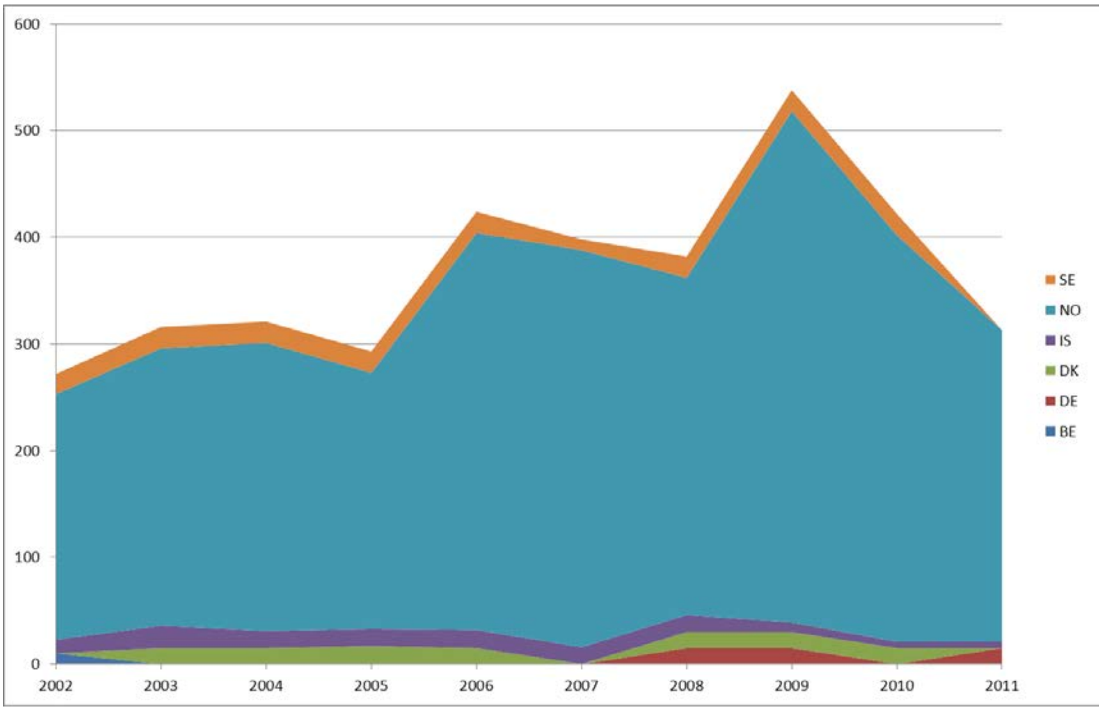



**Fig. 3.2.64 Number of measurements of zinc in biota [Gadus] divided by country submitting data to Eionet CDR or ICES.**

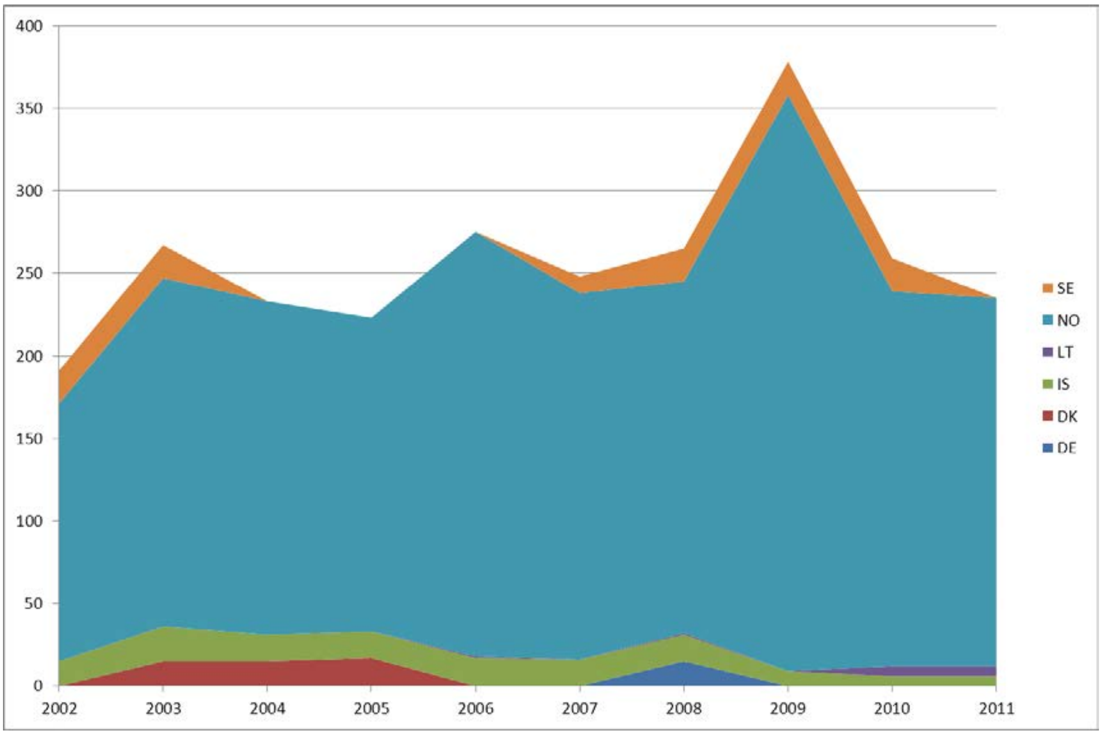


**Fig. 3.2.65 Number of measurements of alpha-HCH in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

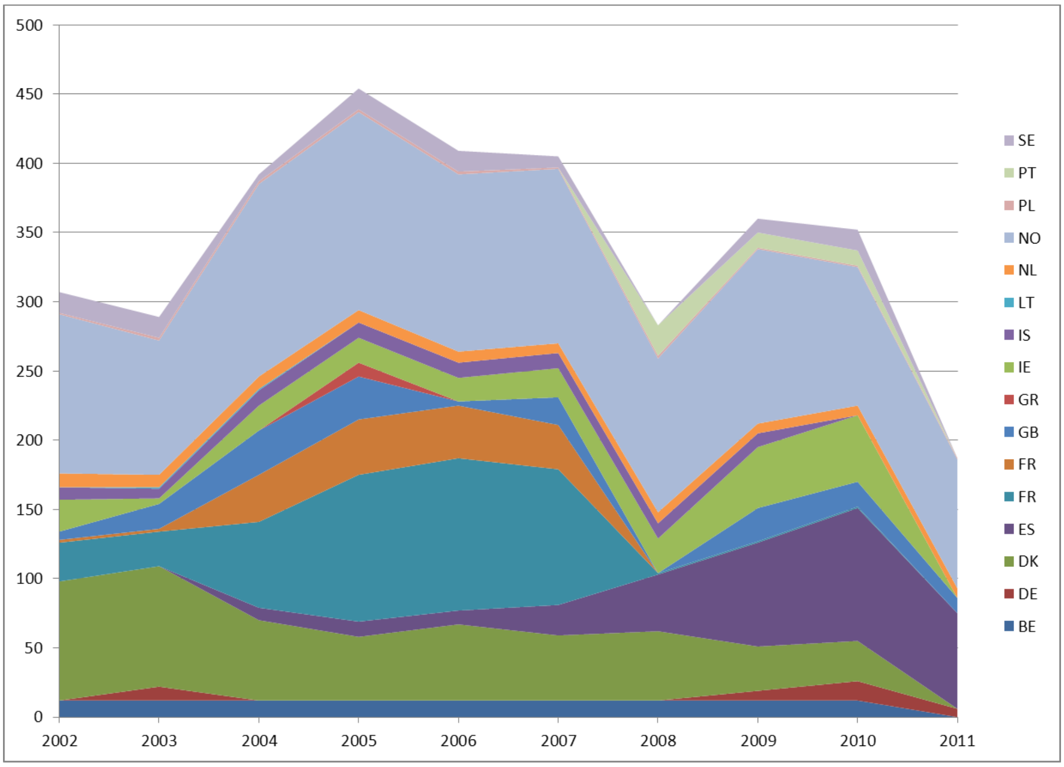



**Fig. 3.2.66 Number of measurements of anthracene in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

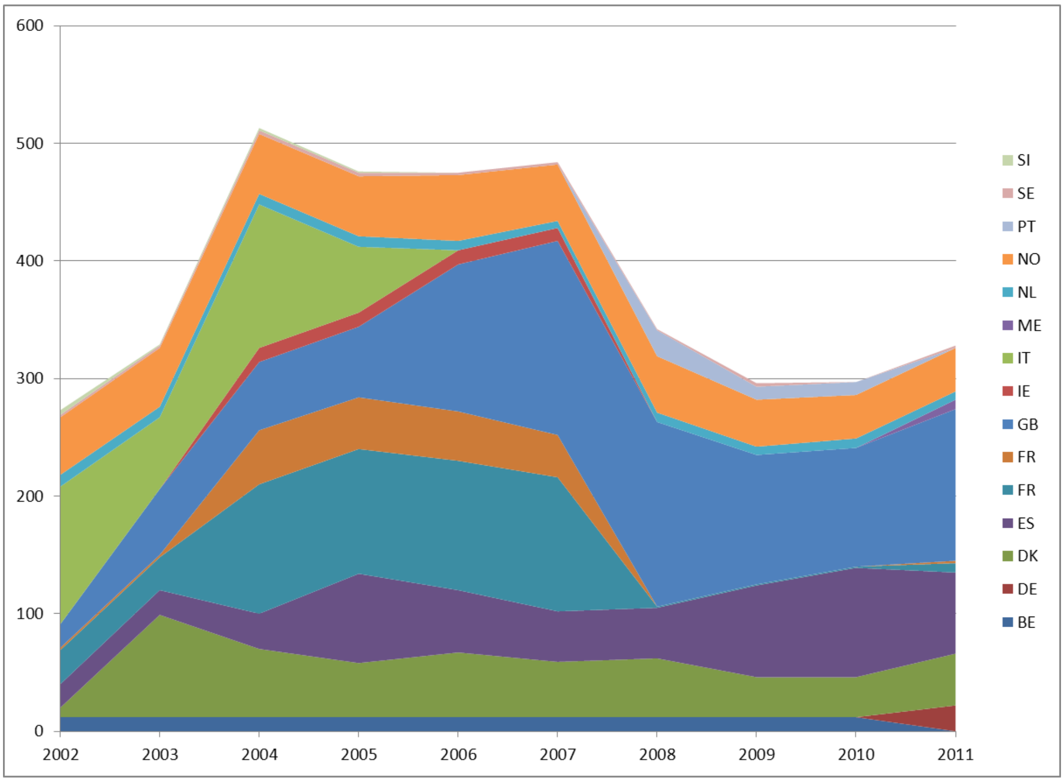


**Fig. 3.2.67 Number of measurements of arsenic in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

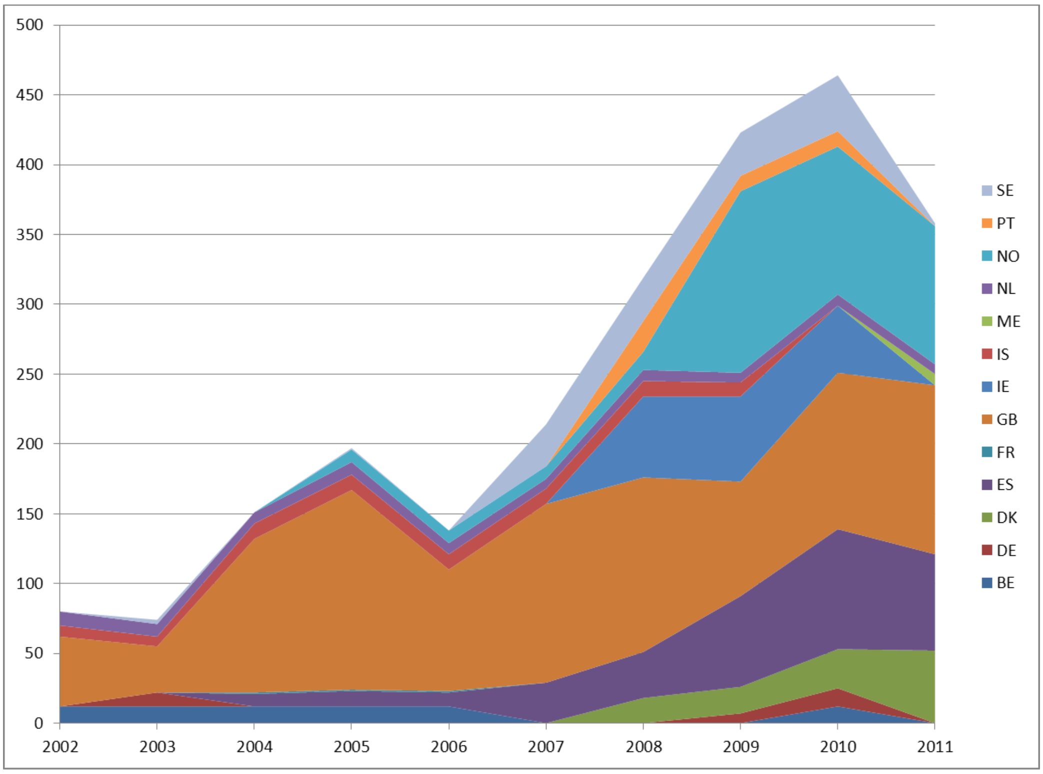



**Fig. 3.2.68 Number of measurements of benzo(a)anthracene in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

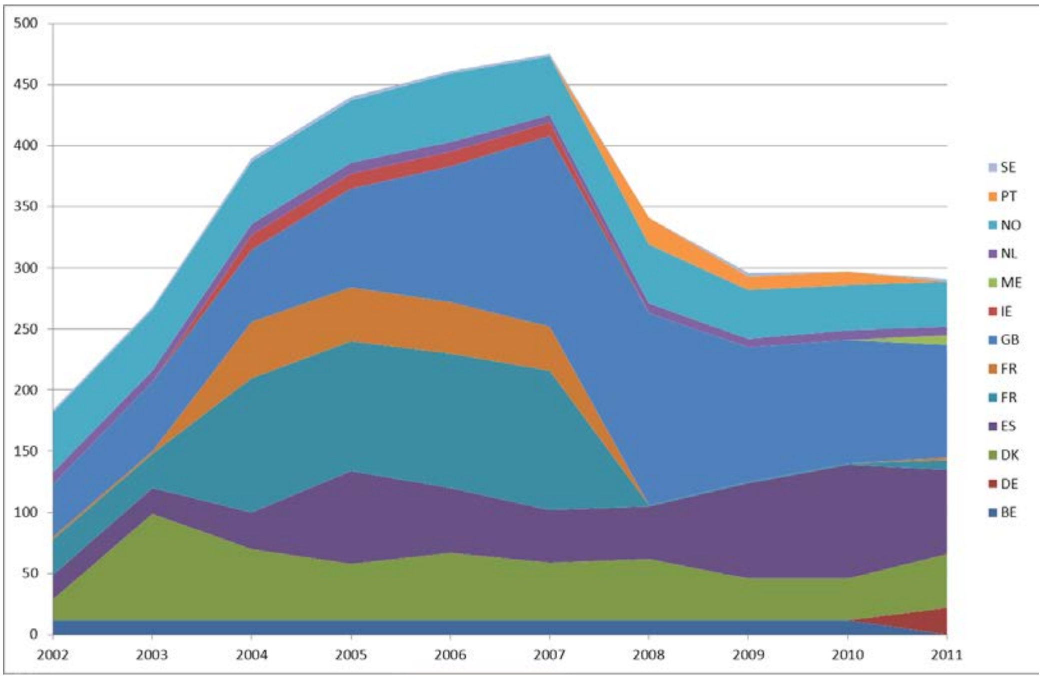


**Fig. 3.2.69 Number of measurements of benzo(a)pyrene in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

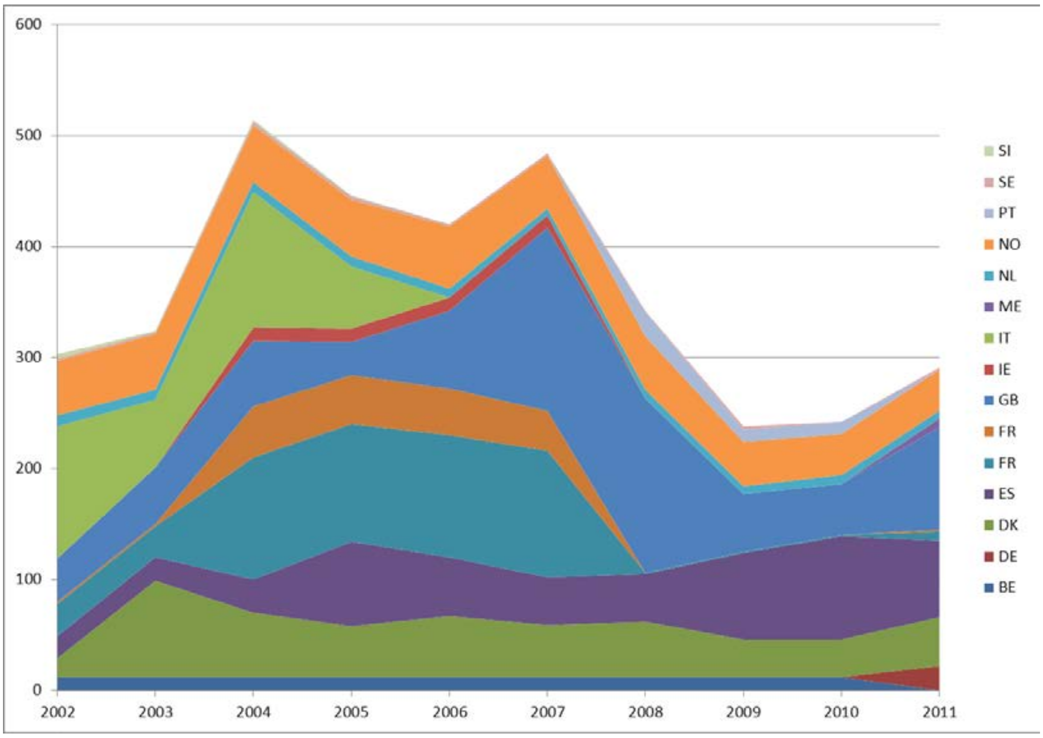



**Fig. 3.2.70 Number of measurements of benzo(b)fluoranthene in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

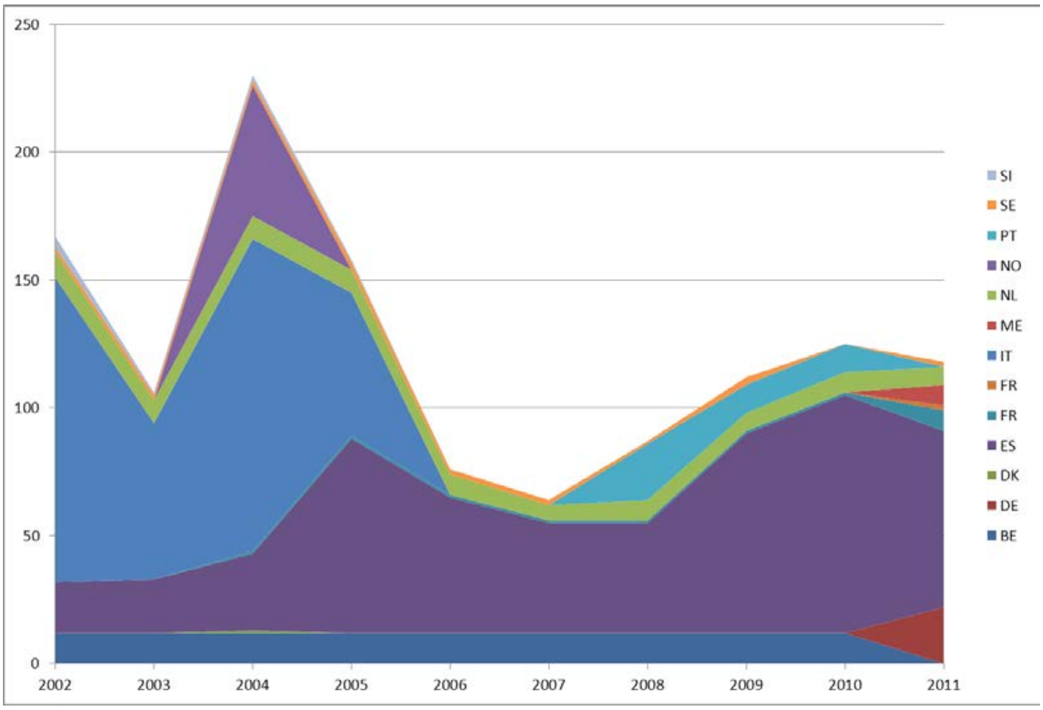


**Fig. 3.2.71 Number of measurements of benzo(g,h,i)perylene in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

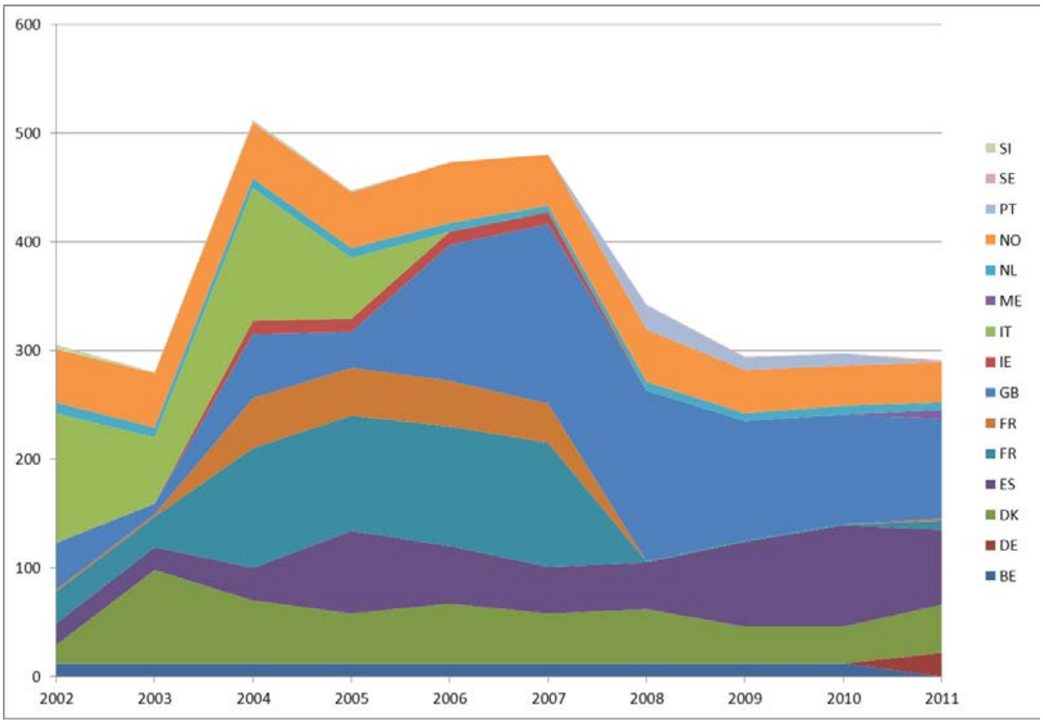



**Fig. 3.2.72 Number of measurements of benzo(k)fluoranthene in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

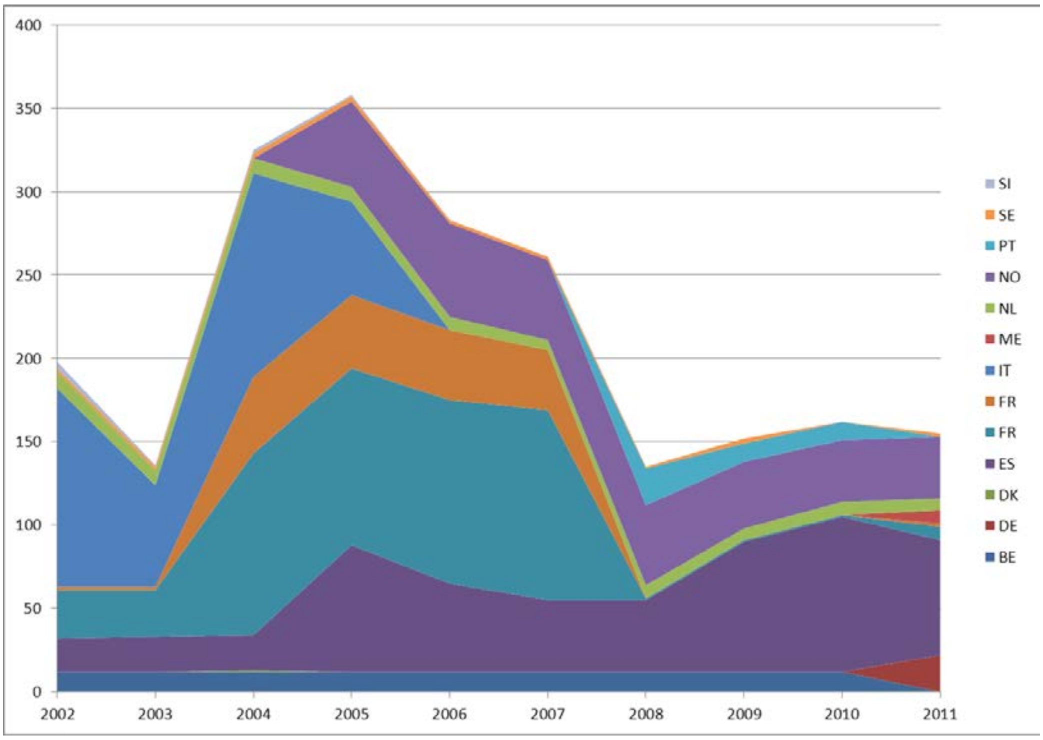


**Fig. 3.2.73 Number of measurements of beta-HCH in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

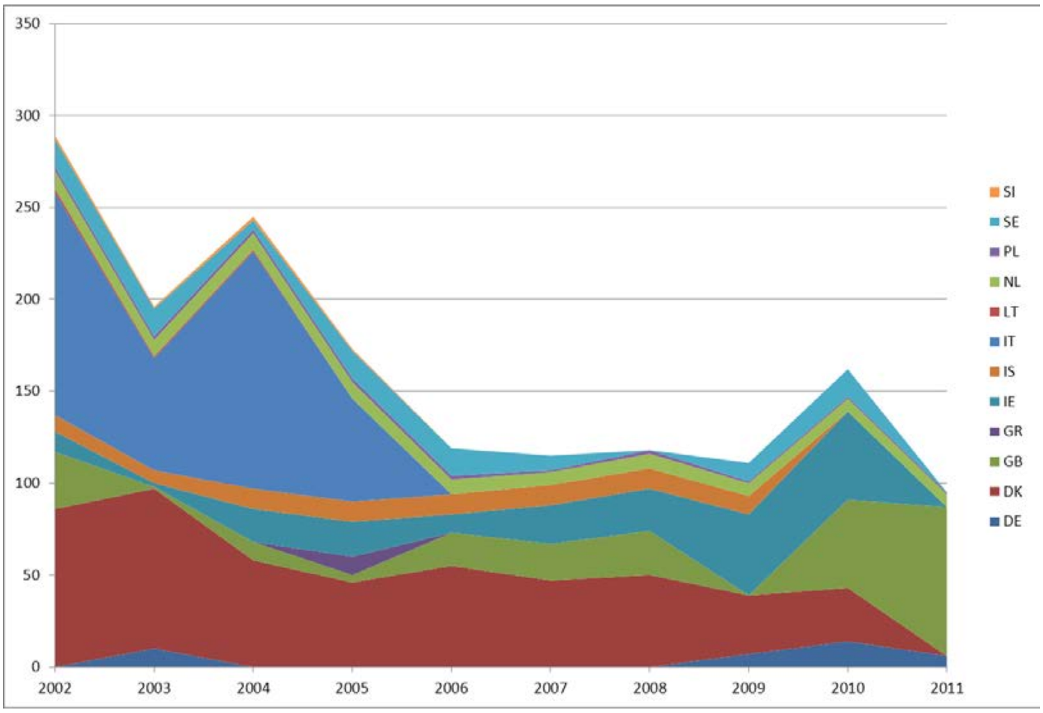



**Fig. 3.2.74 Number of measurements of cadmium in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

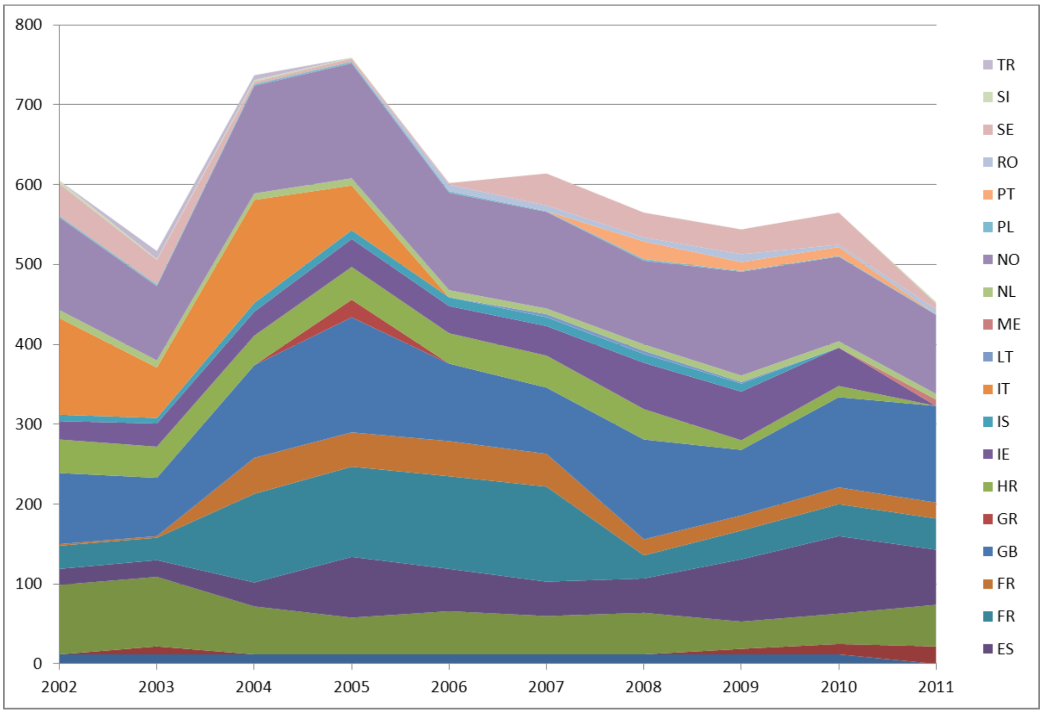


**Fig. 3.2.75 Number of measurements of chromium in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

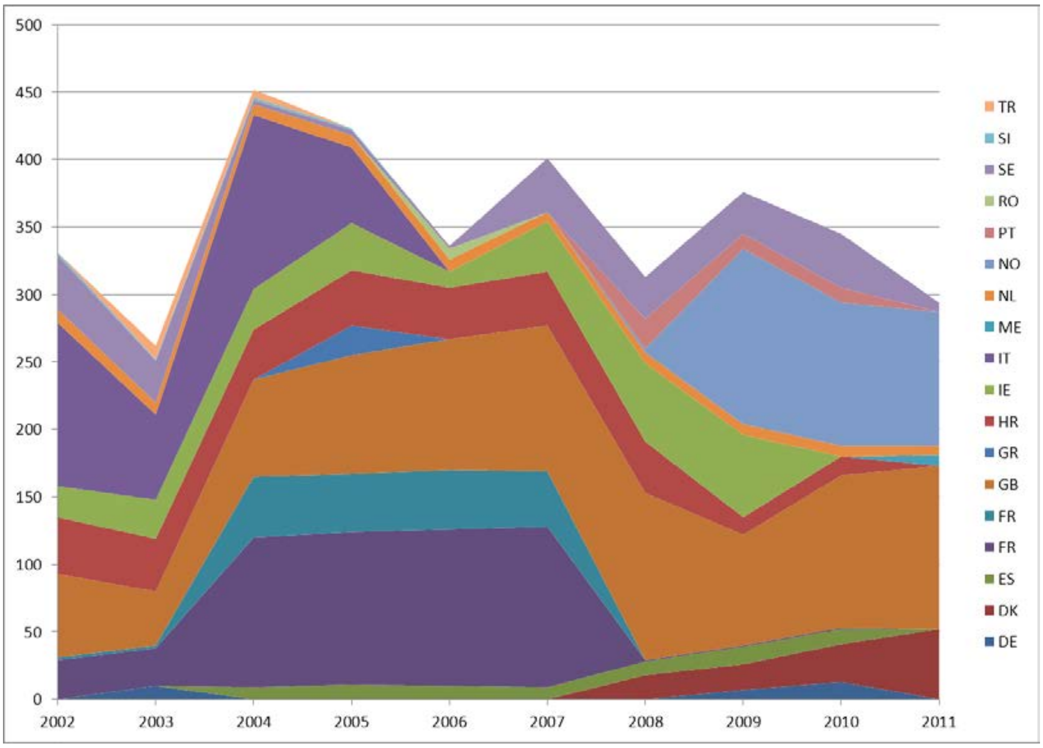



**Fig. 3.2.76 Number of measurements of copper in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

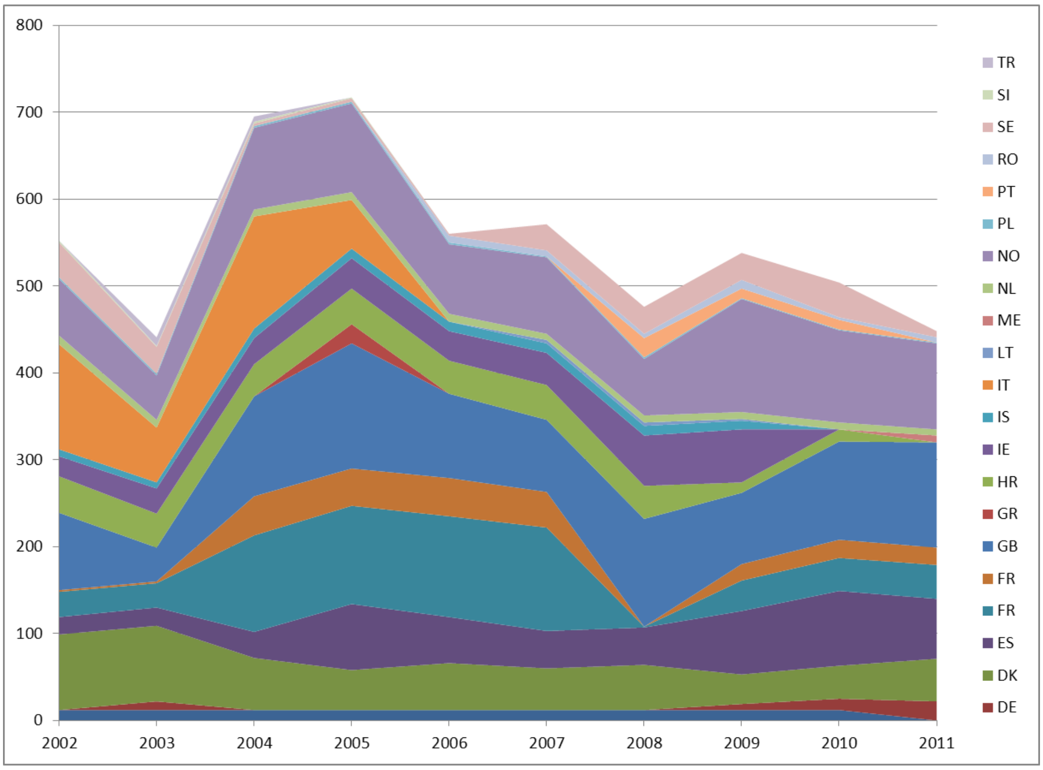


**Fig. 3.2.77 Number of measurements of DDD p,p' in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

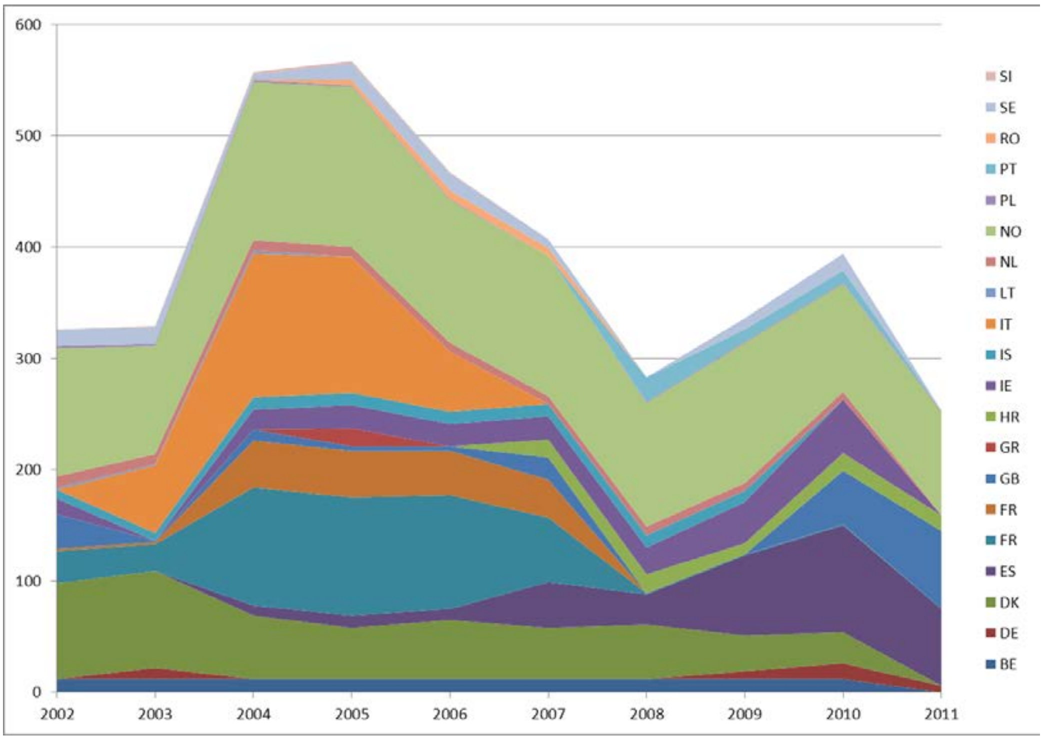



**Fig. 3.2.78 Number of measurements of DDE p,p' in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

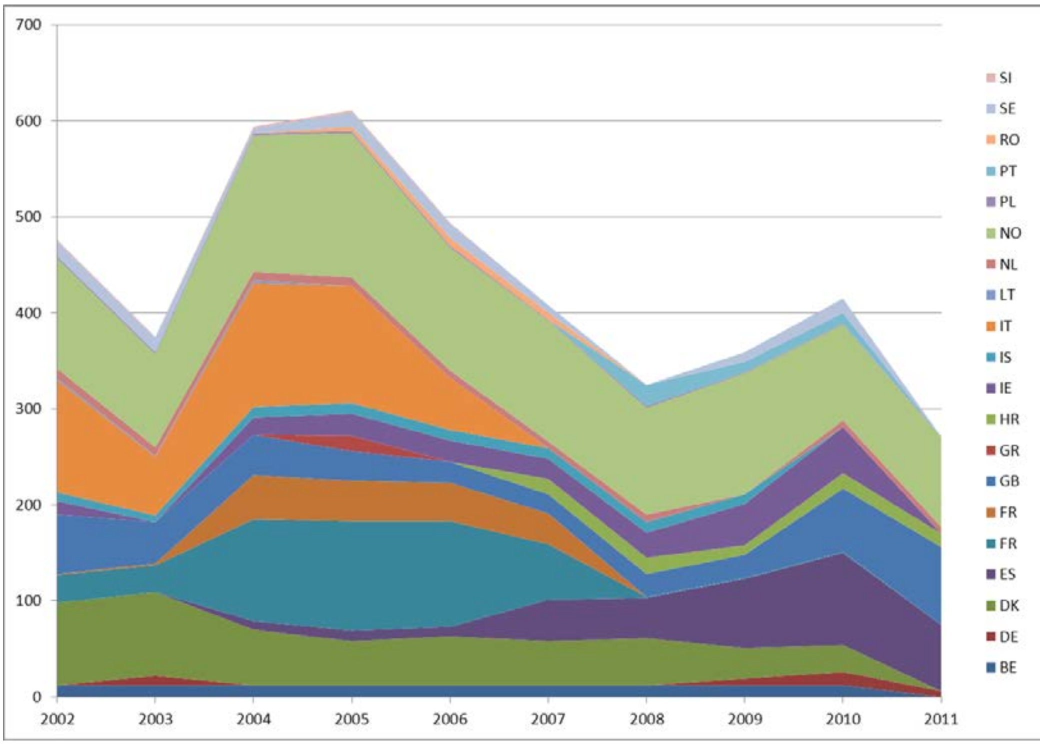


**Fig. 3.2.79 Number of measurements of DDT p,p' in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

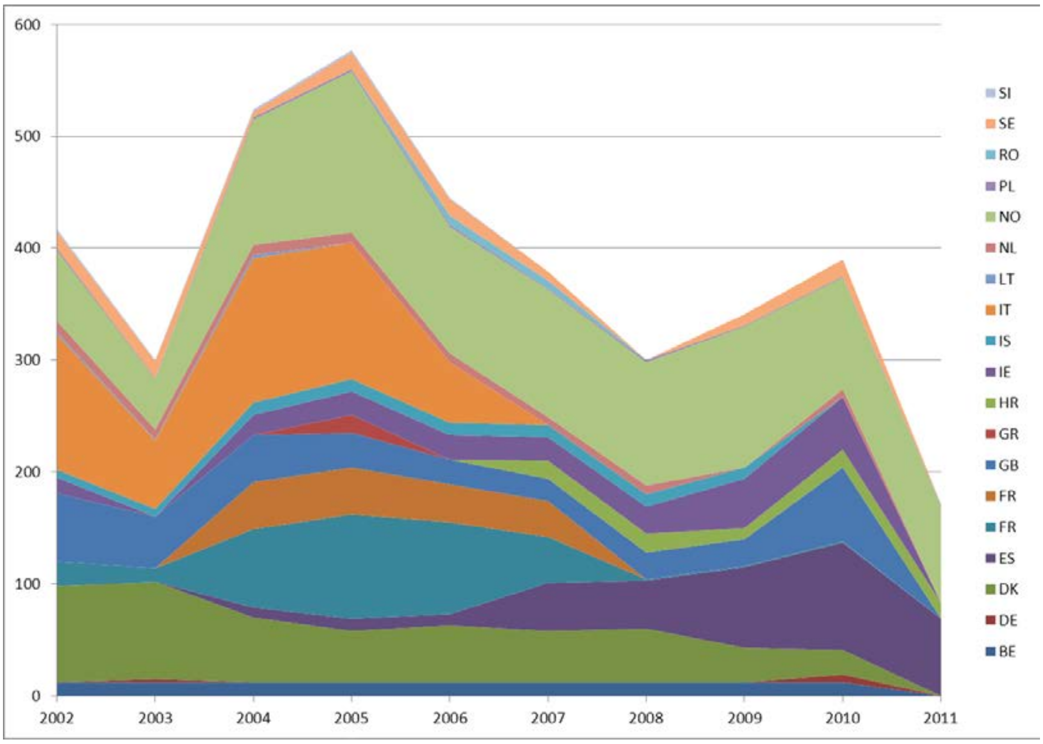



**Fig. 3.2.80 Number of measurements of dieldrin in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

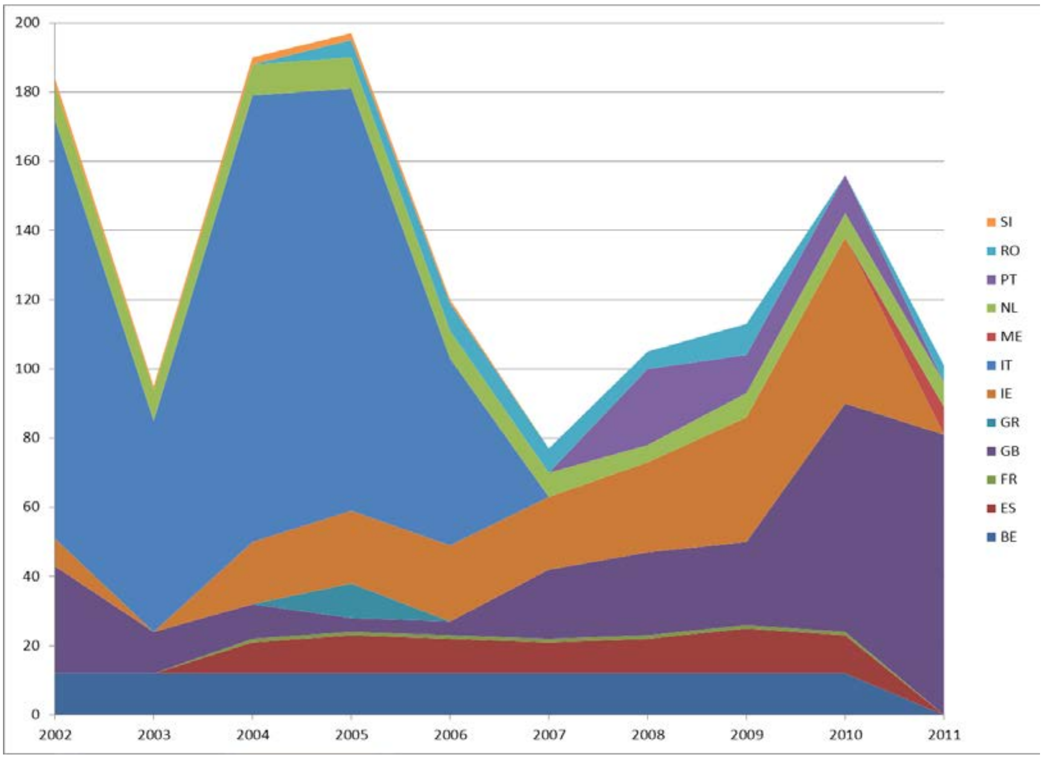


**Fig. 3.2.81 Number of measurements of fluoranthene in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

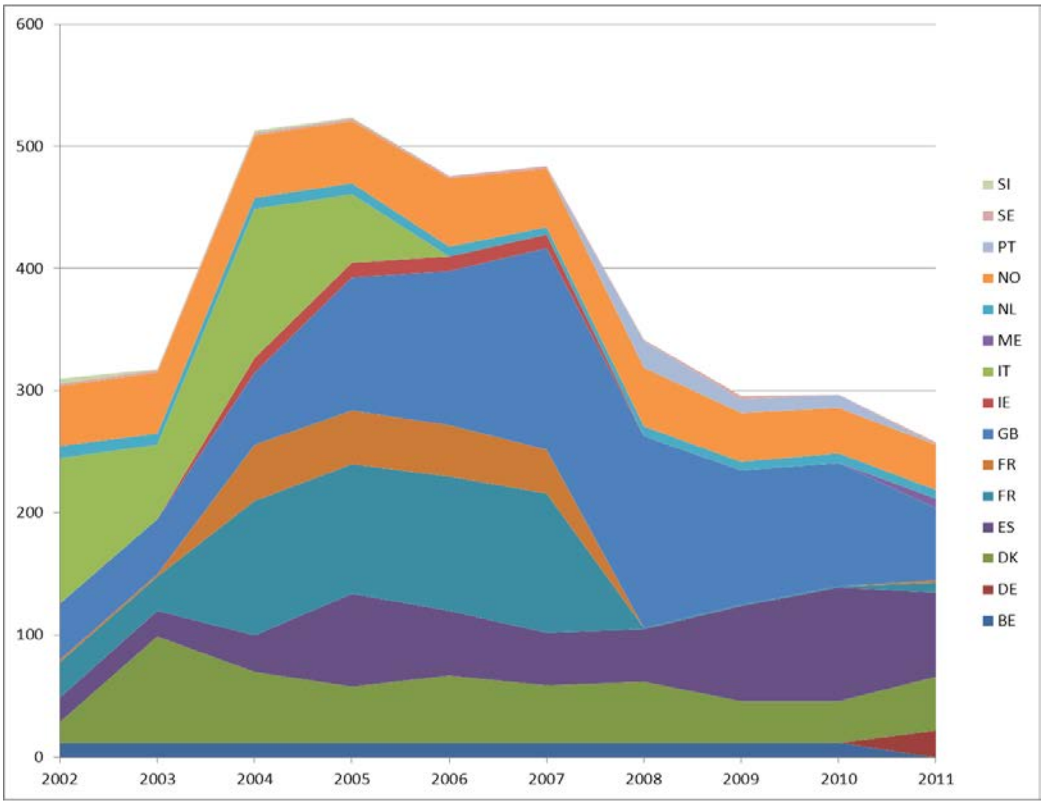



**Fig. 3.2.82 Number of measurements of gamma-HCH in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

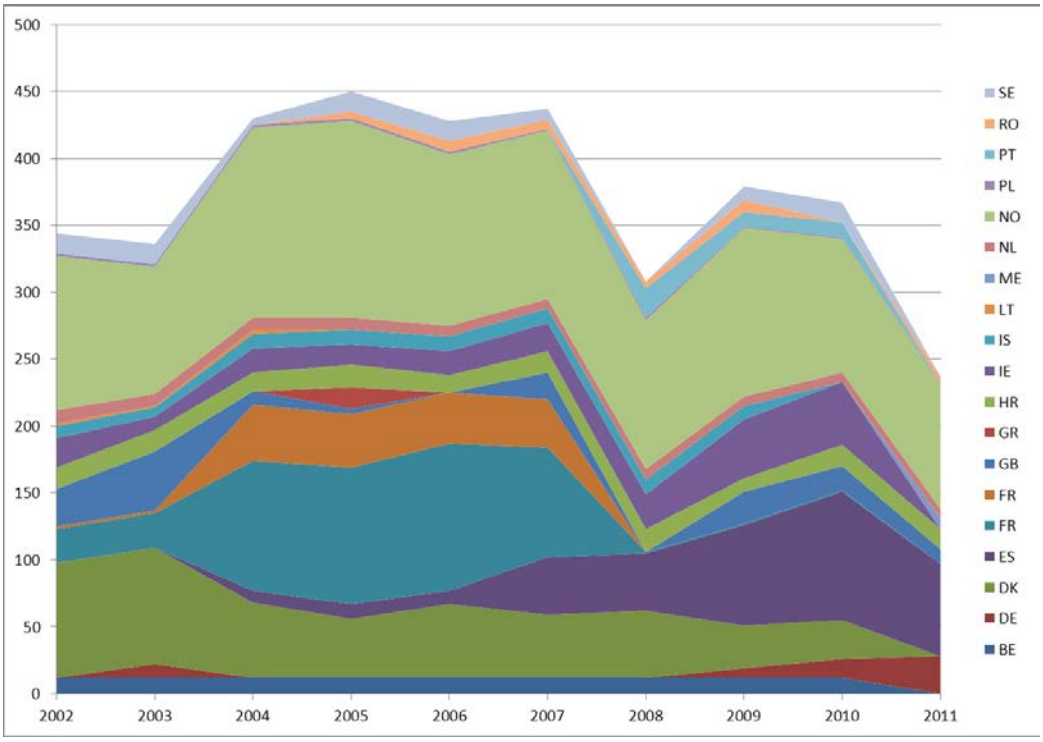


**Fig. 3.2.83 Number of measurements of hexachlorobenzene in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

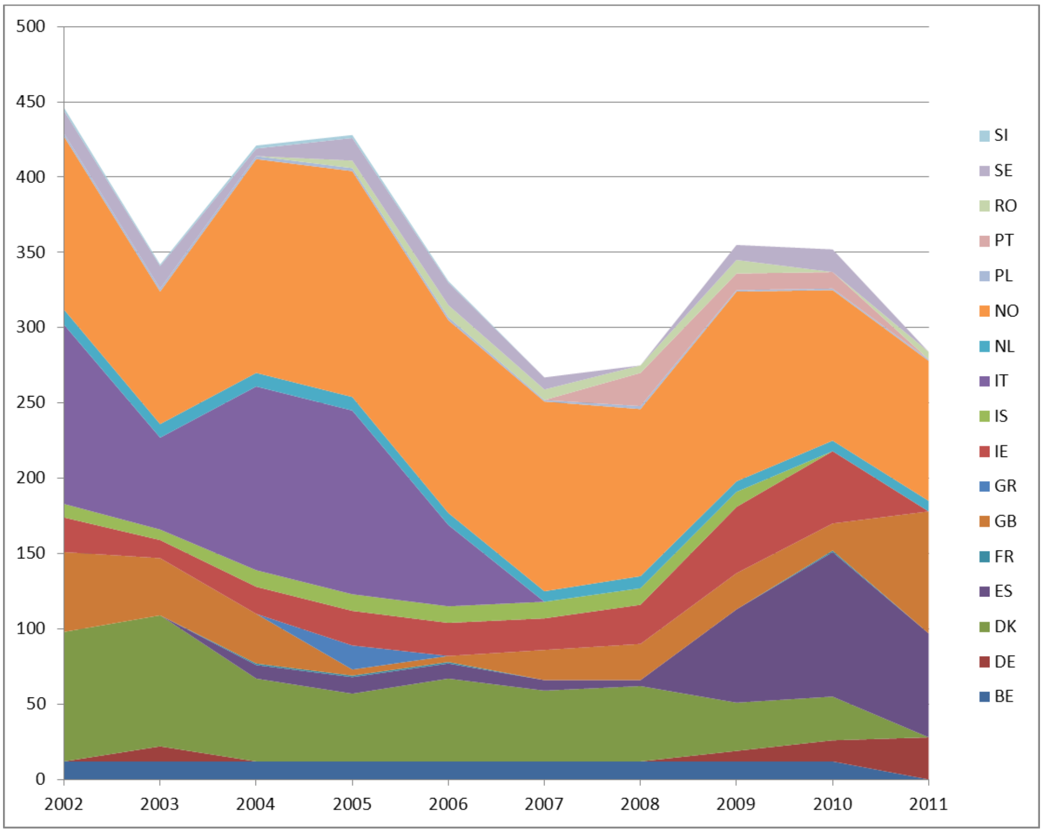



**Fig. 3.2.84 Number of measurements of indeno(1,2,3-cd)pyrene in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

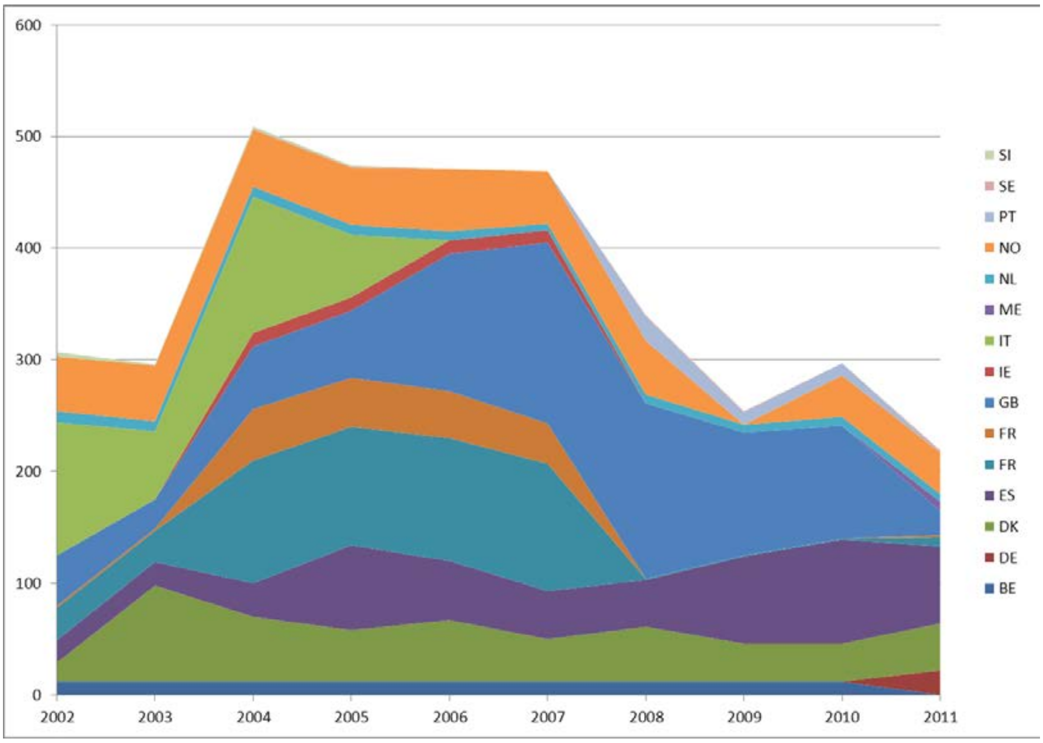


**Fig. 3.2.85 Number of measurements of lead in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

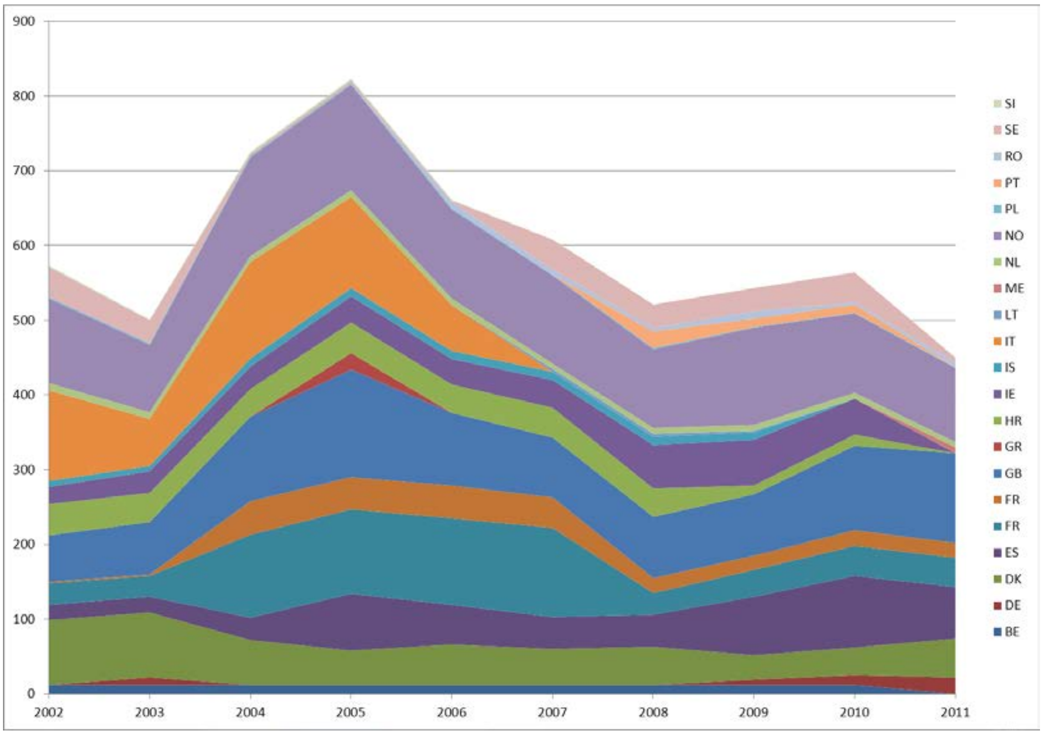



**Fig. 3.2.86 Number of measurements of mercury in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

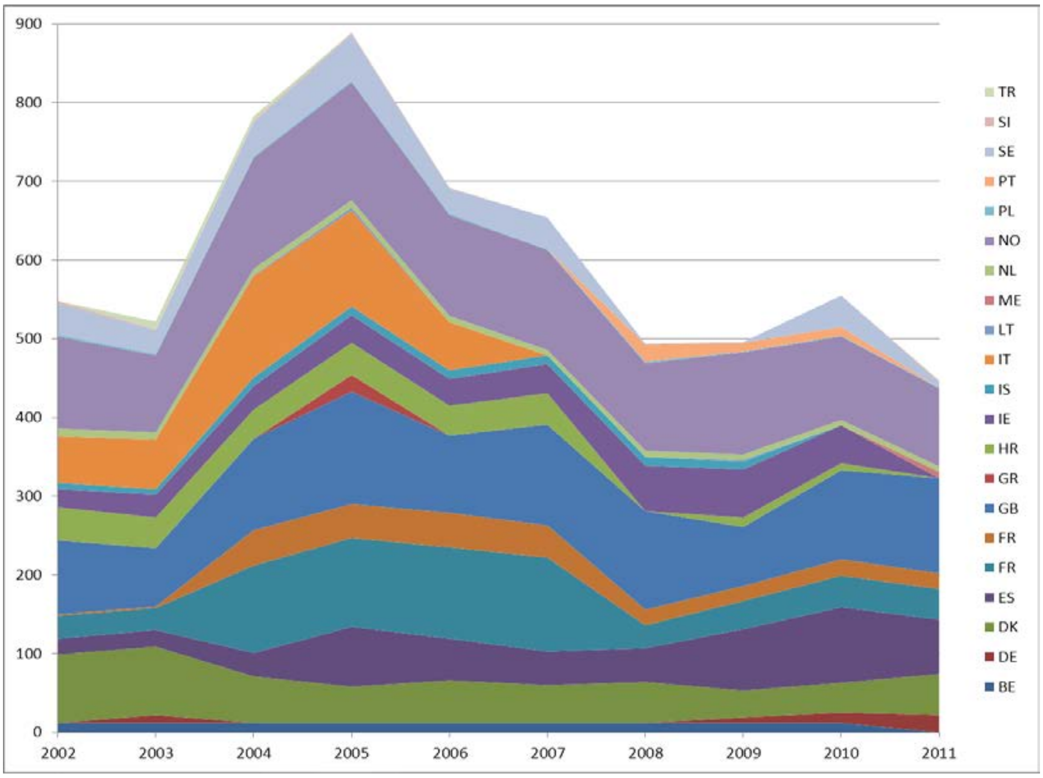


**Fig. 3.2.87 Number of measurements of nickel in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

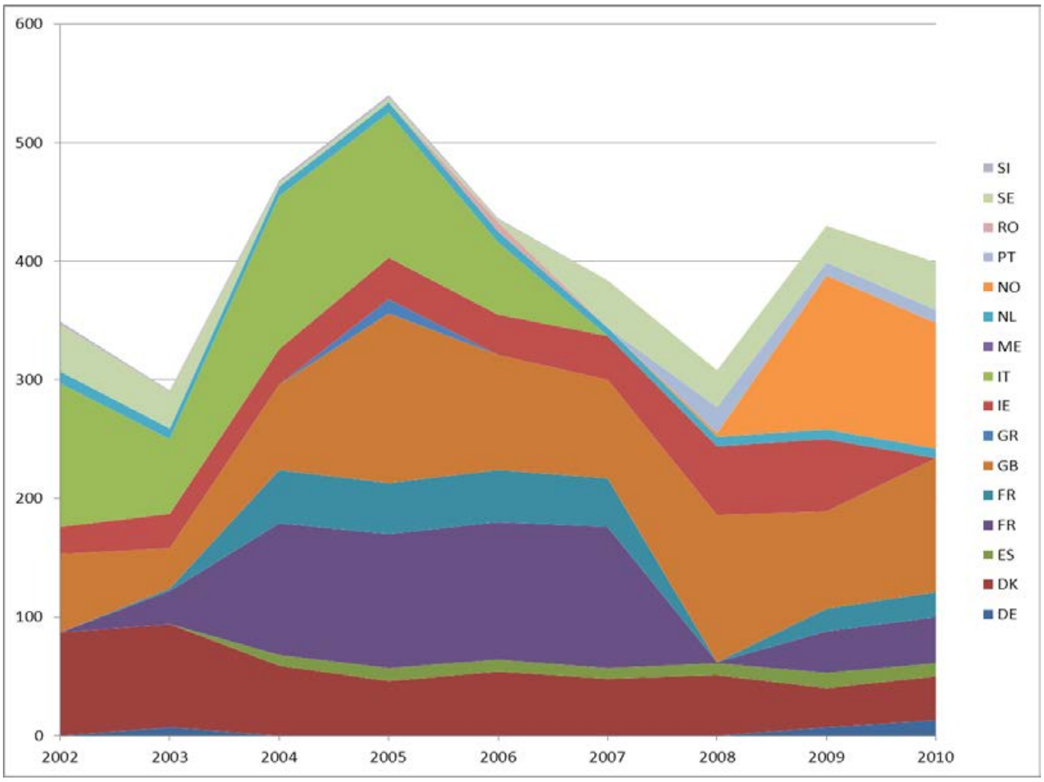



**Fig. 3.2.88 Number of measurements of PCB28 in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

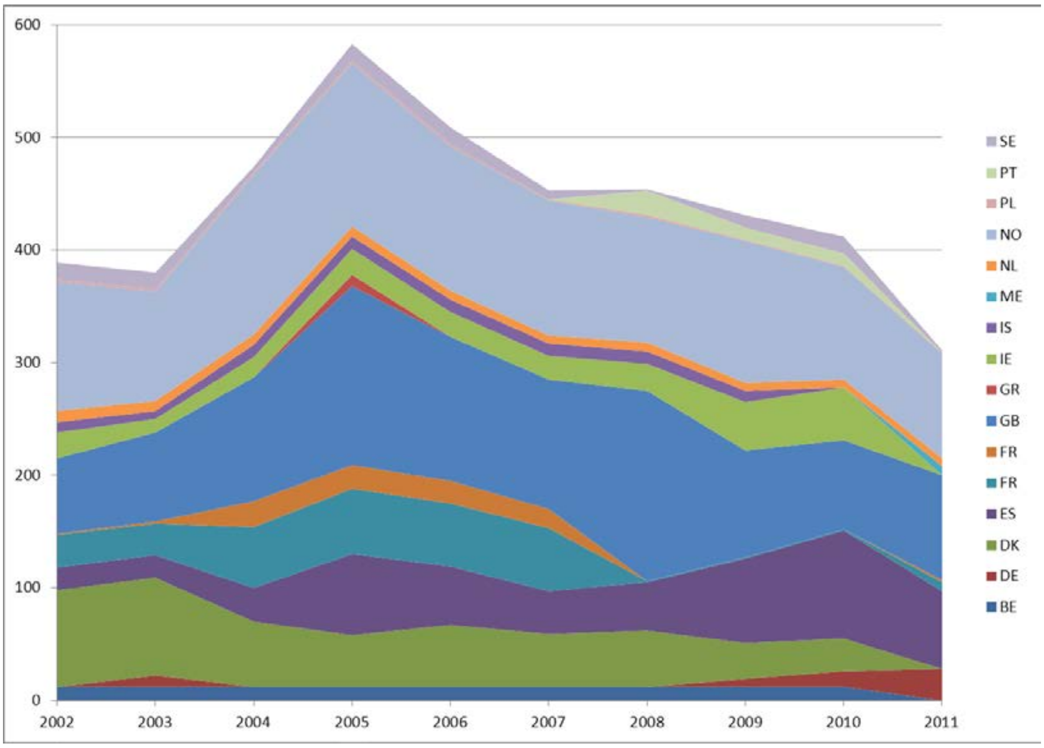


**Fig. 3.2.89 Number of measurements of PCB52 in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

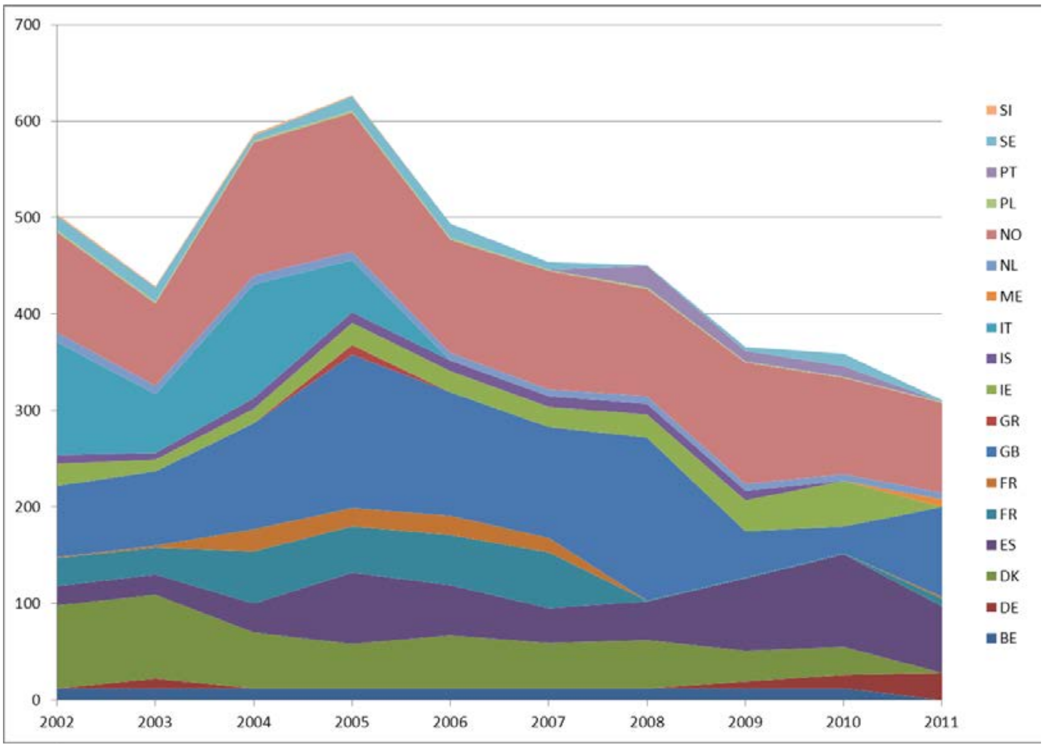



**Fig. 3.2.90 Number of measurements of PCB101 in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

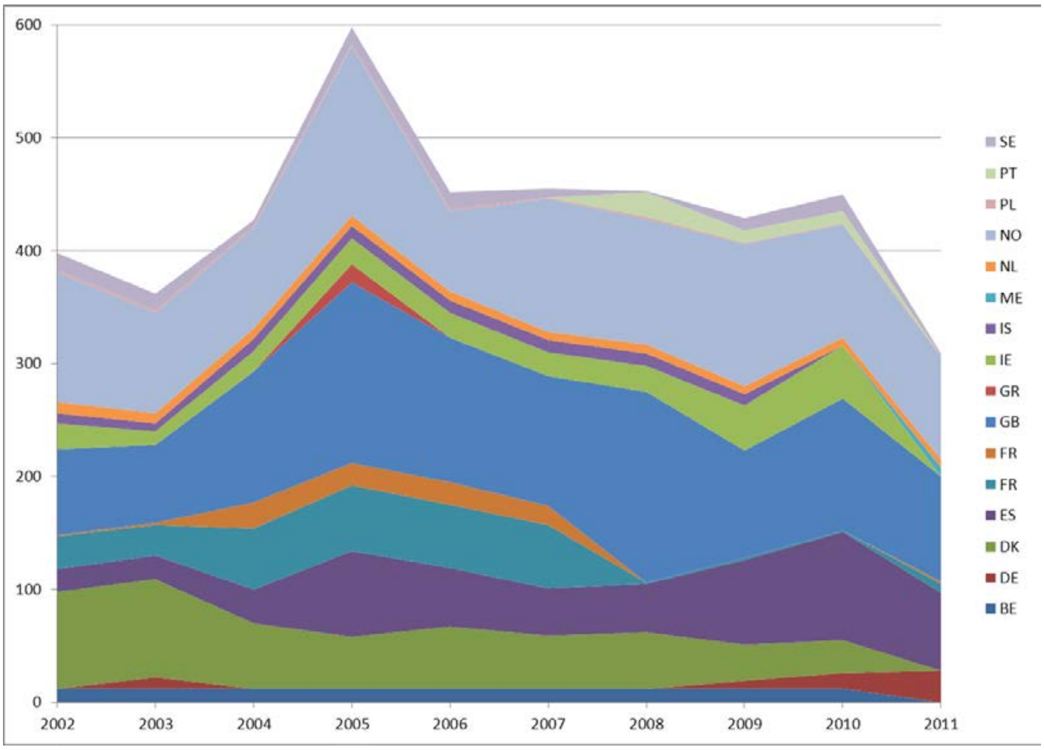


**Fig. 3.2.91 Number of measurements of PCB118 in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

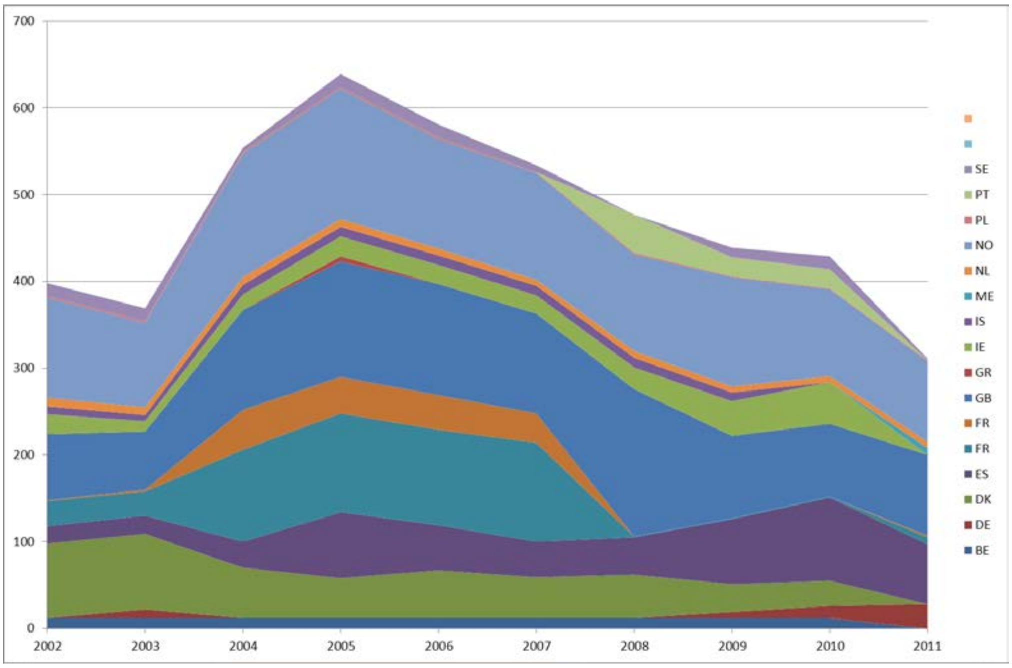



**Fig. 3.2.92 Number of measurements of PCB138 in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

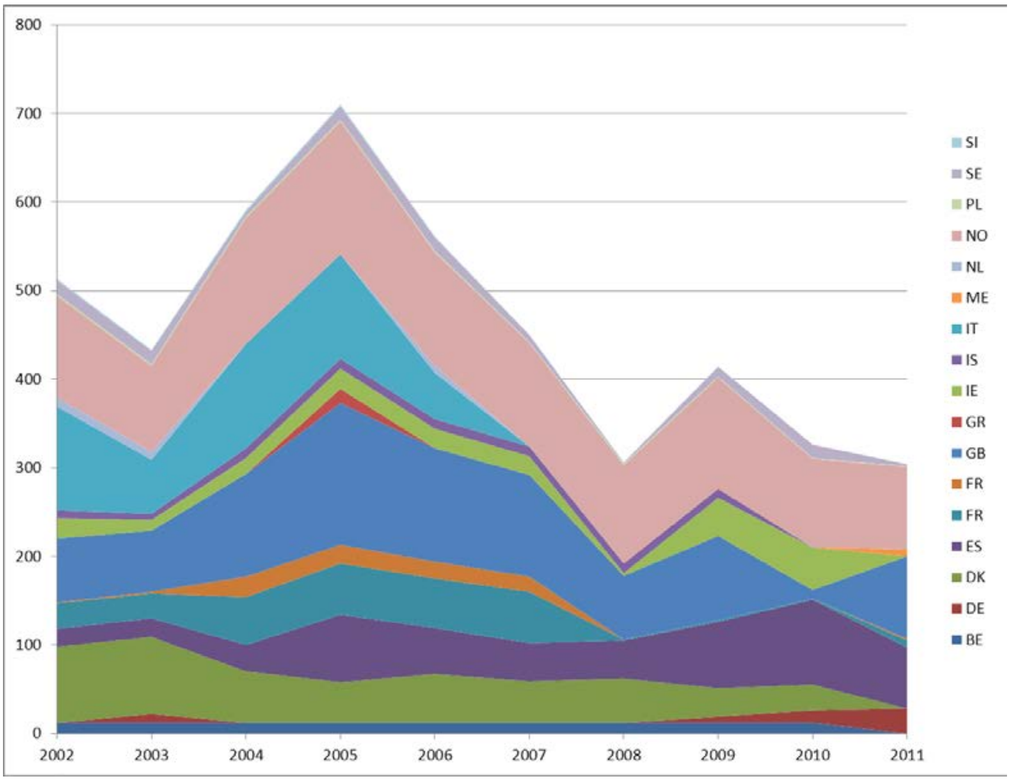


**Fig. 3.2.93 Number of measurements of PCB153 in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

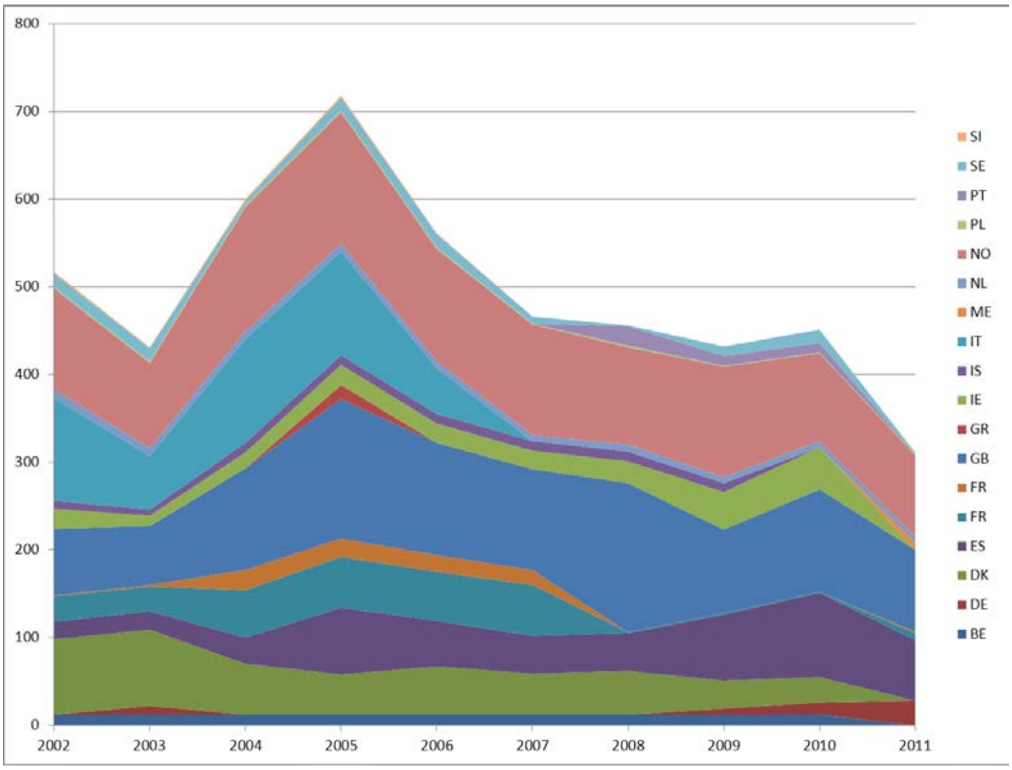



**Fig. 3.2.94 Number of measurements of PCB180 in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

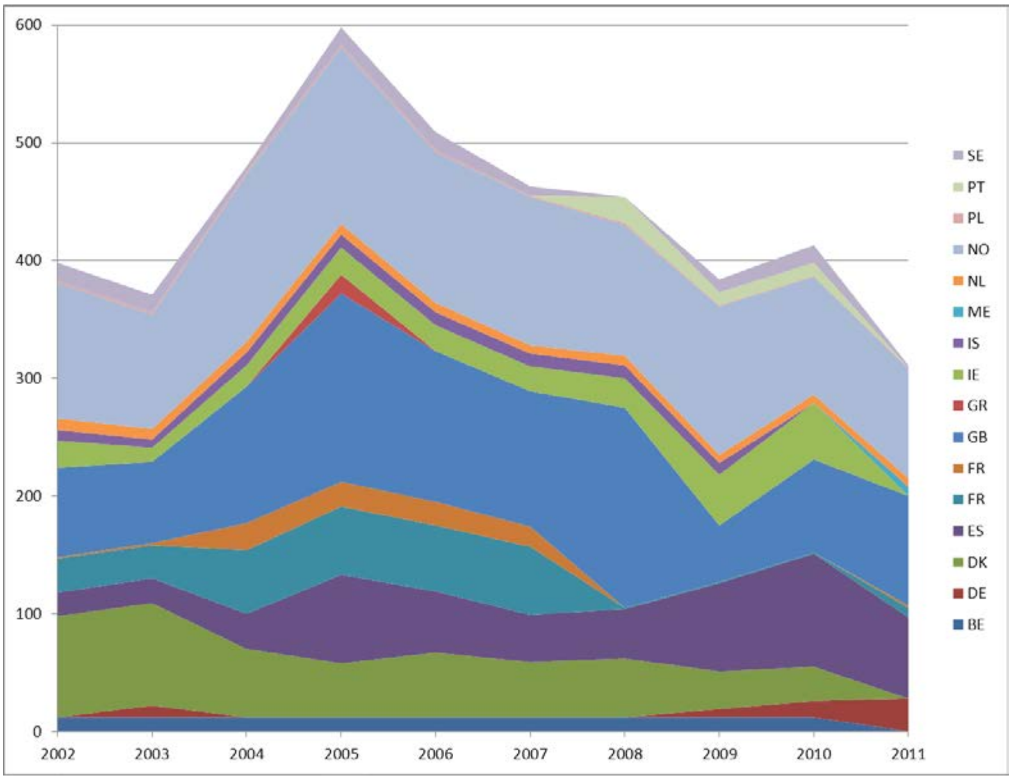


**Fig. 3.2.95 Number of measurements of phenanthrene in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

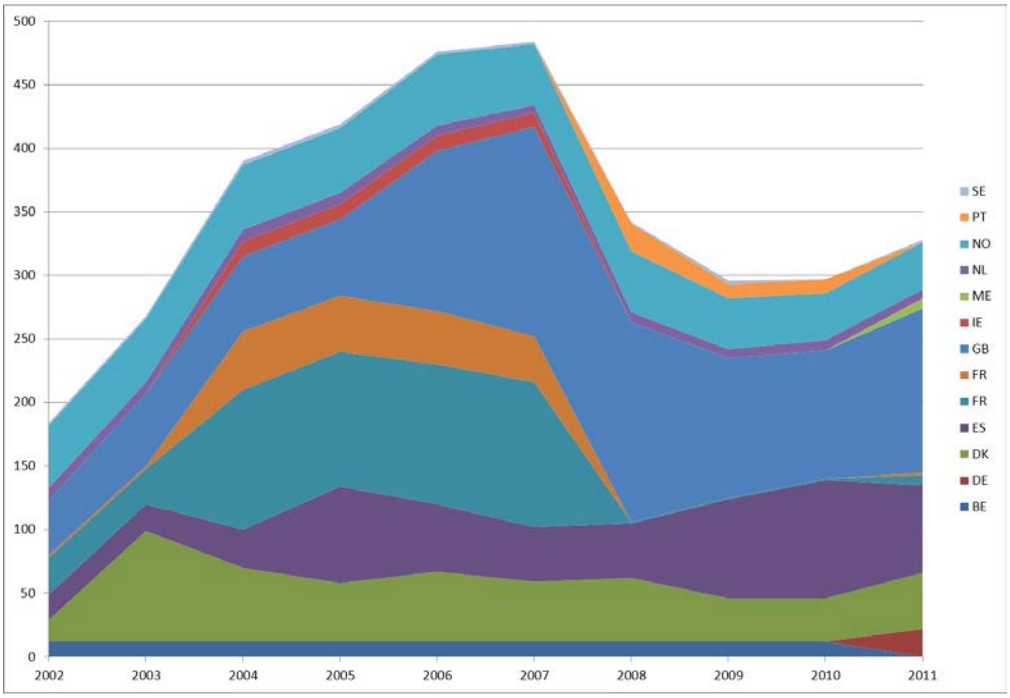



**Fig. 3.2.96 Number of measurements of pyrene in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

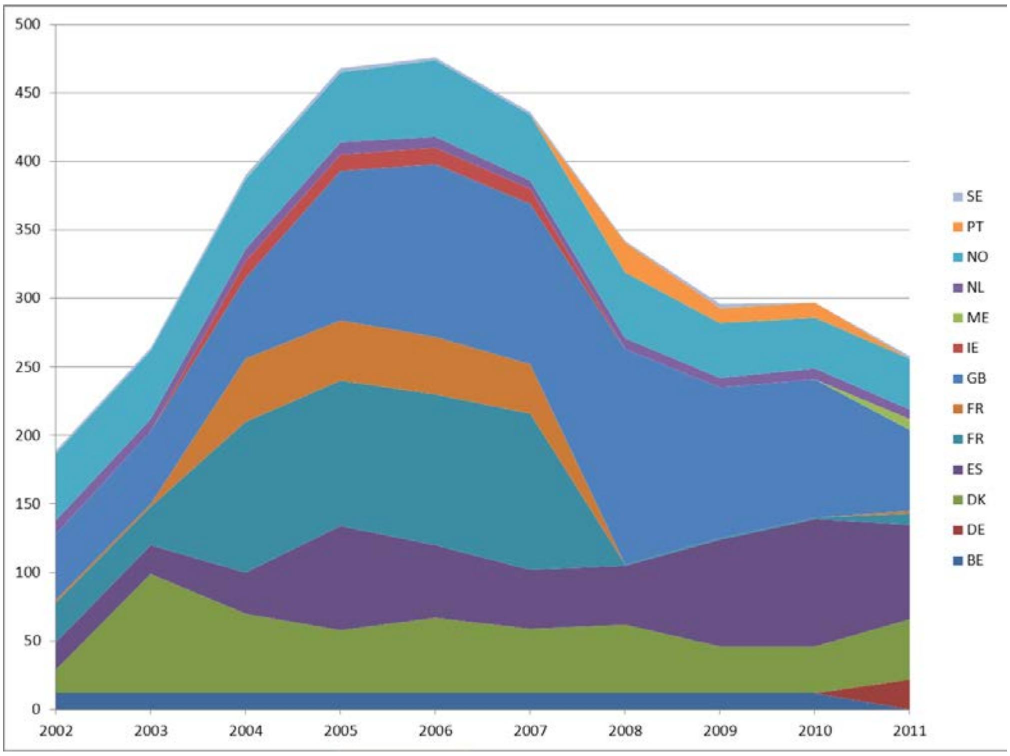


**Fig. 3.2.97 Number of measurements of zinc in biota [Mytilus] divided by country submitting data to Eionet CDR or ICES.**

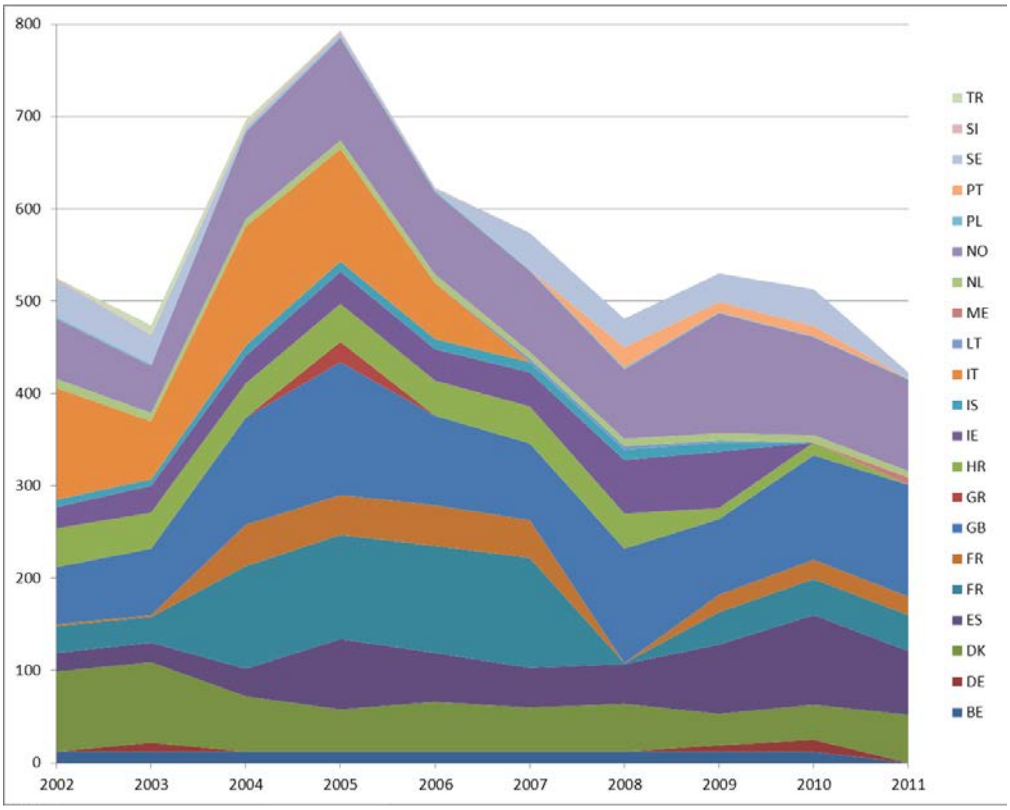



**Fig. 3.2.98 Number of measurements of cadmium in biota [Platichthys] divided by country submitting data to Eionet CDR or ICES.**

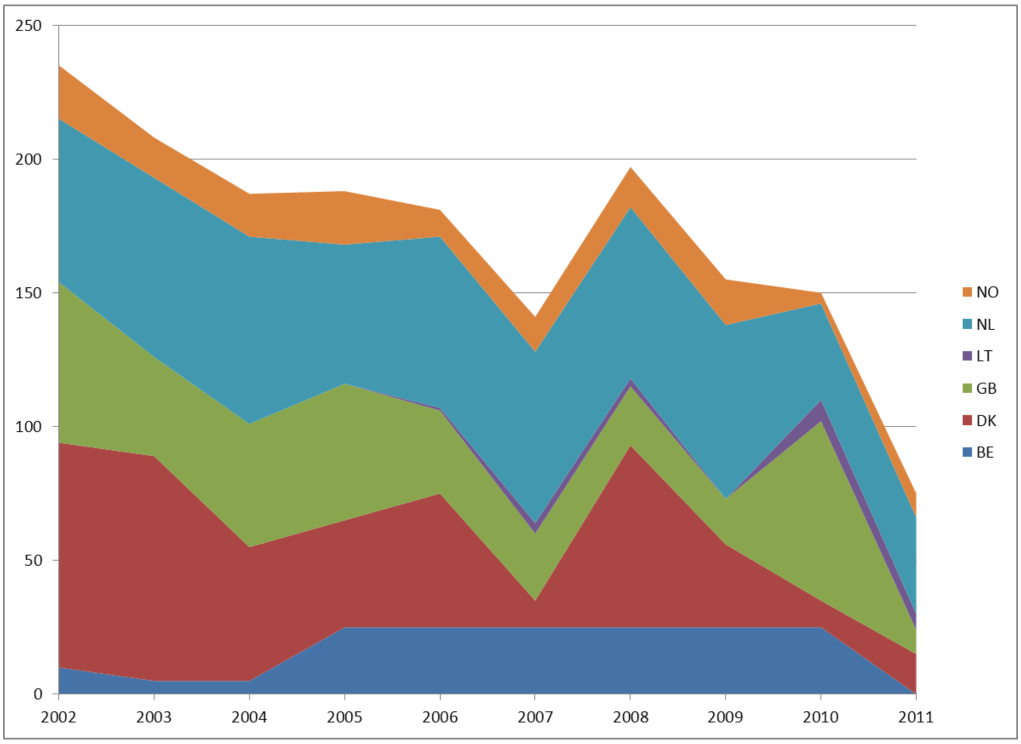


**Fig. 3.2.99 Number of measurements of lead in biota [Platichthys] divided by country submitting data to Eionet CDR or ICES.**

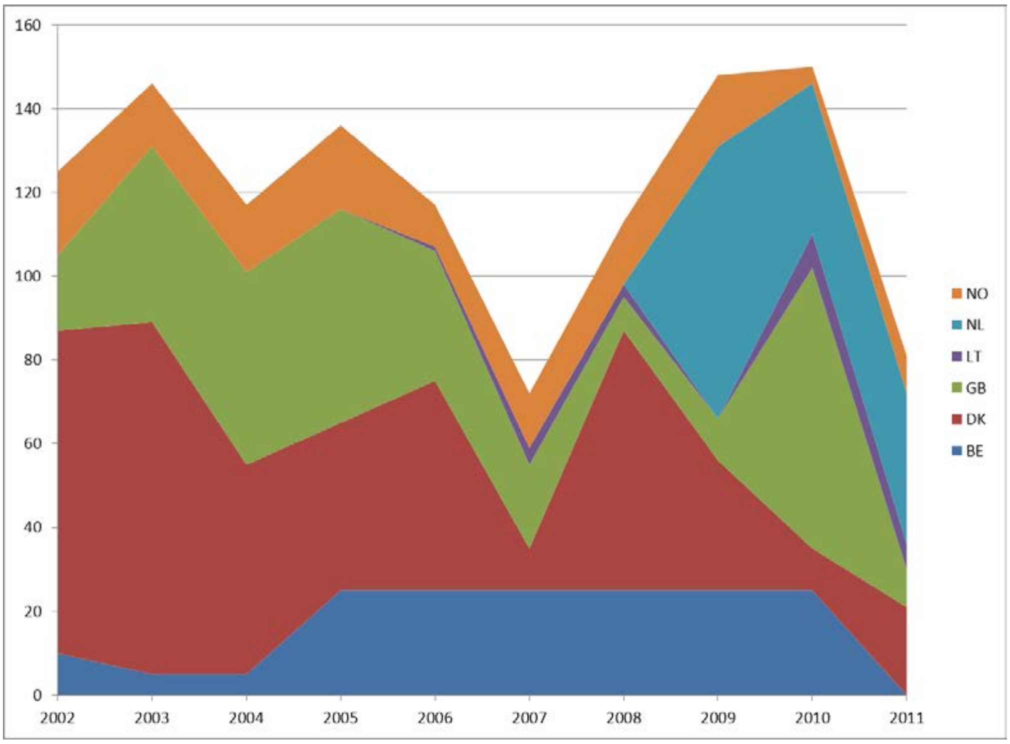
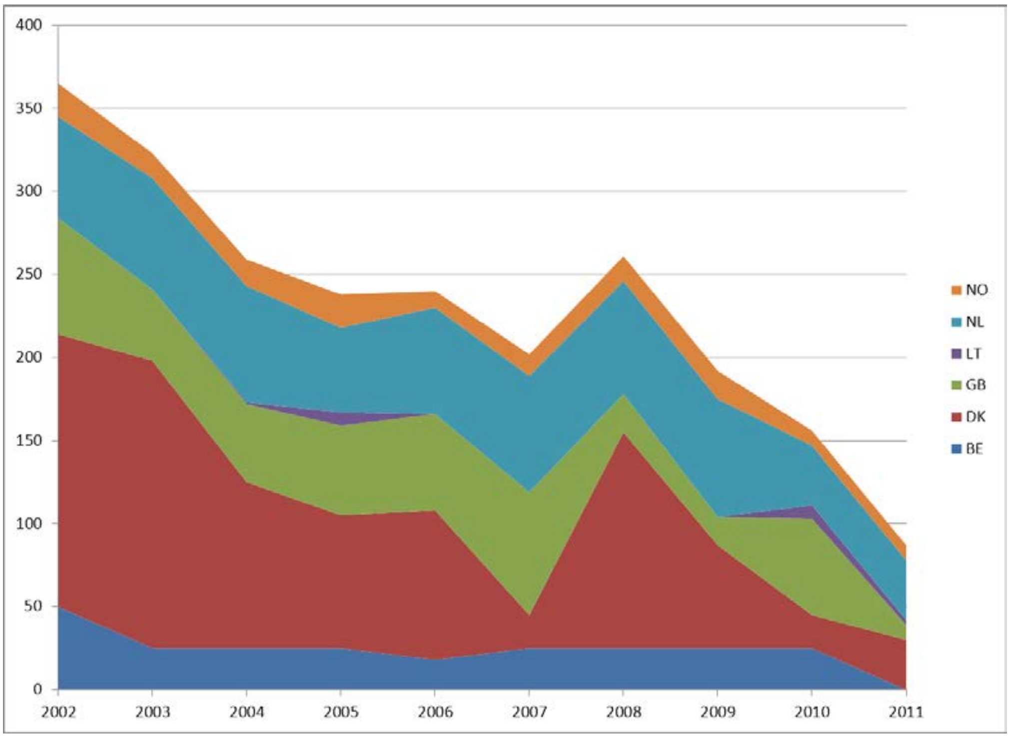



**Fig. 3.2.100 Number of measurements of mercury in biota [Platichthys] divided by country submitting data to Eionet CDR or ICES.**



## 3.3 Rivers

The number of samples and monitoring stations has increased substantially from 2002 to 2011. Reported data on pesticides and metals were most abundant, and the data stretches back for the longest amount of time, more or less continuously from 2002. Measurements of the selected hazardous substances in rivers have been conducted in several of the countries, but as shown in the following tables, high variations between the countries in the numbers of substances reported, length of time the monitoring has been performed, and numbers of stations included are depicted. France is by far the country that has submitted the most extensive set of data. A temporal availability of river SoE data for selected hazardous substances in the period 2002–2011 is shown in Tables 3.3.1 to 3.3.7. Most of the substances have been reported for 10 years throughout Europe.

**Table 3.3.1 Temporal availability of SoE river data for selected hazardous substances in the 2002–2011 period.**

| Substance | No. of years | Period |
|---|---|---|
| 1,1,2,2-tetrachloroethene | 10 | 2002 - 2011 |
| 1,2-dichloroethane | 10 | 2002 - 2011 |
| 4-nonylphenol | 9 | 2003 - 2011 |
| Alachlor | 10 | 2002 - 2011 |
| Anthracene | 10 | 2002 - 2011 |
| Atrazine | 10 | 2002 - 2011 |
| Benzene | 10 | 2002 - 2011 |
| Benzo(a)pyrene | 10 | 2002 - 2011 |
| Cadmium | 10 | 2002 - 2011 |
| Cadmium dissolved | 4 | 2008 - 2011 |
| Chlorfenvinphos | 10 | 2002 - 2011 |
| Chlorpyrifos | 10 | 2002 - 2011 |
| DDT, p,p' | 10 | 2002 - 2011 |
| Di (2-ethylhexyl) phthalate (DEHP) | 9 | 2003 - 2011 |
| Dichloromethane | 10 | 2002 - 2011 |
| Diuron | 10 | 2002 - 2011 |
| Endosulfan | 10 | 2002 - 2011 |
| Fluoranthene | 10 | 2002 - 2011 |
| Hexachlorobenzene (HCB) | 10 | 2002 - 2011 |
| Hexachlorobutadiene (HCBD) | 10 | 2002 - 2011 |
| Hexachlorocyclohexane (HCH) | 7 | 2002 - 2011 |
| Isoproturon | 10 | 2002 - 2011 |
| Lead | 10 | 2002 - 2011 |
| Lead dissolved | 4 | 2008 - 2011 |
| Mercury | 10 | 2002 - 2011 |
| Mercury dissolved | 4 | 2008 - 2011 |
| Naphthalene | 10 | 2002 - 2011 |
| Nickel | 10 | 2002 - 2011 |
| Nickel dissolved | 4 | 2008 - 2011 |
| Para-tert-octylphenol | 9 | 2003 - 2011 |
| Pentachlorobenzene | 10 | 2002 - 2011 |
| Pentachlorophenol | 10 | 2002 - 2011 |
| SUM Cyclodienes: Aldrin, Endrin, Dieldrin, Isodrin | 10 | 2002 - 2011 |
| SUM DDT Total: DDD, p,p', DDE, p,p', DDT, o,p', DDT, p,p' | 10 | 2002 - 2011 |
| SUM HCH | 10 | 2002 - 2011 |
| SUM PAH1: Benzo(b)fluoranthene, Benzo(k)fluoranthene | 10 | 2002 - 2011 |
| SUM PAH2: Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene | 10 | 2002 - 2011 |
| Simazine | 10 | 2002 - 2011 |
| Tributyltin cation | 6 | 2005 - 2011 |
| Trichloromethane | 10 | 2002 - 2011 |
| Trifluralin | 10 | 2002 - 2011 |

**Table 3.3.2 No. of years with available river data for countries within the 2002–2011 period**

| Substance | AL | AT | BA | BE | BG | CY | CZ | DE | EE | ES | FI | FR | GB | GR | HR | HU | CH | IE | IS | IT | LT | LU | LV | MK | MT | NL | NO | PL | PT | RO | RS | SE | SI | SK | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-tetrachloroethene | | | 1 | 3 | | 2 | | 8 | | 3 | | 8 | 9 | | 2 | | | 1 | | 1 | 3 | 3 | | | 1 | 4 | | 2 | | 2 | | | | 4 | |
| 1,2-dichloroethane | | 5 | 2 | 9 | | 3 | 5 | 8 | | 3 | | 1 | 9 | | 2 | | | 4 | | 8 | 2 | 5 | | | 1 | 4 | | 3 | | 1 | | | 2 | 5 | |
| 4-nonylphenol | | | 2 | 8 | | | | | | 2 | 4 | 8 | | | | | | 3 | | 3 | 1 | 2 | | | 1 | | | | | 2 | | | 2 | 4 | |
| Alachlor | | 7 | 3 | 9 | | 1 | 5 | 2 | | 3 | 5 | 1 | | | 2 | | | 3 | 1 | 1 | | 5 | | | 1 | 4 | | 3 | 2 | 3 | 3 | 9 | 1 | 4 | |
| Anthracene | | 1 | 5 | 9 | | 2 | | 8 | | 3 | 3 | 1 | 6 | 1 | 2 | | | 4 | | 7 | 4 | 4 | 2 | | 1 | 4 | | 4 | 2 | 3 | 1 | | 5 | 7 | |
| Atrazine | | 7 | 5 | 9 | 2 | 8 | 5 | 7 | | 3 | 5 | 1 | 9 | 4 | 8 | 6 | | 4 | 1 | 1 | 2 | 4 | | | 1 | 4 | | 3 | 2 | 3 | 6 | 9 | 1 | 7 | |
| Benzene | | 2 | 3 | 9 | | 4 | 5 | 7 | | 3 | | 1 | 9 | 1 | 2 | 1 | | 4 | | 7 | 2 | 5 | 2 | | 1 | 4 | | 3 | 1 | 2 | | | 6 | 5 | |
| Benzo(a)pyrene | | 1 | 5 | 9 | | 2 | 5 | 7 | | 3 | 3 | 1 | 6 | | 2 | | | 2 | | 1 | 4 | 5 | 2 | | 1 | 4 | | 4 | 2 | 3 | 4 | | 4 | 7 | |
| Cadmium | 1 | 1 | 9 | 9 | 7 | 6 | 5 | 5 | 9 | 2 | 1 | 1 | 1 | 3 | 8 | 6 | 9 | 6 | 3 | 1 | 8 | 1 | 1 | 9 | 1 | 7 | 7 | 4 | 5 | 5 | 4 | 1 | 8 | 5 | |
| Cadmium dissolved | | 2 | | 3 | | | | 3 | | 1 | | 2 | 2 | | 2 | | 1 | | | 3 | | | | | | 3 | | | | 3 | 4 | | 2 | 3 | 2 |
| DDT, p,p' | | | 1 | 7 | | 3 | 5 | 7 | | 2 | 3 | 9 | 6 | 2 | 8 | 6 | | | 1 | 1 | 6 | 1 | 6 | | 1 | 4 | | 3 | | 3 | 6 | | 7 | 5 | |
| Di (2-ethylhexyl) phthalate (DEHP) | | 1 | 4 | 3 | | 3 | | 2 | | 3 | 4 | 8 | 5 | | | | | 3 | | 3 | 1 | 5 | | | 1 | 4 | | 3 | | | | | 2 | 7 | |
| Dichloromethane | | 3 | 3 | 8 | | 2 | | 7 | | 3 | | 1 | 6 | | 2 | | | 4 | | 6 | 3 | 5 | | | 1 | 4 | | 3 | | 2 | | | 7 | 4 | |
| Diuron | | 1 | 4 | 9 | | 4 | 4 | 7 | | 3 | 5 | 1 | 9 | 1 | 1 | | | 4 | | 7 | | 5 | | | 1 | 4 | | 4 | 2 | 2 | 3 | 1 | 3 | 6 | |
| Endosulfan | | | 5 | 5 | | 3 | 5 | | | | 5 | 8 | 7 | | 2 | | | 3 | 1 | 1 | 2 | 3 | 6 | | 1 | 3 | | 4 | | | 3 | 7 | 6 | 4 | |
| Fluoranthene | | 1 | 5 | 9 | | 2 | 5 | 7 | | 3 | 3 | 1 | 6 | 1 | 2 | | | 4 | | 1 | 4 | 5 | 2 | | 1 | 4 | | 4 | 2 | 3 | 4 | | 5 | 7 | |
| Hexachlorobenzene (HCB) | | 2 | 3 | 8 | | 7 | 5 | 7 | | 3 | 3 | 1 | 7 | | 2 | | | 3 | 1 | 1 | 2 | 2 | 5 | | 1 | 4 | | 3 | | 3 | 6 | | 1 | 5 | |
| Hexachlorobutadiene (HCBD) | | 2 | 2 | 7 | | 4 | 5 | 7 | | 3 | 3 | 1 | 7 | | 2 | | | 5 | 1 | 5 | | 5 | | | 1 | 4 | | 3 | | 2 | 2 | | 6 | 4 | |
| Hexachlorocyclohexane (HCH) | | | | 1 | | 3 | | | | | | 3 | | | 2 | | | | | 5 | 1 | | | | 1 | | | 3 | | | | | 3 | | |
| Chlorfenvinphos | | | 4 | 4 | | 4 | | 2 | | 3 | 5 | 9 | 7 | | 2 | | | 3 | 1 | 1 | | 4 | | | 1 | 4 | | 3 | 1 | 2 | 3 | 9 | 9 | 5 | |

## Table 3.3.2 continued

| Substance | AL | AT | BA | BE | BG | CY | CZ | DE | EE | ES | FI | FR | GB | GR | HR | HU | CH | IE | IS | IT | LT | LU | LV | MK | MT | NL | NO | PL | PT | RO | RS | SE | SI | SK | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chlorpyrifos | | 1 | 4 | 9 | 1 | 3 | 5 | 2 | | 3 | 5 | 8 | 3 | 1 | 2 | | | 2 | | 1 | | 3 | | | 1 | 4 | | 2 | | 2 | 3 | 9 | 2 | 6 | |
| Isoproturon | | 1 | 3 | 9 | | 4 | 4 | 7 | | 3 | 5 | 9 | 8 | 1 | 1 | | | 4 | | 6 | | 4 | | | 1 | 4 | | 2 | | 2 | 3 | 1 | 3 | 5 | |
| Lead | 1 | 1 | 9 | 9 | 8 | 7 | 5 | 2 | 9 | 2 | 1 | 9 | 1 | 3 | 8 | 6 | 9 | 6 | 4 | 1 | 8 | 1 | 1 | 9 | 1 | 7 | 7 | 3 | 4 | 5 | 4 | 1 | 8 | 5 | |
| Lead dissolved | | 3 | | 3 | | | | 3 | | 1 | | 2 | 3 | | 2 | | 1 | | | 3 | | | | | | 3 | | | | 3 | 4 | | 2 | 3 | 2 |
| Mercury | 1 | 9 | 7 | 9 | 2 | 5 | 5 | 5 | 6 | 2 | 1 | 9 | 1 | 3 | 2 | 6 | 3 | 6 | 3 | 1 | 8 | 1 | 6 | | 1 | 6 | 6 | 4 | 5 | 5 | 4 | 8 | 8 | 5 | |
| Mercury dissolved | | 2 | | 3 | | | | 3 | | 1 | | 2 | 2 | | 2 | | 1 | | | 1 | | | | | | 3 | | | | 2 | 4 | | 2 | 2 | 2 |
| Naphthalene | | 1 | 3 | 6 | | 3 | | 7 | | 3 | 3 | 9 | 5 | 1 | 2 | | | 4 | | 7 | | 2 | 2 | | 1 | 4 | | 4 | 2 | 3 | | | 2 | 6 | |
| Nickel | 1 | 1 | 1 | 9 | 8 | 6 | 5 | 2 | 5 | 2 | 1 | 9 | 1 | 3 | 8 | 6 | 3 | 6 | | 1 | 8 | 1 | 9 | 9 | 1 | 7 | 7 | 4 | 1 | 5 | 4 | 1 | 8 | 5 | |
| Nickel dissolved | | 2 | | 3 | | | | 3 | | 1 | | 2 | 3 | | 2 | | 1 | | | 3 | | | | | | 3 | | | | 3 | 4 | | 2 | 2 | |
| Para-tert-octylphenol | | | 2 | 8 | | | | 2 | | | 4 | 8 | 4 | | | | | 3 | | 3 | 1 | 3 | | | 1 | 4 | | 2 | | 2 | 2 | | 2 | 3 | |
| Pentachlorobenzene | | 2 | 2 | 9 | | | | 2 | | 2 | 5 | 9 | 2 | | 2 | | | 3 | 1 | 6 | | 4 | | | 1 | 4 | | 3 | | 3 | 2 | | 3 | 5 | |
| Pentachlorophenol | | 2 | 4 | 9 | | | | 7 | | 3 | | 9 | 7 | | 2 | 3 | | 5 | | 8 | 6 | 5 | | | 1 | 4 | | 3 | 1 | | 3 | | 9 | 4 | |
| Simazine | | 7 | 3 | 9 | 1 | 8 | 5 | 7 | | 3 | 5 | 9 | 7 | 2 | 2 | | | 4 | 1 | 1 | 2 | 4 | | | 1 | 4 | | 4 | | 2 | 6 | 9 | 1 | 8 | |
| Σ Cyclodienes | | 1 | 3 | 6 | 3 | 7 | 5 | | | | 5 | 9 | 7 | | 8 | 1 | | 3 | 1 | 1 | 3 | 1 | 6 | | 1 | 4 | | 3 | | | 6 | | 8 | 4 | |
| Σ DDT | | | 1 | 4 | | 3 | 5 | | | | 3 | 1 | 5 | 1 | 8 | 6 | | | 1 | 1 | 6 | 1 | 6 | | 1 | 4 | | 4 | | | 6 | | 3 | 4 | |
| Σ HCH | | | 2 | 5 | 2 | 1 | 5 | | | | 3 | 1 | 5 | | 8 | 6 | | | 1 | 1 | 6 | 2 | 5 | | | 4 | 6 | 1 | | | 6 | 9 | 3 | 4 | |
| Σ Benzo(b)fluoranthene, Benzo(k)fluoranthene | | | 5 | 6 | | 2 | 5 | | | | 3 | 1 | 2 | | 2 | | | 2 | | 1 | 4 | 3 | 2 | | 1 | 4 | | 4 | | | 4 | | 1 | 6 | |
| Σ Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene | | | 4 | 6 | | 2 | 5 | | | | 3 | 1 | 2 | | 2 | | | 2 | | 1 | 4 | 3 | 2 | | 1 | 4 | | 4 | | | 4 | | 4 | 6 | |
| Tributyltin cation | | | | 3 | | | | 5 | | 1 | | 5 | 4 | | | | | | | | | 3 | | | 1 | 1 | | 2 | | | | | 1 | 3 | |
| Trifluralin | | 2 | 2 | 9 | | 4 | 5 | 7 | | 3 | 5 | 9 | 7 | 1 | | | | 2 | | 1 | | 3 | | | 1 | 4 | | 3 | | 2 | 3 | 9 | 9 | 5 | |
| Trichloromethane | | 5 | 3 | 9 | | 3 | | 7 | | 3 | | 8 | 9 | | 2 | 2 | | 1 | | 5 | 2 | 3 | 2 | | 1 | 4 | | 4 | | 2 | | | 5 | 5 | |

**Table 3.3.3 No. of years with available river data for countries within the 2010–2011 period**

| Substance | AL | AT | BA | BE | BG | CY | CZ | DE | EE | ES | FI | FR | GB | GR | HR | HU | CH | IE | IS | IT | LT | LU | LV | MK | MT | NL | NO | PL | PT | RO | RS | SE | SI | SK | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-tetrachloroethene | | | 1 | 2 | | 1 | | 2 | | 2 | | 2 | 2 | | 2 | | | 1 | | 2 | 1 | 2 | | | 1 | 2 | | 1 | | 2 | | | | 2 | |
| 1,2-dichloroethane | | | 2 | 2 | | 2 | | 2 | | 2 | | 2 | 2 | | 2 | | | 2 | | 2 | | 2 | | | 1 | 2 | | 1 | | 1 | | | 1 | 2 | |
| 4-nonylphenol | | | 2 | 2 | | | | | | 2 | | 2 | | | | | | | | 2 | 1 | 2 | | | 1 | | | | | 2 | | | 1 | 2 | |
| Alachlor | | | 2 | 2 | | 2 | | 2 | | 2 | 2 | 2 | | | 2 | | | | 1 | 2 | | 2 | | | 1 | 2 | | 1 | 1 | 2 | 2 | 2 | 2 | 2 | |
| Anthracene | | | 2 | 2 | | | | 2 | | 2 | 1 | 2 | 2 | | 2 | | | 1 | | 2 | 2 | 2 | | | 1 | 2 | | 2 | 1 | 2 | 1 | | 1 | 2 | |
| Atrazine | | | 2 | 2 | 2 | 2 | | 2 | | 2 | 2 | 2 | 2 | | 2 | | | 1 | 1 | 2 | | 1 | | | 1 | 2 | | 1 | 1 | 2 | 2 | 2 | 2 | 2 | |
| Benzene | | | 2 | 2 | | 2 | | 2 | | 2 | | 2 | 2 | | 2 | | | 2 | | 2 | | 2 | | | 1 | 2 | | 1 | | 2 | | | 1 | 2 | |
| Benzo(a)pyrene | | | 2 | 2 | | | | 2 | | 2 | 1 | 2 | 2 | | 2 | | | 1 | | 2 | 2 | 2 | | | 1 | 2 | | 2 | | 2 | 1 | | 1 | 2 | |
| Cadmium | 1 | 2 | 2 | 2 | 2 | 1 | | | 2 | 1 | 2 | 2 | 2 | | 2 | | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | | | |
| Cadmium dissolved | | 2 | | 2 | | | | 2 | | 1 | | 2 | 2 | | 2 | | 1 | | | 2 | | | | | | 2 | | | | 2 | 2 | | 2 | 2 | 1 |
| DDT, p,p' | | | | 1 | | 1 | | 2 | | 2 | 1 | 2 | 2 | | 2 | | | | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | | 2 | 2 | | 2 | 2 | |
| Di (2-ethylhexyl) phthalate (DEHP) | | | 2 | 2 | | | | 2 | | 2 | | 2 | 2 | | | | | 2 | | 2 | 1 | 2 | | | 1 | 2 | | 1 | | | | | 1 | 2 | |
| Dichloromethane | | | 2 | 2 | | 1 | | 2 | | 2 | | 2 | 2 | | 2 | | | 2 | | 2 | 1 | 2 | | | 1 | 2 | | 1 | | 2 | | | 1 | 2 | |
| Diuron | | | 2 | 2 | | 1 | | 2 | | 2 | 2 | 2 | 2 | | 1 | | | 1 | | 2 | | 2 | | | 1 | 2 | | 2 | 1 | 2 | 2 | 2 | 1 | 2 | |
| Endosulfan | | | 2 | 1 | | 1 | | | | | 2 | 2 | 2 | | 2 | | | | 1 | 2 | | 1 | 2 | | 1 | 2 | | 2 | | | 2 | 2 | 2 | 2 | |
| Fluoranthene | | | 2 | 2 | | | | 2 | | 2 | 1 | 2 | 2 | | 2 | | | 1 | | 2 | 2 | 2 | | | 1 | 2 | | 2 | 1 | 2 | 1 | | 1 | 2 | |
| Hexachlorobenzene (HCB) | | | 2 | 1 | | 2 | | 2 | | 2 | 1 | 2 | 2 | | 2 | | | | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | | 2 | 2 | | 2 | 2 | |
| Hexachlorobutadiene (HCBD) | | | 2 | | | 2 | | 2 | | 2 | 1 | 2 | 2 | | 2 | | | 2 | 1 | 2 | | 2 | | | 1 | 2 | | 1 | | 2 | 2 | | 2 | 2 | |
| Hexachlorocyclohexane (HCH) | | | | 1 | | 1 | | | | | | | | | 2 | | | | | 2 | | | | | 1 | | | 1 | | | | | | | |
| Chlorfenvinphos | | | 2 | 1 | | 2 | | 2 | | 2 | 2 | 2 | 2 | | 2 | | | | 1 | 2 | | 2 | | | 1 | 2 | | 1 | | 2 | 2 | 2 | 2 | 2 | |

### Table 3.3.3 continued

| Substance | AL | AT | BA | BE | BG | CY | CZ | DE | EE | ES | FI | FR | GB | GR | HR | HU | CH | IE | IS | IT | LT | LU | LV | MK | MT | NL | NO | PL | PT | RO | RS | SE | SI | SK | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chlorpyrifos | | | 2 | 2 | 1 | 1 | | 2 | | 2 | 2 | 2 | 2 | | 2 | | | 2 | | 2 | | 2 | | | 1 | 2 | | 1 | | 2 | 2 | 2 | 1 | 2 | |
| Isoproturon | | | 2 | 2 | | 1 | | 2 | | 2 | 2 | 2 | 2 | | 1 | | | 1 | | 2 | | 2 | | | 1 | 2 | | 1 | | 2 | 2 | 2 | 1 | 2 | |
| Lead | 1 | 2 | 2 | 2 | 2 | 2 | | | 2 | 1 | 2 | 2 | 2 | | 2 | | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | | | |
| Lead dissolved | | 2 | | 2 | | | | 2 | | 1 | | 2 | 2 | | 2 | | 1 | | | 2 | | | | | | 2 | | | | 2 | 2 | | 2 | 2 | 1 |
| Mercury | 1 | 1 | 2 | 2 | 1 | 1 | | | | 1 | 2 | 2 | 2 | | 2 | | 1 | 2 | 2 | 2 | 2 | 1 | 1 | | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | | | |
| Mercury dissolved | | 1 | | 2 | | | | 2 | | 1 | | 2 | 2 | | 2 | | 1 | | | 1 | | | | | | 2 | | | | 2 | 2 | | 2 | 2 | |
| Naphthalene | | | 2 | 2 | | 2 | | 2 | | 2 | 1 | 2 | 2 | | 2 | | | 2 | | 2 | | 2 | | | 1 | 2 | | 2 | 1 | 2 | | | 1 | 2 | |
| Nickel | 1 | 2 | 2 | 2 | 2 | 2 | | | 2 | 1 | 2 | 2 | 2 | | 2 | | 2 | 2 | | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | | 2 | 2 | 2 | | 1 | |
| Nickel dissolved | | 2 | | 2 | | | | 2 | | 1 | | 2 | 2 | | 2 | | 1 | | | 2 | | | | | | 2 | | | | 2 | 2 | | 2 | 2 | 1 |
| Para-tert-octylphenol | | | 2 | 2 | | | | 2 | | | 1 | 2 | 2 | | | | | | | 2 | 1 | 2 | | | 1 | 2 | | 1 | | 2 | 2 | | 1 | 2 | |
| Pentachlorobenzene | | | 2 | 2 | | | | 2 | | 1 | 2 | 2 | 2 | | 2 | | | | 1 | 2 | | 2 | | | 1 | 2 | | 1 | | 2 | 2 | | 2 | 2 | |
| Pentachlorophenol | | | 2 | 2 | | | | 2 | | 2 | | 2 | 2 | | 2 | | | 2 | | 2 | 1 | 2 | | | 1 | 2 | | 1 | | | 2 | | 2 | 2 | |
| Simazine | | | 2 | 2 | 1 | 2 | | 2 | | 2 | 2 | 2 | 2 | | 2 | | | 1 | 1 | 2 | | 1 | | | 1 | 2 | | 2 | | 2 | 2 | 2 | 2 | 2 | |
| Σ Cyclodienes | | | 2 | 2 | 2 | 2 | | | | | 2 | 2 | 2 | | 2 | | | | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | | | 2 | | 2 | 2 | |
| Σ DDT | | | | 1 | | 1 | | | | | 1 | 2 | 2 | | 2 | | | | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | | | 2 | | 2 | 2 | |
| Σ HCH | | | 2 | 1 | 2 | 1 | | | | | 1 | 2 | 2 | | 2 | | | | 1 | 2 | | | 2 | | | 2 | 2 | | | | 2 | 2 | 2 | 2 | |
| Σ Benzo(b)fluoranthene, Benzo(k)fluoranthene | | | 2 | 2 | | | | | | | 1 | 2 | 2 | | 2 | | | 1 | | 2 | 2 | 1 | | | 1 | 2 | | 2 | | | 1 | | 1 | 2 | |
| Σ Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene | | | 2 | 2 | | | | | | | 1 | 2 | 2 | | 2 | | | 1 | | 2 | 2 | 1 | | | 1 | 2 | | 2 | | | 1 | | 1 | 2 | |
| Tributyltin cation | | | | 2 | | | | 2 | | 1 | | 2 | 2 | | | | | | | | | 2 | | | 1 | 1 | | 1 | | | | | 1 | 2 | |
| Trifluralin | | | 2 | 2 | | 2 | | 2 | | 2 | 2 | 2 | 2 | | | | | | | 2 | | 2 | | | 1 | 2 | | 1 | | 2 | 2 | 2 | 2 | 2 | |
| Trichloromethane | | | 2 | 2 | | 1 | | 2 | | 2 | | 2 | 2 | | 2 | | | 1 | | 2 | | 2 | | | 1 | 2 | | 2 | | 2 | | | 1 | 2 | |

## Table 3.3.4 Available river samples within the 2002–2011 period

| Substance | AL | AT | BA | BE | BG | CY | CZ | DE | EE | ES | FI | FR | GB | GR | HR | HU | CH | IE | IS | IT | LT | LU | LV | MK | MT | NL | NO | PL | PT | RO | RS | SE | SI | SK | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-tetrachloroethene | | | 5 | 1723 | | 106 | | 8413 | | 1929 | | 41827 | 2255 | | 474 | | | 249 | | 19821 | 412 | 72 | | | 9 | 573 | | 2592 | | 60 | | | 0 | 880 | |
| 1,2-dichloroethane | | 519 | 116 | 3433 | | 143 | 2581 | 8461 | | 2124 | | 41860 | 3027 | | 424 | | | 1444 | | 14118 | 446 | 93 | | | 9 | 573 | | 2520 | | 30 | | | 155 | 1033 | |
| 4-nonylphenol | | | 116 | 2849 | | | | | | 146 | 173 | 16104 | | | | | | 1751 | | 722 | 1 | 51 | | | 9 | | | | | 34 | | | 84 | 997 | |
| Alachlor | | 13907 | 121 | 3247 | | 267 | 2269 | 2544 | | 1604 | 225 | 56285 | | | 383 | | | 1751 | 1 | 20769 | | 90 | | | 9 | 693 | | 1322 | 80 | 293 | 431 | 160 | 579 | 1285 | |
| Anthracene | | 194 | 173 | 3243 | | 105 | | 5000 | | 1394 | 98 | 42367 | 870 | 21 | 261 | | | 2038 | | 7463 | 339 | 78 | 101 | | 9 | 740 | | 2932 | 25 | 277 | 26 | | 249 | 1186 | |
| Atrazine | | 13971 | 233 | 3148 | 112 | 213 | 2268 | 9164 | | 2196 | 225 | 54636 | 2839 | 449 | 883 | 2149 | | 2040 | 1 | 20764 | 453 | 57 | | | 9 | 693 | | 1908 | 85 | 389 | 1176 | 168 | 574 | 1269 | |
| Benzene | | 507 | 129 | 3324 | | 148 | 2579 | 7299 | | 1999 | | 41514 | 1897 | 20 | 371 | 556 | | 1443 | | 15731 | 447 | 93 | 67 | | 9 | 571 | | 2670 | 6 | 93 | | | 447 | 998 | |
| Benzo(a)pyrene | | 172 | 174 | 3326 | | 25 | 2302 | 4565 | | 693 | 97 | 42244 | 3660 | | 262 | | | 959 | | 8197 | 347 | 96 | 101 | | 9 | 736 | | 3504 | 92 | 241 | 99 | | 225 | 1185 | |
| Cadmium | 4 | 13677 | 890 | 4067 | 1731 | 217 | 3200 | 11134 | 483 | 1218 | 5309 | 29059 | 16912 | 483 | 1648 | 10156 | 216 | 2278 | 36 | 54292 | 1001 | 44 | 1409 | 1507 | 9 | 1342 | 2146 | 3392 | 388 | 1511 | 351 | 12125 | 1116 | 1004 | |
| Cadmium dissolved | | 829 | | 2024 | | | | 5703 | | 1132 | | 12178 | 3184 | | 564 | | 13 | | | 1122 | | | | | | 682 | | | | 861 | 2208 | | 267 | 816 | 124 |
| DDT, p,p' | | 0 | 12 | 1843 | | 155 | 2427 | 3852 | | 1584 | 134 | 43985 | 4358 | 206 | 1336 | 1038 | | | 1 | 6858 | 803 | 33 | 84 | | 9 | 740 | | 2690 | | 453 | 1177 | | 255 | 1258 | |
| Di (2-ethylhexyl) phthalate (DEHP) | | 362 | 137 | 1749 | | 142 | | 828 | | 374 | 218 | 23208 | 695 | | | | | 736 | | 838 | 126 | 90 | | | 9 | 677 | | 1196 | | | | | 108 | 1267 | |
| Dichloromethane | | 423 | 122 | 3244 | | 106 | | 8175 | | 1576 | | 41902 | 1180 | | 424 | | | 1230 | | 10425 | 435 | 93 | | | 9 | 574 | | 2502 | | 43 | | | 529 | 1005 | |
| Diuron | | 452 | 154 | 3376 | | 64 | 730 | 8493 | | 1154 | 221 | 54753 | 1473 | 20 | 270 | | | 2042 | | 7397 | | 93 | | | 9 | 549 | | 1273 | 84 | 30 | 407 | 170 | 254 | 1696 | |
| Endosulfan | | | 135 | 1380 | | 139 | 2213 | | | | 225 | 36242 | 869 | | 455 | | | 1751 | 1 | 19010 | 167 | 54 | 76 | | 9 | 384 | | 2143 | | | 432 | 124 | 318 | 874 | |
| Fluoranthene | | 172 | 171 | 3323 | | 105 | 2301 | 4211 | | 1636 | 98 | 42059 | 3761 | 21 | 262 | | | 2038 | | 7592 | 306 | 96 | 101 | | 9 | 738 | | 3156 | 55 | 163 | 99 | | 435 | 1189 | |
| Hexachlorobenzene (HCB) | | 167 | 128 | 1604 | | 216 | 2424 | 4916 | | 958 | 134 | 48178 | 2323 | | 457 | | | 1751 | 1 | 17001 | 454 | 51 | 81 | | 9 | 740 | | 2420 | | 234 | 1176 | | 516 | 1288 | |
| Hexachlorobutadiene (HCBD) | | 167 | 116 | 1450 | | 192 | 2487 | 5423 | | 901 | 134 | 43468 | 2106 | | 420 | | | 2329 | 1 | 14881 | | 90 | | | 9 | 740 | | 2334 | | 66 | 110 | | 318 | 633 | |
| Hexachlorocyclohexane (HCH) | | | | 41 | | 155 | | | | | | 7261 | | | 34 | | | | | 10565 | 211 | | | | 9 | | | 2940 | | | | | 226 | | |
| Chlorfenvinphos | | | 135 | 1187 | | 144 | | 2219 | | 1032 | 225 | 54002 | 1747 | | 171 | | | 1751 | 1 | 12073 | | 87 | | | 9 | 651 | | 1620 | 3 | 115 | 427 | 160 | 563 | 639 | |
| Chlorpyrifos | | 364 | 136 | 2277 | 49 | 124 | 2071 | 2125 | | 1787 | 225 | 52928 | 810 | 2 | 171 | | | 143 | | 19554 | | 69 | | | 9 | 651 | | 1284 | | 141 | 431 | 160 | 64 | 1691 | |
| Isoproturon | | 469 | 122 | 3363 | | 64 | 761 | 8912 | | 1207 | 221 | 53356 | 1362 | 19 | 270 | | | 2041 | | 5695 | | 92 | | | 9 | 548 | | 945 | | 27 | 407 | 207 | 254 | 1685 | |
| Lead | 4 | 13548 | 673 | 4076 | 2508 | 220 | 3103 | 4622 | 472 | 5077 | 5309 | 28915 | 16174 | 483 | 1646 | 10206 | 217 | 2262 | 39 | 49321 | 864 | 44 | 1422 | 1524 | 9 | 1341 | 2146 | 3336 | 279 | 1627 | 354 | 12126 | 1051 | 1010 | |
| Lead dissolved | | 930 | | 2047 | | | | 5273 | | 1136 | | 12321 | 4669 | | 567 | | 13 | | | 7203 | | | | | | 682 | | | | 980 | 2202 | | 267 | 794 | 123 |
| Mercury | 4 | 13399 | 788 | 3206 | 248 | 181 | 2878 | 10483 | 347 | 1742 | 3024 | 28797 | 9654 | 483 | 95 | 10010 | 47 | 2187 | 36 | 43493 | 771 | 44 | 561 | | 9 | 1140 | 1907 | 3132 | 139 | 650 | 342 | 5131 | 1121 | 768 | |
| Mercury dissolved | | 839 | | 1143 | | | | 3760 | | 988 | | 11255 | 2847 | | 530 | | 13 | | | 510 | | | | | | 466 | | | | 595 | 2209 | | 263 | 427 | |
| Naphthalene | | 194 | 148 | 2127 | | 150 | | 5748 | | 2030 | 98 | 41731 | 597 | 20 | 261 | | | 1444 | | 7780 | | 57 | 68 | | 9 | 739 | | 3051 | 30 | 298 | | | 83 | 764 | |
| Nickel | 4 | 13219 | 804 | 4017 | 2112 | 263 | 3384 | 4588 | 43 | 6527 | 5329 | 28572 | 16230 | 483 | 1613 | 10078 | 104 | 2246 | | 47826 | 1046 | 44 | 791 | 1480 | 9 | 1342 | 2150 | 3509 | 3 | 1622 | 350 | 12021 | 1213 | 666 | |
| Nickel dissolved | | 843 | | 2003 | | | | 5187 | | 856 | | 12364 | 4486 | | 555 | | 13 | | | 6909 | | | | | | 681 | | | | 965 | 2179 | | 267 | 468 | 124 |
| Para-tert-octylphenol | | | 116 | 3150 | | | | 910 | | | 178 | 32895 | 253 | | | | | 1751 | | 1234 | 1 | 69 | | | 9 | 611 | | 1097 | | 34 | 267 | | 84 | 628 | |
| Pentachlorobenzene | | 190 | 116 | 2425 | | | | 1144 | | 439 | 225 | 46469 | 177 | | 337 | | | 1751 | 1 | 7103 | | 87 | | | 9 | 739 | | 1868 | | 242 | 110 | | 88 | 1277 | |
| Pentachlorophenol | | 189 | 134 | 3102 | | | | 2954 | | 1599 | | 47029 | 2175 | | 155 | 62 | | 1894 | | 5924 | 650 | 90 | | | 9 | 611 | | 1619 | 3 | | 377 | | 606 | 784 | |
| Simazine | | 14066 | 148 | 3361 | 28 | 211 | 2268 | 9044 | | 1382 | 225 | 53966 | 2764 | 173 | 345 | | | 2042 | 1 | 21422 | 453 | 57 | | | 9 | 693 | | 1906 | | 236 | 1175 | 171 | 574 | 1735 | |
| Σ Cyclodienes | | 744 | 354 | 8317 | 256 | 648 | 7903 | | | | 715 | 189035 | 13151 | | 2599 | 1015 | | 7004 | 4 | 55740 | 633 | 132 | 225 | | 36 | 2910 | | 10444 | | | 3959 | | 869 | 3027 | |
| Σ DDT | | | 36 | 1953 | | 511 | 7230 | | | | 536 | 163626 | 9131 | 1 | 3533 | 1419 | | | 4 | 19064 | 1123 | 33 | 304 | | 9 | 2948 | | 5362 | | | 3529 | | 352 | 3345 | |
| Σ HCH | | | 116 | 1255 | 101 | 27 | 2404 | | | | 134 | 52324 | 3346 | | 1391 | 1418 | | | 1 | 11896 | 498 | 21 | 73 | | | 738 | 307 | 2 | | | 1175 | 129 | 92 | 905 | |
| Σ Benzo(b)fluoranthene, Benzo(k)fluoranthene | | 0 | 348 | 5259 | | 50 | 4487 | | | | 196 | 84796 | 5799 | | 524 | | | 1917 | | 15447 | 425 | 98 | 135 | | 18 | 1476 | | 6821 | | | 198 | | 144 | 1503 | |
| Σ Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene | | 0 | 319 | 4893 | | 50 | 4602 | | | | 196 | 84822 | 5660 | | 523 | | | 1916 | | 15856 | 334 | 120 | 136 | | 18 | 1478 | | 6998 | | | 198 | | 496 | 1503 | |
| Tributyltin cation | | | | 1358 | | | | 2166 | | 67 | | 12210 | 1747 | | | | | | | | | 67 | | | 9 | 187 | | 758 | | | | | 72 | 596 | |
| Trifluralin | | 190 | 116 | 2551 | | 137 | 2112 | 5522 | | 1673 | 225 | 51405 | 1635 | 13 | | | | 1079 | | 19172 | | 63 | | | 9 | 690 | | 1399 | | 61 | 432 | 174 | 563 | 1238 | |
| Trichloromethane | | 519 | 142 | 3306 | | 111 | | 8714 | | 2105 | | 41291 | 3050 | | 474 | 199 | | 249 | | 17449 | 409 | 72 | 18 | | 9 | 574 | | 2670 | | 19 | | | 299 | 1038 | |

## Table 3.3.5 Available river samples for countries within the 2010–2011 period

| Substance | AL | AT | BA | BE | BG | CY | CZ | DE | EE | ES | FI | FR | GB | GR | HR | HU | CH | IE | IS | IT | LT | LU | LV | MK | MT | NL | NO | PL | PT | RO | RS | SE | SI | SK | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-tetrachloroethene | | | 5 | 1042 | | 49 | | 2548 | | 1451 | | 12623 | 1132 | | 474 | | | 249 | | 10611 | 5 | 54 | | | 9 | 285 | | 2407 | | 60 | | | 0 | 276 | |
| 1,2-dichloroethane | | 0 | 116 | 1385 | | 86 | 0 | 2600 | | 1646 | | 12622 | 1760 | | 424 | | | 462 | | 7057 | 0 | 54 | | | 9 | 286 | | 2284 | | 30 | | | 84 | 275 | |
| 4-nonylphenol | | | 116 | 1111 | | | | | | 146 | 0 | 8970 | | | | | | 0 | | 617 | 1 | 51 | | | 9 | | | | | 34 | | | 72 | 245 | |
| Alachlor | | 0 | 115 | 1279 | | 81 | 0 | 2544 | | 1482 | 77 | 16780 | | | 383 | | | 0 | 1 | 10832 | | 51 | | | 9 | 339 | | 1262 | 6 | 287 | 285 | 36 | 84 | 503 | |
| Anthracene | | 0 | 136 | 1328 | | 0 | | 1705 | | 1211 | 23 | 12891 | 529 | 0 | 261 | | | 287 | | 5254 | 21 | 57 | 0 | | 9 | 361 | | 2484 | 3 | 249 | 26 | | 72 | 316 | |
| Atrazine | | 0 | 136 | 1180 | 112 | 66 | 0 | 3069 | | 1877 | 77 | 16650 | 1733 | 0 | 346 | 0 | | 289 | 1 | 11021 | 0 | 18 | | | 9 | 339 | | 1809 | 5 | 353 | 285 | 36 | 84 | 503 | |
| Benzene | | 0 | 117 | 1257 | | 86 | 0 | 2385 | | 1521 | | 12623 | 959 | 0 | 371 | 0 | | 461 | | 9923 | 0 | 54 | 0 | | 9 | 286 | | 2313 | 0 | 93 | | | 96 | 243 | |
| Benzo(a)pyrene | | 0 | 136 | 1368 | | 0 | 0 | 2122 | | 509 | 23 | 12891 | 2880 | | 262 | | | 287 | | 5720 | 19 | 57 | 0 | | 9 | 357 | | 2825 | 0 | 231 | 26 | | 72 | 316 | |
| Cadmium | 4 | 834 | 276 | 1137 | 537 | 81 | 0 | 0 | 91 | 2 | 830 | 603 | 4398 | 0 | 110 | 0 | 78 | 1146 | 24 | 21457 | 13 | 44 | 26 | 422 | 9 | 430 | 527 | 2840 | 9 | 376 | 97 | 1650 | 0 | 0 | |
| Cadmium dissolved | | 829 | | 1726 | | | | 4067 | | 1132 | | 12178 | 3184 | | 564 | | 13 | | | 863 | | | | | | 455 | | | | 824 | 1062 | | 267 | 426 | 47 |
| DDT, p,p' | | 0 | 0 | 756 | | 50 | 0 | 1390 | | 1584 | 47 | 13882 | 3197 | 0 | 416 | 0 | | | 1 | 4463 | 0 | 33 | 18 | | 9 | 361 | | 2464 | | 413 | 285 | | 84 | 493 | |
| Di (2-ethylhexyl) phthalate (DEHP) | | 0 | 120 | 1228 | | 0 | | 828 | | 359 | 0 | 1299 | 176 | | | | | 64 | | 427 | 126 | 51 | | | 9 | 338 | | 1141 | | | | | 72 | 423 | |
| Dichloromethane | | 0 | 116 | 1436 | | 49 | | 2553 | | 1292 | | 12623 | 678 | | 424 | | | 462 | | 6264 | 2 | 54 | | | 9 | 286 | | 2341 | | 43 | | | 84 | 275 | |
| Diuron | | 0 | 136 | 1404 | | 19 | 0 | 3086 | | 1100 | 77 | 16711 | 1234 | 0 | 270 | | | 291 | | 3570 | | 54 | | | 9 | 273 | | 1219 | 4 | 30 | 285 | 36 | 32 | 503 | |
| Endosulfan | | | 117 | 228 | | 50 | 0 | | | | 77 | 13793 | 579 | | 455 | | | 0 | 1 | 11375 | 0 | 33 | 18 | | 9 | 186 | | 1960 | | | 285 | 36 | 84 | 491 | |
| Fluoranthene | | 0 | 136 | 1366 | | 0 | 0 | 1746 | | 1525 | 23 | 12891 | 2894 | 0 | 262 | | | 287 | | 5262 | 10 | 57 | 0 | | 9 | 360 | | 2491 | 1 | 127 | 26 | | 72 | 316 | |
| Hexachlorobenzene (HCB) | | 0 | 116 | 152 | | 77 | 0 | 1975 | | 702 | 47 | 13950 | 1276 | | 457 | | | 0 | 1 | 10299 | 0 | 33 | 18 | | 9 | 361 | | 2244 | | 222 | 285 | | 84 | 493 | |
| Hexachlorobutadiene (HCBD) | | 0 | 116 | 0 | | 86 | 0 | 2060 | | 552 | 47 | 12960 | 1272 | | 420 | | | 462 | 1 | 8097 | | 51 | | | 9 | 361 | | 2164 | | 66 | 110 | | 80 | 275 | |
| Hexachlorocyclohexane (HCH) | | | | 41 | | 50 | | | | | | 0 | | | 34 | | | | | 8492 | 0 | | | | 9 | | | 2480 | | | | | 0 | | |
| Chlorfenvinphos | | | 118 | 604 | | 66 | | 2219 | | 994 | 77 | 16737 | 1074 | | 171 | | | 0 | 1 | 6706 | | 51 | | | 9 | 325 | | 1582 | 0 | 115 | 285 | 36 | 84 | 493 | |
| Chlorpyrifos | | 0 | 119 | 522 | 49 | 46 | 0 | 2125 | | 1625 | 77 | 16748 | 808 | 0 | 171 | | | 143 | | 11104 | | 51 | | | 9 | 325 | | 1247 | | 141 | 285 | 36 | 24 | 493 | |
| Isoproturon | | 0 | 116 | 1391 | | 19 | 0 | 3530 | | 1153 | 77 | 16723 | 1177 | 0 | 270 | | | 290 | | 3006 | | 56 | | | 9 | 273 | | 923 | | 27 | 285 | 36 | 32 | 503 | |
| Lead | 4 | 849 | 318 | 1142 | 748 | 96 | 0 | 0 | 91 | 4652 | 829 | 603 | 4036 | 0 | 106 | 0 | 78 | 1157 | 24 | 16618 | 10 | 44 | 29 | 422 | 9 | 430 | 527 | 2839 | 8 | 400 | 97 | 1650 | 0 | 0 | |
| Lead dissolved | | 835 | | 1749 | | | | 3614 | | 1136 | | 12321 | 3625 | | 567 | | 13 | | | 6751 | | | | | | 455 | | | | 864 | 1053 | | 267 | 416 | 47 |
| Mercury | 4 | 827 | 236 | 809 | 187 | 81 | 0 | 0 | 0 | 1400 | 561 | 574 | 3723 | 0 | 95 | 0 | 26 | 1096 | 24 | 20141 | 13 | 44 | 10 | | 9 | 340 | 524 | 2830 | 9 | 370 | 96 | 521 | 0 | 0 | |
| Mercury dissolved | | 827 | | 845 | | | | 2624 | | 988 | | 11255 | 2847 | | 530 | | 13 | | | 510 | | | | | | 311 | | | | 595 | 1061 | | 263 | 427 | |
| Naphthalene | | 0 | 136 | 1353 | | 86 | | 2328 | | 1618 | 23 | 12891 | 585 | 0 | 261 | | | 462 | | 5153 | | 57 | 0 | | 9 | 361 | | 2454 | 6 | 250 | | | 72 | 316 | |
| Nickel | 4 | 850 | 148 | 1119 | 713 | 148 | 0 | 0 | 19 | 5332 | 830 | 603 | 3679 | 0 | 48 | 0 | 78 | 1144 | | 15668 | 121 | 44 | 28 | 422 | 9 | 430 | 527 | 2867 | 0 | 401 | 97 | 1650 | 0 | 30 | |
| Nickel dissolved | | 843 | | 1719 | | | | 3533 | | 856 | | 12364 | 3568 | | 555 | | 13 | | | 6460 | | | | | | 455 | | | | 845 | 1056 | | 267 | 468 | 47 |
| Para-tert-octylphenol | | | 116 | 1405 | | | | 910 | | | 17 | 14767 | 237 | | | | | 0 | | 1070 | 1 | 51 | | | 9 | 312 | | 1077 | | 34 | 267 | | 72 | 246 | |
| Pentachlorobenzene | | 0 | 116 | 973 | | | | 1144 | | 424 | 77 | 13625 | 177 | | 337 | | | 0 | 1 | 5908 | | 51 | | | 9 | 360 | | 1721 | | 218 | 110 | | 84 | 489 | |
| Pentachlorophenol | | 0 | 116 | 1177 | | | | 758 | | 1309 | | 15387 | 1151 | | 155 | 0 | | 143 | | 3679 | 7 | 51 | | | 9 | 312 | | 1463 | 0 | | 281 | | 124 | 256 | |
| Simazine | | 0 | 136 | 1393 | 28 | 66 | 0 | 3066 | | 1066 | 77 | 16736 | 1679 | 0 | 345 | | | 291 | 1 | 11452 | 0 | 18 | | | 9 | 339 | | 1811 | | 236 | 284 | 36 | 84 | 503 | |
| Σ Cyclodienes | | 0 | 348 | 3905 | 164 | 231 | 0 | | | | 248 | 59273 | 9178 | | 1820 | 0 | | 0 | 4 | 32807 | 0 | 132 | 54 | | 36 | 1435 | | 9464 | | | 1139 | | 336 | 1972 | |
| Σ DDT | | | 0 | 1212 | | 150 | 0 | | | | 188 | 59257 | 7996 | 0 | 1248 | 0 | | | 4 | 10911 | 0 | 33 | 72 | | 9 | 1444 | | 4818 | | | 855 | | 336 | 1972 | |
| Σ HCH | | | 116 | 289 | 101 | 27 | 0 | | | | 47 | 16816 | 2885 | | 433 | 0 | | | 1 | 3535 | 0 | 0 | 18 | | | 360 | 71 | 0 | | | 283 | 36 | 84 | 493 | |
| Σ Benzo(b)fluoranthene, Benzo(k)fluoranthene | | 0 | 272 | 2620 | | 0 | 0 | | | | 46 | 25782 | 5799 | | 524 | | | 573 | | 10905 | 62 | 56 | 0 | | 18 | 720 | | 5630 | | | 52 | | 144 | 632 | |
| Σ Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene | | 0 | 272 | 2247 | | 0 | 0 | | | | 46 | 25782 | 5660 | | 523 | | | 572 | | 11086 | 3 | 78 | 0 | | 18 | 722 | | 5986 | | | 52 | | 144 | 631 | |
| Tributyltin cation | | | | 1034 | | | | 1305 | | 67 | | 6162 | 1644 | | | | | | | | | 51 | | | 9 | 187 | | 748 | | | | | 72 | 224 | |
| Trifluralin | | 0 | 116 | 1049 | | 59 | 0 | 2138 | | 1519 | 77 | 14677 | 640 | 0 | | | | 0 | | 10502 | | 51 | | | 9 | 339 | | 1339 | | 61 | 285 | 36 | 84 | 445 | |
| Trichloromethane | | 0 | 130 | 1258 | | 49 | | 2565 | | 1627 | | 12623 | 1736 | | 474 | 0 | | 249 | | 9693 | 0 | 54 | 0 | | 9 | 286 | | 2326 | | 19 | | | 84 | 275 | |

## Table 3.3.6 Available river stations with data within the 2002–2011 period

| Substance | AL | AT | BA | BE | BG | CH | CY | CZ | DE | DK | EE | ES | FI | FR | GB | GR | HR | HU | IE | IS | IT | LI | LT | LU | LV | ME | MK | NL | NO | PL | PT | RO | RS | SE | SI | SK | TR | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-tetrachloroethene | 0 | 0 | 5 | 83 | 0 | 0 | 22 | 0 | 172 | 0 | 0 | 292 | 0 | 1472 | 116 | 0 | 29 | 0 | 25 | 0 | 871 | 0 | 52 | 3 | 0 | 0 | 0 | 13 | 0 | 234 | 0 | 8 | 0 | 0 | 0 | 38 | 0 | 0 |
| 1,2-dichloroethane | 0 | 33 | 10 | 87 | 0 | 0 | 22 | 63 | 190 | 0 | 0 | 302 | 0 | 1461 | 363 | 0 | 27 | 0 | 177 | 0 | 966 | 0 | 49 | 3 | 0 | 0 | 0 | 13 | 0 | 243 | 0 | 4 | 0 | 0 | 19 | 41 | 0 | 0 |
| 4-nonylphenol | 0 | 0 | 10 | 87 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 10 | 1038 | 0 | 0 | 0 | 0 | 179 | 0 | 90 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 7 | 47 | 0 | 0 |
| Alachlor | 0 | 379 | 11 | 89 | 0 | 0 | 32 | 58 | 125 | 0 | 0 | 331 | 9 | 1540 | 0 | 0 | 26 | 0 | 179 | 1 | 1013 | 0 | 0 | 3 | 0 | 0 | 0 | 14 | 0 | 140 | 19 | 39 | 66 | 2 | 32 | 45 | 0 | 0 |
| Anthracene | 0 | 24 | 26 | 90 | 0 | 0 | 14 | 0 | 163 | 0 | 0 | 302 | 9 | 1450 | 145 | 20 | 16 | 0 | 204 | 0 | 595 | 0 | 55 | 3 | 16 | 0 | 0 | 15 | 0 | 269 | 17 | 36 | 3 | 0 | 24 | 51 | 0 | 0 |
| Atrazine | 0 | 379 | 26 | 89 | 13 | 0 | 32 | 55 | 194 | 0 | 0 | 375 | 9 | 1541 | 143 | 73 | 25 | 199 | 204 | 1 | 983 | 0 | 49 | 3 | 0 | 0 | 0 | 14 | 0 | 196 | 19 | 37 | 69 | 3 | 32 | 51 | 0 | 0 |
| Benzene | 0 | 33 | 20 | 87 | 0 | 0 | 22 | 63 | 176 | 0 | 0 | 298 | 0 | 1468 | 315 | 19 | 24 | 82 | 177 | 0 | 805 | 0 | 49 | 3 | 8 | 0 | 0 | 13 | 0 | 252 | 3 | 19 | 0 | 0 | 25 | 40 | 0 | 0 |
| Benzo(a)pyrene | 0 | 19 | 26 | 90 | 0 | 0 | 9 | 59 | 169 | 0 | 0 | 218 | 9 | 1464 | 237 | 0 | 16 | 0 | 81 | 0 | 649 | 0 | 52 | 3 | 16 | 0 | 0 | 15 | 0 | 305 | 19 | 35 | 30 | 0 | 23 | 51 | 0 | 0 |
| Cadmium | 4 | 384 | 49 | 66 | 115 | 5 | 32 | 67 | 219 | 0 | 57 | 173 | 65 | 1462 | 559 | 72 | 36 | 253 | 146 | 3 | 1906 | 0 | 73 | 3 | 126 | 0 | 20 | 29 | 53 | 327 | 50 | 83 | 22 | 170 | 31 | 46 | 0 | 0 |
| Cadmium dissolved | 0 | 66 | 0 | 90 | 0 | 1 | 0 | 0 | 200 | 0 | 0 | 294 | 0 | 786 | 240 | 0 | 31 | 0 | 0 | 0 | 110 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 73 | 73 | 0 | 19 | 40 | 0 | 48 |
| Chlorfenvinphos | 0 | 0 | 21 | 69 | 0 | 0 | 21 | 0 | 111 | 0 | 0 | 214 | 9 | 1527 | 94 | 0 | 15 | 0 | 179 | 1 | 739 | 0 | 0 | 3 | 0 | 0 | 0 | 14 | 0 | 217 | 2 | 15 | 66 | 2 | 32 | 32 | 0 | 0 |
| Chlorpyrifos | 0 | 32 | 21 | 54 | 11 | 0 | 21 | 57 | 105 | 0 | 0 | 337 | 9 | 1525 | 46 | 2 | 15 | 0 | 18 | 0 | 904 | 0 | 0 | 3 | 0 | 0 | 0 | 14 | 0 | 204 | 0 | 19 | 66 | 2 | 9 | 51 | 0 | 0 |
| DDT, p,p' | 0 | 0 | 12 | 87 | 0 | 0 | 22 | 65 | 137 | 0 | 0 | 381 | 8 | 1243 | 378 | 34 | 39 | 118 | 0 | 1 | 542 | 0 | 89 | 3 | 22 | 0 | 0 | 15 | 0 | 251 | 0 | 44 | 69 | 0 | 26 | 46 | 0 | 0 |
| Di (2-ethylhexyl) phthalate (DEHP) | 0 | 32 | 20 | 82 | 0 | 0 | 19 | 0 | 52 | 0 | 0 | 76 | 10 | 1422 | 61 | 0 | 0 | 0 | 73 | 0 | 221 | 0 | 16 | 3 | 0 | 0 | 0 | 14 | 0 | 205 | 0 | 0 | 0 | 0 | 8 | 53 | 0 | 0 |
| Dichloromethane | 0 | 33 | 11 | 87 | 0 | 0 | 22 | 0 | 192 | 0 | 0 | 276 | 0 | 1461 | 265 | 0 | 27 | 0 | 141 | 0 | 501 | 0 | 49 | 3 | 0 | 0 | 0 | 13 | 0 | 241 | 0 | 5 | 0 | 0 | 25 | 38 | 0 | 0 |
| Diuron | 0 | 44 | 26 | 89 | 0 | 0 | 19 | 38 | 201 | 0 | 0 | 160 | 9 | 1543 | 89 | 19 | 24 | 0 | 204 | 0 | 565 | 0 | 0 | 3 | 0 | 0 | 0 | 11 | 0 | 144 | 18 | 6 | 66 | 3 | 20 | 51 | 0 | 0 |
| Endosulfan | 0 | 0 | 21 | 47 | 0 | 0 | 22 | 61 | 0 | 0 | 0 | 0 | 9 | 1309 | 55 | 0 | 29 | 0 | 179 | 1 | 847 | 0 | 15 | 3 | 22 | 0 | 0 | 15 | 0 | 188 | 0 | 0 | 66 | 3 | 20 | 42 | 0 | 0 |
| Fluoranthene | 0 | 19 | 26 | 90 | 0 | 0 | 14 | 59 | 145 | 0 | 0 | 358 | 9 | 1464 | 252 | 20 | 16 | 0 | 204 | 0 | 591 | 0 | 50 | 3 | 16 | 0 | 0 | 15 | 0 | 276 | 15 | 29 | 30 | 0 | 27 | 51 | 0 | 0 |
| Hexachlorobenzene (HCB) | 0 | 23 | 19 | 47 | 0 | 0 | 29 | 65 | 160 | 0 | 0 | 231 | 8 | 1466 | 161 | 0 | 28 | 0 | 179 | 1 | 911 | 0 | 49 | 3 | 22 | 0 | 0 | 15 | 0 | 238 | 0 | 29 | 69 | 0 | 30 | 46 | 0 | 0 |
| Hexachlorobutadiene (HCBD) | 0 | 23 | 10 | 47 | 0 | 0 | 24 | 62 | 172 | 0 | 0 | 205 | 8 | 1456 | 158 | 0 | 26 | 0 | 232 | 1 | 765 | 0 | 0 | 3 | 0 | 0 | 0 | 15 | 0 | 226 | 0 | 13 | 61 | 0 | 21 | 39 | 0 | 0 |
| Hexachlorocyclohexane (HCH) | 0 | 0 | 0 | 28 | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 718 | 0 | 0 | 17 | 0 | 0 | 0 | 483 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 268 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 0 |
| Isoproturon | 0 | 44 | 11 | 89 | 0 | 0 | 19 | 42 | 214 | 0 | 0 | 174 | 9 | 1537 | 75 | 19 | 24 | 0 | 204 | 0 | 371 | 0 | 0 | 3 | 0 | 0 | 0 | 11 | 0 | 109 | 0 | 5 | 66 | 3 | 20 | 51 | 0 | 0 |
| Lead | 4 | 384 | 47 | 66 | 116 | 5 | 32 | 65 | 134 | 0 | 56 | 797 | 67 | 1462 | 504 | 72 | 36 | 253 | 146 | 4 | 1608 | 0 | 73 | 3 | 128 | 0 | 20 | 29 | 53 | 290 | 51 | 89 | 22 | 170 | 31 | 45 | 0 | 0 |
| Lead dissolved | 0 | 66 | 0 | 90 | 0 | 1 | 0 | 0 | 171 | 0 | 0 | 257 | 0 | 786 | 360 | 0 | 31 | 0 | 0 | 0 | 499 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 74 | 73 | 0 | 19 | 40 | 0 | 48 |
| Mercury | 4 | 291 | 47 | 65 | 44 | 3 | 30 | 69 | 204 | 0 | 19 | 97 | 33 | 1459 | 479 | 72 | 9 | 254 | 146 | 3 | 1760 | 0 | 62 | 3 | 88 | 0 | 0 | 18 | 46 | 328 | 26 | 52 | 22 | 109 | 31 | 47 | 0 | 0 |
| Mercury dissolved | 0 | 66 | 0 | 59 | 0 | 1 | 0 | 0 | 142 | 0 | 0 | 268 | 0 | 774 | 199 | 0 | 30 | 0 | 0 | 0 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 55 | 73 | 0 | 19 | 28 | 0 | 0 |
| Naphthalene | 0 | 24 | 17 | 89 | 0 | 0 | 23 | 0 | 175 | 0 | 0 | 343 | 9 | 1447 | 135 | 20 | 16 | 0 | 177 | 0 | 601 | 0 | 0 | 3 | 16 | 0 | 0 | 15 | 0 | 266 | 18 | 38 | 0 | 0 | 12 | 49 | 0 | 0 |
| Nickel | 4 | 291 | 48 | 66 | 112 | 3 | 31 | 70 | 134 | 0 | 14 | 807 | 70 | 1447 | 508 | 72 | 36 | 252 | 146 | 0 | 1590 | 0 | 79 | 3 | 93 | 0 | 20 | 29 | 53 | 372 | 1 | 84 | 22 | 170 | 31 | 45 | 0 | 0 |
| Nickel dissolved | 0 | 66 | 0 | 90 | 0 | 1 | 0 | 0 | 170 | 0 | 0 | 158 | 0 | 786 | 361 | 0 | 31 | 0 | 0 | 0 | 498 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 77 | 73 | 0 | 19 | 27 | 0 | 48 |
| Para-tert-octylphenol | 0 | 0 | 10 | 87 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 9 | 1231 | 31 | 0 | 0 | 0 | 179 | 0 | 168 | 0 | 1 | 3 | 0 | 0 | 0 | 14 | 0 | 196 | 0 | 3 | 65 | 0 | 7 | 36 | 0 | 0 |
| Pentachlorobenzene | 0 | 27 | 10 | 87 | 0 | 0 | 0 | 0 | 62 | 0 | 0 | 173 | 9 | 1462 | 24 | 0 | 23 | 0 | 179 | 1 | 460 | 0 | 0 | 3 | 0 | 0 | 0 | 15 | 0 | 182 | 0 | 32 | 61 | 0 | 7 | 45 | 0 | 0 |
| Pentachlorophenol | 0 | 27 | 19 | 87 | 0 | 0 | 0 | 0 | 128 | 0 | 0 | 313 | 0 | 1462 | 154 | 0 | 15 | 5 | 197 | 0 | 318 | 0 | 67 | 3 | 0 | 0 | 0 | 14 | 0 | 167 | 2 | 0 | 66 | 0 | 26 | 36 | 0 | 0 |
| Σ Cyclodienes | 0 | 23 | 11 | 84 | 17 | 0 | 29 | 61 | 0 | 0 | 0 | 0 | 9 | 1489 | 211 | 0 | 38 | 84 | 179 | 1 | 878 | 0 | 15 | 3 | 22 | 0 | 0 | 15 | 0 | 263 | 0 | 0 | 69 | 0 | 29 | 44 | 0 | 0 |
| Σ DDT | 0 | 0 | 12 | 84 | 0 | 0 | 22 | 64 | 0 | 0 | 0 | 0 | 8 | 1213 | 370 | 1 | 39 | 119 | 0 | 1 | 535 | 0 | 63 | 3 | 22 | 0 | 0 | 15 | 0 | 277 | 0 | 0 | 69 | 0 | 7 | 45 | 0 | 0 |
| Σ HCH | 0 | 0 | 10 | 46 | 18 | 0 | 7 | 64 | 0 | 0 | 0 | 0 | 8 | 1503 | 179 | 0 | 39 | 143 | 0 | 1 | 704 | 0 | 63 | 3 | 21 | 0 | 0 | 15 | 11 | 2 | 0 | 0 | 69 | 3 | 7 | 45 | 0 | 0 |
| Σ Benzo(b)fluoranthene, Benzo(k)fluoranthene | 0 | 0 | 26 | 85 | 0 | 0 | 9 | 59 | 0 | 0 | 0 | 0 | 9 | 1461 | 224 | 0 | 16 | 0 | 81 | 0 | 644 | 0 | 26 | 3 | 10 | 0 | 0 | 15 | 0 | 302 | 0 | 0 | 30 | 0 | 6 | 49 | 0 | 0 |
| Σ Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene | 0 | 0 | 26 | 85 | 0 | 0 | 9 | 59 | 0 | 0 | 0 | 0 | 9 | 1461 | 220 | 0 | 16 | 0 | 81 | 0 | 643 | 0 | 14 | 3 | 10 | 0 | 0 | 15 | 0 | 301 | 0 | 0 | 30 | 0 | 25 | 49 | 0 | 0 |
| Simazine | 0 | 379 | 26 | 89 | 14 | 0 | 33 | 55 | 199 | 0 | 0 | 242 | 9 | 1541 | 137 | 34 | 19 | 0 | 204 | 1 | 1054 | 0 | 49 | 3 | 0 | 0 | 0 | 14 | 0 | 196 | 0 | 34 | 69 | 3 | 32 | 57 | 0 | 0 |
| Tributyltin cation | 0 | 0 | 0 | 82 | 0 | 0 | 0 | 0 | 105 | 0 | 0 | 13 | 0 | 1127 | 292 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 14 | 0 | 178 | 0 | 0 | 0 | 0 | 6 | 35 | 0 | 0 |
| Trichloromethane | 0 | 33 | 26 | 87 | 0 | 0 | 22 | 0 | 191 | 0 | 0 | 296 | 0 | 1461 | 345 | 0 | 29 | 21 | 25 | 0 | 870 | 0 | 49 | 3 | 2 | 0 | 0 | 13 | 0 | 256 | 0 | 5 | 0 | 0 | 22 | 40 | 0 | 0 |
| Trifluralin | 0 | 27 | 10 | 89 | 0 | 0 | 21 | 58 | 177 | 0 | 0 | 330 | 9 | 1533 | 97 | 13 | 0 | 0 | 123 | 0 | 909 | 0 | 0 | 3 | 0 | 0 | 0 | 14 | 0 | 211 | 0 | 10 | 66 | 3 | 32 | 44 | 0 | 0 |

## Table 3.3.7 Available river stations with data within the 2010–2011 period

| Substance | AL | AT | BA | BE | BG | CH | CY | CZ | DE | DK | EE | ES | FI | FR | GB | GR | HR | HU | IE | IS | IT | LI | LT | LU | LV | ME | MK | NL | NO | PL | PT | RO | RS | SE | SI | SK | TR | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-tetrachloroethene | 0 | 0 | 5 | 68 | 0 | 0 | 12 | 0 | 122 | 0 | 0 | 278 | 0 | 786 | 99 | 0 | 29 | 0 | 25 | 0 | 539 | 0 | 3 | 3 | 0 | 0 | 0 | 10 | 0 | 223 | 0 | 8 | 0 | 0 | 0 | 22 | 0 | 0 |
| 1,2-dichloroethane | 0 | 0 | 10 | 78 | 0 | 0 | 12 | 0 | 121 | 0 | 0 | 288 | 0 | 786 | 330 | 0 | 27 | 0 | 52 | 0 | 504 | 0 | 0 | 3 | 0 | 0 | 0 | 10 | 0 | 221 | 0 | 4 | 0 | 0 | 7 | 22 | 0 | 0 |
| 4-nonylphenol | 0 | 0 | 10 | 81 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 608 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 6 | 20 | 0 | 0 |
| Alachlor | 0 | 0 | 10 | 78 | 0 | 0 | 13 | 0 | 125 | 0 | 0 | 329 | 5 | 1109 | 0 | 0 | 26 | 0 | 0 | 1 | 642 | 0 | 0 | 3 | 0 | 0 | 0 | 13 | 0 | 127 | 4 | 36 | 65 | 2 | 14 | 30 | 0 | 0 |
| Anthracene | 0 | 0 | 17 | 84 | 0 | 0 | 0 | 0 | 104 | 0 | 0 | 301 | 6 | 786 | 130 | 0 | 16 | 0 | 25 | 0 | 482 | 0 | 12 | 3 | 0 | 0 | 0 | 14 | 0 | 232 | 3 | 36 | 3 | 0 | 6 | 23 | 0 | 0 |
| Atrazine | 0 | 0 | 17 | 83 | 13 | 0 | 13 | 0 | 144 | 0 | 0 | 373 | 5 | 1109 | 87 | 0 | 20 | 0 | 25 | 1 | 635 | 0 | 0 | 3 | 0 | 0 | 0 | 13 | 0 | 177 | 3 | 37 | 65 | 2 | 14 | 30 | 0 | 0 |
| Benzene | 0 | 0 | 11 | 75 | 0 | 0 | 12 | 0 | 114 | 0 | 0 | 284 | 0 | 786 | 274 | 0 | 24 | 0 | 52 | 0 | 582 | 0 | 0 | 3 | 0 | 0 | 0 | 10 | 0 | 215 | 0 | 19 | 0 | 0 | 8 | 21 | 0 | 0 |
| Benzo(a)pyrene | 0 | 0 | 17 | 84 | 0 | 0 | 0 | 0 | 142 | 0 | 0 | 196 | 6 | 786 | 212 | 0 | 16 | 0 | 25 | 0 | 528 | 0 | 10 | 3 | 0 | 0 | 0 | 14 | 0 | 265 | 0 | 35 | 3 | 0 | 6 | 23 | 0 | 0 |
| Cadmium | 4 | 66 | 30 | 59 | 51 | 3 | 18 | 0 | 0 | 0 | 53 | 2 | 43 | 60 | 352 | 0 | 9 | 0 | 68 | 3 | 1031 | 0 | 9 | 3 | 5 | 0 | 20 | 14 | 46 | 261 | 3 | 38 | 8 | 72 | 0 | 0 | 0 | 0 |
| Cadmium dissolved | 0 | 66 | 0 | 90 | 0 | 1 | 0 | 0 | 191 | 0 | 0 | 294 | 0 | 786 | 240 | 0 | 31 | 0 | 0 | 0 | 110 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 70 | 72 | 0 | 19 | 28 | 0 | 47 |
| Chlorfenvinphos | 0 | 0 | 12 | 54 | 0 | 0 | 13 | 0 | 111 | 0 | 0 | 213 | 5 | 1108 | 55 | 0 | 15 | 0 | 0 | 1 | 508 | 0 | 0 | 3 | 0 | 0 | 0 | 13 | 0 | 206 | 0 | 15 | 65 | 2 | 14 | 29 | 0 | 0 |
| Chlorpyrifos | 0 | 0 | 12 | 35 | 11 | 0 | 13 | 0 | 105 | 0 | 0 | 335 | 5 | 1108 | 44 | 0 | 15 | 0 | 18 | 0 | 668 | 0 | 0 | 3 | 0 | 0 | 0 | 13 | 0 | 193 | 0 | 19 | 65 | 2 | 6 | 29 | 0 | 0 |
| DDT, p,p' | 0 | 0 | 0 | 68 | 0 | 0 | 13 | 0 | 80 | 0 | 0 | 381 | 5 | 834 | 334 | 0 | 28 | 0 | 0 | 1 | 384 | 0 | 0 | 3 | 3 | 0 | 0 | 14 | 0 | 238 | 0 | 43 | 65 | 0 | 7 | 29 | 0 | 0 |
| Di (2-ethylhexyl) phthalate (DEHP) | 0 | 0 | 11 | 82 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 76 | 0 | 233 | 54 | 0 | 0 | 0 | 17 | 0 | 110 | 0 | 16 | 3 | 0 | 0 | 0 | 13 | 0 | 193 | 0 | 0 | 0 | 0 | 6 | 28 | 0 | 0 |
| Dichloromethane | 0 | 0 | 10 | 81 | 0 | 0 | 12 | 0 | 122 | 0 | 0 | 262 | 0 | 786 | 254 | 0 | 27 | 0 | 52 | 0 | 387 | 0 | 2 | 3 | 0 | 0 | 0 | 10 | 0 | 222 | 0 | 5 | 0 | 0 | 7 | 22 | 0 | 0 |
| Diuron | 0 | 0 | 17 | 83 | 0 | 0 | 6 | 0 | 147 | 0 | 0 | 154 | 5 | 1108 | 73 | 0 | 24 | 0 | 25 | 0 | 331 | 0 | 0 | 3 | 0 | 0 | 0 | 10 | 0 | 127 | 2 | 6 | 65 | 2 | 6 | 30 | 0 | 0 |
| Endosulfan | 0 | 0 | 11 | 23 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 5 | 835 | 36 | 0 | 29 | 0 | 0 | 1 | 628 | 0 | 0 | 3 | 3 | 0 | 0 | 14 | 0 | 175 | 0 | 0 | 65 | 2 | 7 | 29 | 0 | 0 |
| Fluoranthene | 0 | 0 | 17 | 84 | 0 | 0 | 0 | 0 | 106 | 0 | 0 | 357 | 6 | 786 | 215 | 0 | 16 | 0 | 25 | 0 | 483 | 0 | 5 | 3 | 0 | 0 | 0 | 14 | 0 | 232 | 1 | 26 | 3 | 0 | 6 | 23 | 0 | 0 |
| Hexachlorobenzene (HCB) | 0 | 0 | 10 | 14 | 0 | 0 | 13 | 0 | 124 | 0 | 0 | 215 | 5 | 841 | 115 | 0 | 28 | 0 | 0 | 1 | 659 | 0 | 0 | 3 | 3 | 0 | 0 | 14 | 0 | 218 | 0 | 29 | 65 | 0 | 7 | 29 | 0 | 0 |
| Hexachlorobutadiene (HCBD) | 0 | 0 | 10 | 0 | 0 | 0 | 12 | 0 | 106 | 0 | 0 | 167 | 5 | 799 | 115 | 0 | 26 | 0 | 52 | 1 | 474 | 0 | 0 | 3 | 0 | 0 | 0 | 14 | 0 | 207 | 0 | 13 | 61 | 0 | 7 | 22 | 0 | 0 |
| Hexachlorocyclohexane (HCH) | 0 | 0 | 0 | 28 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 438 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 231 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Isoproturon | 0 | 0 | 10 | 83 | 0 | 0 | 6 | 0 | 184 | 0 | 0 | 168 | 5 | 1108 | 67 | 0 | 24 | 0 | 25 | 0 | 228 | 0 | 0 | 3 | 0 | 0 | 0 | 10 | 0 | 97 | 0 | 5 | 65 | 2 | 6 | 30 | 0 | 0 |
| Lead | 4 | 66 | 30 | 59 | 64 | 3 | 18 | 0 | 0 | 0 | 53 | 796 | 42 | 60 | 329 | 0 | 9 | 0 | 67 | 3 | 694 | 0 | 9 | 3 | 5 | 0 | 20 | 14 | 46 | 262 | 3 | 38 | 8 | 72 | 0 | 0 | 0 | 0 |
| Lead dissolved | 0 | 66 | 0 | 90 | 0 | 1 | 0 | 0 | 153 | 0 | 0 | 257 | 0 | 786 | 334 | 0 | 31 | 0 | 0 | 0 | 499 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 68 | 72 | 0 | 19 | 26 | 0 | 47 |
| Mercury | 4 | 66 | 30 | 36 | 29 | 1 | 18 | 0 | 0 | 0 | 0 | 73 | 27 | 61 | 227 | 0 | 9 | 0 | 69 | 3 | 1033 | 0 | 10 | 3 | 5 | 0 | 0 | 14 | 46 | 261 | 3 | 35 | 8 | 54 | 0 | 0 | 0 | 0 |
| Mercury dissolved | 0 | 66 | 0 | 36 | 0 | 1 | 0 | 0 | 135 | 0 | 0 | 268 | 0 | 774 | 199 | 0 | 30 | 0 | 0 | 0 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 55 | 72 | 0 | 19 | 28 | 0 | 0 |
| Naphthalene | 0 | 0 | 17 | 84 | 0 | 0 | 12 | 0 | 112 | 0 | 0 | 329 | 6 | 786 | 135 | 0 | 16 | 0 | 52 | 0 | 457 | 0 | 0 | 3 | 0 | 0 | 0 | 14 | 0 | 232 | 4 | 37 | 0 | 0 | 6 | 23 | 0 | 0 |
| Nickel | 4 | 66 | 21 | 59 | 58 | 3 | 18 | 0 | 0 | 0 | 8 | 784 | 43 | 60 | 308 | 0 | 5 | 0 | 67 | 0 | 668 | 0 | 23 | 3 | 5 | 0 | 20 | 14 | 46 | 259 | 0 | 38 | 8 | 72 | 0 | 3 | 0 | 0 |
| Nickel dissolved | 0 | 66 | 0 | 90 | 0 | 1 | 0 | 0 | 152 | 0 | 0 | 158 | 0 | 786 | 334 | 0 | 31 | 0 | 0 | 0 | 498 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 70 | 72 | 0 | 19 | 27 | 0 | 47 |
| Para-tert-octylphenol | 0 | 0 | 10 | 79 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 5 | 926 | 31 | 0 | 0 | 0 | 0 | 0 | 144 | 0 | 1 | 3 | 0 | 0 | 0 | 13 | 0 | 185 | 0 | 3 | 65 | 0 | 6 | 20 | 0 | 0 |
| Pentachlorobenzene | 0 | 0 | 10 | 69 | 0 | 0 | 0 | 0 | 62 | 0 | 0 | 168 | 5 | 816 | 24 | 0 | 23 | 0 | 0 | 1 | 421 | 0 | 0 | 3 | 0 | 0 | 0 | 14 | 0 | 165 | 0 | 28 | 61 | 0 | 7 | 29 | 0 | 0 |
| Pentachlorophenol | 0 | 0 | 10 | 76 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 300 | 0 | 943 | 91 | 0 | 15 | 0 | 18 | 0 | 232 | 0 | 4 | 3 | 0 | 0 | 0 | 13 | 0 | 148 | 0 | 0 | 65 | 0 | 10 | 19 | 0 | 0 |
| Σ Cyclodienes | 0 | 0 | 10 | 70 | 17 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 5 | 969 | 135 | 0 | 29 | 0 | 0 | 1 | 600 | 0 | 0 | 3 | 3 | 0 | 0 | 14 | 0 | 240 | 0 | 0 | 65 | 0 | 7 | 29 | 0 | 0 |
| Σ DDT | 0 | 0 | 0 | 68 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 5 | 974 | 334 | 0 | 28 | 0 | 0 | 1 | 378 | 0 | 0 | 3 | 3 | 0 | 0 | 14 | 0 | 251 | 0 | 0 | 65 | 0 | 7 | 29 | 0 | 0 |
| Σ HCH | 0 | 0 | 10 | 27 | 18 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 5 | 1110 | 141 | 0 | 28 | 0 | 0 | 1 | 347 | 0 | 0 | 0 | 3 | 0 | 0 | 14 | 10 | 0 | 0 | 0 | 64 | 2 | 7 | 29 | 0 | 0 |
| Σ Benzo(b)fluoranthene, Benzo(k)fluoranthene | 0 | 0 | 17 | 84 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 786 | 224 | 0 | 16 | 0 | 25 | 0 | 522 | 0 | 17 | 3 | 0 | 0 | 0 | 14 | 0 | 266 | 0 | 0 | 3 | 0 | 6 | 23 | 0 | 0 |
| Σ Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene | 0 | 0 | 17 | 84 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 786 | 220 | 0 | 16 | 0 | 25 | 0 | 516 | 0 | 2 | 3 | 0 | 0 | 0 | 14 | 0 | 275 | 0 | 0 | 3 | 0 | 6 | 23 | 0 | 0 |
| Simazine | 0 | 0 | 17 | 83 | 14 | 0 | 13 | 0 | 144 | 0 | 0 | 224 | 5 | 1109 | 84 | 0 | 19 | 0 | 25 | 1 | 706 | 0 | 0 | 3 | 0 | 0 | 0 | 13 | 0 | 177 | 0 | 34 | 65 | 2 | 14 | 30 | 0 | 0 |
| Tributyltin cation | 0 | 0 | 0 | 75 | 0 | 0 | 0 | 0 | 97 | 0 | 0 | 13 | 0 | 689 | 279 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 14 | 0 | 168 | 0 | 0 | 0 | 0 | 6 | 19 | 0 | 0 |
| Trichloromethane | 0 | 0 | 17 | 75 | 0 | 0 | 12 | 0 | 122 | 0 | 0 | 282 | 0 | 786 | 317 | 0 | 29 | 0 | 25 | 0 | 547 | 0 | 0 | 3 | 0 | 0 | 0 | 10 | 0 | 225 | 0 | 5 | 0 | 0 | 7 | 22 | 0 | 0 |
| Trifluralin | 0 | 0 | 10 | 76 | 0 | 0 | 13 | 0 | 116 | 0 | 0 | 328 | 5 | 946 | 49 | 0 | 0 | 0 | 0 | 0 | 625 | 0 | 0 | 3 | 0 | 0 | 0 | 13 | 0 | 198 | 0 | 10 | 65 | 2 | 14 | 29 | 0 | 0 |

## 3.4 Lakes

The number of samples and monitoring stations has increased substantially from 2002 to 2011. Reported data on pesticides and metals were most abundant, and the data stretches back for the longest amount of time, more or less continuously from 2002. Measurements of the selected hazardous substances in lakes have been conducted in several of the countries, but as shown in the following tables, high variations between the countries in the numbers of substances reported, length of time the monitoring has been performed, and numbers of stations included are depicted. A temporal availability of lakes SoE data for selected hazardous substances in the period 2002–2011 is shown in Tables 3.4.1 to 3.4.7. Most of the substances have been reported for 10 years throughout Europe.

**Table 3.4.1 Temporal availability of SoE lake data for selected hazardous substances in the 2002–2011 period.**

| Substance | No. of years | Period |
|---|---|---|
| 1,1,2,2-tetrachloroethene | 10 | 2002-2011 |
| 1,2-dichloroethane | 9 | 2003-2011 |
| 4-nonylphenol | 5 | 2006-2011 |
| Alachlor | 10 | 2002-2011 |
| Anthracene | 7 | 2003-2011 |
| Atrazine | 10 | 2002-2011 |
| Benzene | 7 | 2004-2011 |
| Benzo(a)pyrene | 9 | 2003-2011 |
| Cadmium | 10 | 2002-2011 |
| Cadmium dissolved | 3 | 2009-2011 |
| Chlorfenvinphos | 10 | 2002-2011 |
| Chlorpyrifos | 10 | 2002-2011 |
| DDT, p,p' | 10 | 2002-2011 |
| Di (2-ethylhexyl) phthalate (DEHP) | 5 | 2006-2011 |
| Dichloromethane | 5 | 2007-2011 |
| Diuron | 10 | 2002-2011 |
| Endosulfan | 6 | 2002-2011 |
| Fluoranthene | 9 | 2003-2011 |
| Hexachlorobenzene (HCB) | 10 | 2002-2011 |
| Hexachlorobutadiene (HCBD) | 6 | 2005-2011 |
| Hexachlorocyclohexane (HCH) | 6 | 2002-2011 |
| Isoproturon | 9 | 2003-2011 |
| Lead | 10 | 2002-2011 |
| Lead dissolved | 3 | 2009-2011 |
| Mercury | 10 | 2002-2011 |
| Mercury dissolved | 3 | 2009-2011 |
| Naphthalene | 5 | 2007-2011 |
| Nickel | 10 | 2002-2011 |
| Nickel dissolved | 3 | 2009-2011 |
| Para-tert-octylphenol | 5 | 2007-2011 |
| Pentachlorobenzene | 5 | 2007-2011 |
| Pentachlorophenol | 10 | 2002-2011 |
| ∑ Cyclodienes | 10 | 2002-2011 |
| ∑ DDT | 10 | 2002-2011 |
| ∑ HCH | 10 | 2002-2011 |
| ∑ Benzo(b)fluoranthene, Benzo(k)fluoranthene | 9 | 2003-2011 |
| ∑ Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene | 9 | 2003-2011 |
| Simazine | 10 | 2002-2011 |
| Tributyltin cation | 2 | 2010-2011 |
| Trichloromethane | 9 | 2003-2011 |
| Trifluralin | 10 | 2002-2011 |

**Table 3.4.2 No. of years with available lake data for countries within the 2002–2011 period**

| Substance | BA | BE | BG | CH | CY | DE | EE | ES | FI | FR | GB | GR | HR | HU | IE | IS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-tetrachloroethene | | 3 | | | 2 | | | 2 | | 2 | | | 2 | | 2 | |
| 1,2-dichloroethane | | 3 | | | 4 | | | 2 | | 2 | 6 | | 3 | | 2 | |
| 4-nonylphenol | | 2 | | | | | | 2 | 1 | 3 | | | | | | |
| Alachlor | | 3 | | | 10 | | | 2 | 1 | 3 | | | 3 | | | |
| Anthracene | | 3 | | | 3 | | | 2 | | 3 | 2 | | 1 | | 1 | |
| Atrazine | | 3 | 1 | 4 | 8 | | | 2 | 1 | 5 | 6 | 3 | 2 | 4 | 1 | |
| Benzene | | 3 | | | 4 | | | 2 | | 3 | 5 | | 1 | 1 | 3 | |
| Benzo(a)pyrene | | 3 | | | 3 | 2 | | 2 | | 3 | 2 | | 1 | | 1 | |
| Cadmium | 4 | 3 | 6 | | 8 | 1 | 10 | | 10 | 3 | 9 | 1 | 7 | 5 | 3 | 4 |
| Cadmium dissolved | | 2 | | | | | | 1 | | 1 | 2 | | 2 | | | |
| Chlorfenvinphos | | | | | 4 | | | 2 | 1 | 3 | 6 | | 3 | | | |
| Chlorpyrifos | | 3 | 1 | | 3 | | | 2 | 1 | 3 | 5 | | 3 | | 2 | |
| DDT, p,p' | | 1 | | | 2 | | | 2 | 1 | 2 | 4 | | 7 | 1 | | |
| Di (2-ethylhexyl) phthalate (DEHP) | 1 | 2 | | | 2 | 2 | | 2 | 1 | 1 | 2 | | | | 2 | |
| Dichloromethane | | 3 | | | 3 | | | 2 | | 2 | 1 | | 3 | | 3 | |
| Diuron | | 3 | | | 7 | | | 2 | 1 | 4 | 8 | | 1 | | 1 | |
| Endosulfan | | 3 | | | 3 | | | | 1 | 2 | 5 | | 2 | | | |
| Fluoranthene | | 3 | | | 3 | 3 | | 2 | | 3 | 3 | | 1 | | 1 | |
| Hexachlorobenzene (HCB) | | 1 | | | 7 | | | 1 | 1 | 2 | 1 | | 3 | | | |
| Hexachlorobutadiene (HCBD) | | | | | 4 | | | 1 | 1 | 2 | 1 | | 3 | | 2 | |
| Hexachlorocyclohexane (HCH) | | 1 | | | 2 | | | | | | 1 | | 1 | | | |
| Isoproturon | | 3 | | 1 | 4 | | | 2 | 1 | 3 | 6 | | 1 | | 1 | |
| Lead | 3 | 3 | 7 | 2 | 9 | 2 | 9 | 1 | 10 | 3 | 8 | 1 | 5 | 5 | 3 | 4 |
| Lead dissolved | | 2 | | | | | | 1 | | | 3 | | 3 | | | |
| Mercury | 5 | 3 | 2 | 2 | 7 | 4 | 10 | 1 | 10 | 3 | 9 | 1 | 7 | 5 | 3 | 4 |
| Mercury dissolved | | 2 | | | | | | 1 | | | 2 | | 2 | | | |
| Mercury dissolved | | | | | | | | | | | | | | | | |
| Naphthalene | | 3 | | | 3 | 2 | | 2 | | 3 | | | 1 | | 3 | |
| Nickel | 3 | 3 | 7 | 2 | 9 | 4 | 1 | 1 | 10 | 3 | 9 | 1 | 6 | 5 | 3 | 4 |
| Nickel dissolved | | 2 | | | | | | 1 | | | 3 | | 3 | | | |
| Para-tert-octylphenol | | 3 | | | | | | | | 3 | 2 | | | | | |
| Pentachlorobenzene | | 1 | | | | | | 1 | 1 | 2 | | | 1 | | | |
| Pentachlorophenol | | 3 | | | | | | 2 | | 2 | 6 | | 3 | | 2 | |
| Simazine | | 3 | | 3 | 8 | | | 2 | 1 | 3 | 6 | 1 | 2 | | 1 | |
| Σ Cyclodienes | | 1 | 2 | | 6 | | | | 1 | 3 | 10 | | 8 | 1 | | |
| Σ DDT | | 1 | | | 3 | | | | 1 | 2 | 4 | | 7 | 1 | | |
| Σ HCH | | 3 | | | 1 | | | | 1 | 3 | 4 | | 7 | 4 | | |
| Σ Benzo(b)fluoranthene, Benzo(k)fluoranthene | | 3 | | | 3 | | | | | 3 | 2 | | 1 | | 1 | |
| Σ Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene | | 3 | | | 3 | | | | | 3 | 2 | | 1 | | 1 | |
| Tributyltin cation | | 2 | | | | | | | | 1 | 1 | | | | | |
| Trichloromethane | | 3 | | | 3 | | | 2 | | 3 | 7 | | 3 | | 1 | |
| Trifluralin | | 3 | | 4 | 4 | | | 2 | 1 | 3 | 6 | | | | | |

**Table 3.4.2 continued**

| Substance | IT | LT | LV | MK | MT | NL | NO | PL | PT | RO | RS | SE | SI | SK | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-tetrachloroethene | 10 | | | | 1 | 5 | | 3 | | | | | | 2 | |
| 1,2-dichloroethane | 6 | | | | 1 | 5 | | 3 | | | | | | 3 | |
| 4-nonylphenol | 2 | | | | 1 | 2 | | 1 | | | | | | 2 | |
| Alachlor | 10 | | | | 1 | 5 | | 3 | 2 | 2 | | | 3 | 2 | |
| Anthracene | 4 | | | | 1 | 5 | | 3 | 3 | 2 | | | | 2 | |
| Atrazine | 10 | 1 | | | 1 | 5 | | 3 | 2 | | 3 | | 2 | 2 | |
| Benzene | 4 | | | | 1 | 5 | | 3 | 1 | | | | | 2 | |
| Benzo(a)pyrene | 9 | | | | 1 | 3 | | 3 | 4 | 2 | 1 | | | 3 | |
| Cadmium | 10 | 4 | 7 | | 1 | 3 | 7 | 3 | 3 | 2 | 1 | 10 | 2 | 1 | |
| Cadmium dissolved | 1 | | | | | 3 | | | 1 | 2 | 2 | | 1 | 1 | 3 |
| Chlorfenvinphos | 10 | | | | 1 | 5 | | 3 | | | | | 2 | 1 | |
| Chlorpyrifos | 10 | | | | 1 | 5 | | 3 | 1 | | | | 2 | 2 | |
| DDT, p,p' | 10 | 3 | | | 1 | 5 | | 2 | | 2 | 3 | | 1 | 1 | |
| Di (2-ethylhexyl) phthalate (DEHP) | 2 | | | 1 | 1 | 3 | | 3 | | | | | | 2 | |
| Dichloromethane | 4 | | | | 1 | 5 | | 3 | 1 | | | | | 3 | |
| Diuron | 7 | | | | 1 | 5 | | 3 | 2 | | | | | 2 | |
| Endosulfan | 10 | | | | 1 | 3 | | 2 | | | | | | 1 | |
| Fluoranthene | 8 | | | | 1 | 5 | | 3 | 3 | 2 | 1 | | | 2 | |
| Hexachlorobenzene (HCB) | 10 | | | | 1 | 5 | | 3 | 1 | 2 | 3 | | | 1 | |
| Hexachlorobutadiene (HCBD) | 4 | | | | 1 | 5 | | 3 | 1 | | | | | 2 | |
| Hexachlorocyclohexane (HCH) | 4 | 1 | | | 1 | | | 2 | | | | | | | |
| Isoproturon | 4 | | | | 1 | 5 | | 3 | | | | | | 2 | |
| Lead | 10 | 4 | 7 | | 1 | 3 | 7 | 3 | 3 | 2 | 1 | 10 | 2 | 1 | |
| Lead dissolved | 3 | | | | | 3 | | | 1 | 2 | 3 | | 1 | | 3 |
| Mercury | 10 | 4 | 3 | | 1 | 3 | | 2 | 2 | 1 | 2 | 6 | 2 | 1 | |
| Mercury dissolved | 1 | | | | | 3 | | | 1 | 2 | | | 1 | 1 | |
| Mercury dissolved | | | | | | | | | | | 2 | | | | |
| Naphthalene | 4 | | | | 1 | 5 | | 3 | 3 | 2 | | | | 3 | |
| Nickel | 10 | 4 | 4 | 1 | 1 | 5 | 7 | 3 | | 2 | 1 | 10 | 2 | 1 | |
| Nickel dissolved | 3 | | | | | 3 | | | 1 | 2 | 3 | | 1 | | 3 |
| Para-tert-octylphenol | 2 | | | | 1 | 5 | | 1 | | | | | | 1 | |
| Pentachlorobenzene | 4 | | | | 1 | 5 | | 3 | 1 | 2 | | | | 1 | |
| Pentachlorophenol | 5 | 2 | | | 1 | 5 | | 3 | 1 | | | | | 2 | |
| Simazine | 10 | 1 | | | 1 | 5 | | 3 | | | 3 | | 2 | 2 | |
| Σ Cyclodienes | 10 | 1 | | | 1 | 5 | | 2 | | | 3 | | 1 | 2 | |
| Σ DDT | 10 | 3 | | | 1 | 5 | | 2 | | | 3 | | 1 | 2 | |
| Σ HCH | 10 | 2 | | 1 | | 3 | | | | | 3 | | | 1 | |
| Σ Benzo(b)fluoranthene, Benzo(k)fluoranthene | 9 | | | | 1 | 5 | | 2 | | | 1 | | | 3 | |
| Σ Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene | 9 | | | | 1 | 5 | | 2 | | | 1 | | | 3 | |
| Tributyltin cation | | | | | 1 | 1 | | | | | | | | 1 | |
| Trichloromethane | 4 | | | | 1 | 5 | | 3 | | | | | | 2 | |
| Trifluralin | 10 | | | | 1 | 5 | | 3 | 1 | | | | 2 | 2 | |

**Table 3.4.3 No. of years with available lake data for countries within the 2010–2011 period**

| Substance | BA | BE | BG | CH | CY | DE | EE | ES | FI | FR | GB | GR | HR | HU | IE | IS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-tetrachloroethene | | 2 | | | 1 | | | 2 | | 2 | | | 2 | | 2 | |
| 1,2-dichloroethane | | 2 | | | 2 | | | 2 | | 2 | 1 | | 2 | | 2 | |
| 4-nonylphenol | | 1 | | | | | | 2 | | 2 | | | | | | |
| Alachlor | | 2 | | | 2 | | | 2 | | 2 | | | 2 | | | |
| Anthracene | | 2 | | | 1 | | | 2 | | 2 | | | | | 1 | |
| Atrazine | | 2 | 1 | | 2 | | | 2 | | 2 | | | | | 1 | |
| Benzene | | 2 | | | 2 | | | 2 | | 2 | 1 | | | | 2 | |
| Benzo(a)pyrene | | 2 | | | 1 | 2 | | 2 | | 2 | 2 | | | | 1 | |
| Cadmium | 2 | 2 | 2 | | 1 | | 2 | | 2 | 2 | 2 | | | | 2 | 2 |
| Cadmium dissolved | | 2 | | | | | | 1 | | 1 | 2 | | 2 | | | |
| Cadmium dissolved | | | | | | | | | | | | | | | | |
| Chlorfenvinphos | | | | | 2 | | | 2 | | 2 | | | 2 | | | |
| Chlorpyrifos | | 2 | 1 | | 1 | | | 2 | | 2 | | | 2 | | 2 | |
| DDT, p,p' | | | | | 1 | | | 2 | | 2 | 1 | | 1 | | | |
| Di (2-ethylhexyl) phthalate (DEHP) | 1 | 2 | | | | 1 | | 2 | | 1 | 2 | | | | 2 | |
| Dichloromethane | | 2 | | | 1 | | | 2 | | 2 | 1 | | 2 | | 2 | |
| Diuron | | 2 | | | 2 | | | 2 | | 2 | 2 | | | | 1 | |
| Endosulfan | | 2 | | | 1 | | | | | 2 | | | 1 | | | |
| Fluoranthene | | 2 | | | 1 | 2 | | 2 | | 2 | 2 | | | | 1 | |
| Hexachlorobenzene (HCB) | | | | | 2 | | | 1 | | 2 | | | 2 | | | |
| Hexachlorobutadiene (HCBD) | | | | | 2 | | | 1 | | 2 | | | 2 | | 2 | |
| Hexachlorocyclohexane (HCH) | | 1 | | | 1 | | | | | | | | | | | |
| Isoproturon | | 2 | | | 2 | | | 2 | | 2 | | | | | 1 | |
| Lead | 2 | 2 | 2 | | 2 | 1 | 2 | 1 | 2 | 2 | 2 | | | | 2 | 2 |
| Lead dissolved | | 2 | | | | | | 1 | | | 2 | | 2 | | | |
| Mercury | 2 | 2 | 1 | | 1 | 2 | 2 | 1 | 2 | 2 | 2 | | | | 2 | 2 |
| Mercury dissolved | | 2 | | | | | | 1 | | | 2 | | 2 | | | |
| Mercury dissolved | | | | | | | | | | | | | | | | |
| Naphthalene | | 2 | | | 2 | 2 | | 2 | | 2 | | | | | 2 | |
| Nickel | | 2 | 2 | | 2 | 2 | 1 | 1 | 2 | 2 | 2 | | | | 2 | 2 |
| Nickel dissolved | | 2 | | | | | | 1 | | | 2 | | 2 | | | |
| Para-tert-octylphenol | | 2 | | | | | | | | 2 | 2 | | | | | |
| Pentachlorobenzene | | | | | | | | 1 | | 2 | | | | | | |
| Pentachlorophenol | | 2 | | | | | | 2 | | 2 | | | 2 | | 2 | |
| Simazine | | 2 | | | 2 | | | 2 | | 2 | | | | | 1 | |
| Σ Cyclodienes | | | 2 | | 2 | | | | | 2 | 2 | | 2 | | | |
| Σ DDT | | | | | 1 | | | | | 2 | 1 | | 1 | | | |
| Σ HCH | | 2 | | | 1 | | | | | 2 | 2 | | 1 | | | |
| Σ Benzo(b)fluoranthene, Benzo(k)fluoranthene | | 2 | | | 1 | | | | | 2 | 2 | | | | 1 | |
| Σ Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene | | 2 | | | 1 | | | | | 2 | 2 | | | | 1 | |
| Tributyltin cation | | 2 | | | | | | | | 1 | 1 | | | | | |
| Trichloromethane | | 2 | | | 1 | | | 2 | | 2 | 2 | | 2 | | 1 | |
| Trifluralin | | 2 | | | 2 | | | 2 | | 2 | | | | | | |

**Table 3.4.3 continued**

| Substance | IT | LT | LV | MK | MT | NL | NO | PL | PT | RO | RS | SE | SI | SK | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-tetrachloroethene | 2 | | | | 1 | 2 | | 2 | | | | | | 2 | |
| 1,2-dichloroethane | 2 | | | | 1 | 2 | | 2 | | | | | | 2 | |
| 4-nonylphenol | 2 | | | | 1 | | | | | | | | | 1 | |
| Alachlor | 2 | | | | 1 | 2 | | 2 | 2 | 2 | | | 2 | 1 | |
| Anthracene | 2 | | | | 1 | 2 | | 2 | 2 | 2 | | | | 2 | |
| Atrazine | 2 | | | | 1 | 2 | | 2 | 2 | | | | 1 | 1 | |
| Benzene | 2 | | | | 1 | 2 | | 2 | 1 | | | | | 1 | |
| Benzo(a)pyrene | 2 | | | | 1 | 2 | | 2 | 2 | 2 | | | | 2 | |
| Cadmium | 2 | | | | 1 | 2 | 2 | 2 | 1 | 2 | | 2 | 1 | | |
| Cadmium dissolved | 1 | | | | | 2 | | | 1 | 2 | | | 1 | 1 | 2 |
| Cadmium dissolved | | | | | | | | | | | 2 | | | | |
| Chlorfenvinphos | 2 | | | | 1 | 2 | | 2 | | | | | 1 | 1 | |
| Chlorpyrifos | 2 | | | | 1 | 2 | | 2 | 1 | | | | 1 | 1 | |
| DDT, p,p' | 2 | | | | 1 | 2 | | 2 | | 2 | | | 1 | 1 | |
| Di (2-ethylhexyl) phthalate (DEHP) | 2 | | | 1 | 1 | 2 | | 2 | | | | | | 2 | |
| Dichloromethane | 2 | | | | 1 | 2 | | 2 | 1 | | | | | 2 | |
| Diuron | 2 | | | | 1 | 2 | | 2 | 1 | | | | | 1 | |
| Endosulfan | 2 | | | | 1 | 2 | | 1 | | | | | | 1 | |
| Fluoranthene | 2 | | | | 1 | 2 | | 2 | 2 | 2 | | | | 2 | |
| Hexachlorobenzene (HCB) | 2 | | | | 1 | 2 | | 2 | 1 | 2 | | | | 1 | |
| Hexachlorobutadiene (HCBD) | 2 | | | | 1 | 2 | | 2 | 1 | | | | | 2 | |
| Hexachlorocyclohexane (HCH) | 2 | | | | 1 | | | 1 | | | | | | | |
| Isoproturon | 2 | | | | 1 | 2 | | 2 | | | | | | 1 | |
| Lead | 2 | | | | 1 | 2 | 2 | 2 | 1 | 1 | | 2 | 1 | | |
| Lead dissolved | 2 | | | | | 2 | | | 1 | 2 | 2 | | 1 | | 2 |
| Mercury | 2 | | | | 1 | 2 | | 2 | | 1 | | 2 | 1 | | |
| Mercury dissolved | 1 | | | | | 2 | | | 1 | 2 | | | 1 | 1 | |
| Mercury dissolved | | | | | | | | | | | 2 | | | | |
| Naphthalene | 2 | | | | 1 | 2 | | 2 | 2 | 2 | | | | 2 | |
| Nickel | 2 | | | 1 | 1 | 2 | 2 | 2 | | 1 | | 2 | 1 | | |
| Nickel dissolved | 2 | | | | | 2 | | | 1 | 2 | 2 | | 1 | | 2 |
| Para-tert-octylphenol | 2 | | | | 1 | 2 | | | | | | | | 1 | |
| Pentachlorobenzene | 2 | | | | 1 | 2 | | 2 | 1 | 2 | | | | 1 | |
| Pentachlorophenol | 2 | | | | 1 | 2 | | 2 | 1 | | | | | 1 | |
| Simazine | 2 | | | | 1 | 2 | | 2 | | | | | 1 | 1 | |
| Σ Cyclodienes | 2 | | | | 1 | 2 | | 1 | | | | | 1 | 1 | |
| Σ DDT | 2 | | | | 1 | 2 | | 1 | | | | | 1 | 1 | |
| Σ HCH | 2 | | | 1 | | 2 | | | | | | | | 1 | |
| Σ Benzo(b)fluoranthene, Benzo(k)fluoranthene | 2 | | | | 1 | 2 | | 1 | | | | | | 2 | |
| Σ Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene | 2 | | | | 1 | 2 | | 1 | | | | | | 2 | |
| Tributyltin cation | | | | | 1 | 1 | | | | | | | | 1 | |
| Trichloromethane | 2 | | | | 1 | 2 | | 2 | | | | | | 2 | |
| Trifluralin | 2 | | | | 1 | 2 | | 2 | 1 | | | | 1 | 1 | |

## Table 3.4.4 Available lakes samples within the 2002–2011 period

| Substance | BA | BE | BG | CH | CY | DE | EE | ES | FI | FR | GB | GR | HR | HU | IE | IS | IT | LT | LV | MK | MT | NL | NO | PL | PT | RO | RS | SE | SI | SK | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-tetrachloroethene |  | 28 |  |  | 79 |  |  | 247 |  | 273 |  |  | 16 |  | 237 |  | 980 |  |  |  | 12 | 873 |  | 1077 |  |  |  |  |  | 48 |  |
| 1,2-dichloroethane |  | 28 |  |  | 154 |  |  | 298 |  | 273 | 170 |  | 52 |  | 237 |  | 911 |  |  |  | 12 | 874 |  | 1021 |  |  |  |  |  | 324 |  |
| 4-nonylphenol |  | 15 |  |  |  |  |  | 42 | 8 | 340 |  |  |  |  |  |  | 115 |  |  |  | 12 | 43 |  | 12 |  |  |  |  |  | 287 |  |
| Alachlor |  | 28 |  |  | 280 |  |  | 383 | 4 | 323 |  |  | 44 |  |  |  | 1384 |  |  |  | 12 | 1049 |  | 526 | 7 | 8 |  |  | 69 | 288 |  |
| Anthracene |  | 27 |  |  | 111 |  |  | 332 |  | 309 | 3 |  | 36 |  | 140 |  | 581 |  |  |  | 12 | 1053 |  | 1079 | 41 | 7 |  |  |  | 96 |  |
| Atrazine |  | 28 | 6 | 15 | 166 |  |  | 439 | 4 | 327 | 178 | 16 | 37 | 88 | 138 |  | 1386 | 32 |  |  | 12 | 1025 |  | 692 | 5 |  | 372 |  | 45 | 288 |  |
| Benzene |  | 28 |  |  | 154 |  |  | 279 |  | 307 | 184 |  | 36 | 82 | 293 |  | 756 |  |  |  | 12 | 867 |  | 613 | 3 |  |  |  |  | 288 |  |
| Benzo(a)pyrene |  | 27 |  |  | 72 | 58 |  | 155 |  | 309 | 6 |  | 36 |  | 140 |  | 649 |  |  |  | 12 | 663 |  | 1078 | 47 | 7 | 203 |  |  | 372 |  |
| Cadmium | 120 | 94 | 177 |  | 194 | 1 | 56 |  | 616 | 139 | 1025 | 6 | 144 | 642 | 396 | 16 | 2325 | 53 | 48 |  | 12 | 607 | 189 | 1095 | 16 | 24 | 81 | 1360 | 16 | 6 |  |
| Cadmium dissolved |  | 46 |  |  |  |  |  | 226 |  | 1 | 81 |  | 17 |  |  |  | 4 |  |  |  |  | 621 |  |  | 3 | 79 | 454 |  | 11 | 24 | 24 |
| Chlorfenvinphos |  |  |  |  | 111 |  |  | 157 | 4 | 339 | 177 |  | 44 |  |  |  | 871 |  |  |  | 12 | 1018 |  | 258 |  |  |  |  | 45 | 12 |  |
| Chlorpyrifos |  | 27 | 12 |  | 95 |  |  | 401 | 4 | 289 | 130 |  | 44 |  | 127 |  | 1298 |  |  |  | 12 | 1041 |  | 260 | 2 |  |  |  | 45 | 288 |  |
| DDT, p,p' |  | 4 |  |  | 78 |  |  | 405 | 4 | 272 | 170 |  | 62 | 53 |  |  | 471 | 45 |  |  | 12 | 1033 |  | 1000 |  | 7 | 372 |  | 24 | 12 |  |
| Di (2-ethylhexyl) phthalate (DEHP) | 9 | 12 |  |  | 84 | 16 |  | 37 | 17 | 50 | 8 |  |  |  | 58 |  | 108 |  |  | 15 | 12 | 653 |  | 317 |  |  |  |  |  | 286 |  |
| Dichloromethane |  | 28 |  |  | 90 |  |  | 257 |  | 273 | 134 |  | 52 |  | 279 |  | 639 |  |  |  | 12 | 847 |  | 1071 | 3 |  |  |  |  | 324 |  |
| Diuron |  | 28 |  |  | 52 |  |  | 391 | 4 | 316 | 202 |  | 36 |  | 138 |  | 530 |  |  |  | 12 | 975 |  | 242 | 19 |  |  |  |  | 288 |  |
| Endosulfan |  | 28 |  |  | 81 |  |  |  | 4 | 302 | 53 |  | 40 |  |  |  | 816 |  |  |  | 12 | 667 |  | 495 |  |  |  |  |  | 12 |  |
| Fluoranthene |  | 27 |  |  | 111 | 52 |  | 447 |  | 309 | 17 |  | 36 |  | 140 |  | 618 |  |  |  | 12 | 1052 |  | 1097 | 39 | 12 | 203 |  |  | 96 |  |
| Hexachlorobenzene (HCB) |  | 4 |  |  | 181 |  |  | 113 | 4 | 273 | 13 |  | 44 |  |  |  | 1039 |  |  |  | 12 | 1033 |  | 958 | 2 | 7 | 372 |  |  | 12 |  |
| Hexachlorobutadiene (HCBD) |  |  |  |  | 156 |  |  | 96 | 4 | 289 | 2 |  | 52 |  | 237 |  | 850 |  |  |  | 12 | 1033 |  | 646 | 3 |  |  |  |  | 48 |  |
| Hexachlorocyclohexane (HCH) |  | 12 |  |  | 77 |  |  |  |  |  | 14 |  | 36 |  |  |  | 557 | 9 |  |  | 12 |  |  | 584 |  |  |  |  |  |  |  |
| Isoproturon |  | 28 |  | 1 | 34 |  |  | 296 | 4 | 306 | 153 |  | 36 |  | 138 |  | 340 |  |  |  | 12 | 975 |  | 164 |  |  |  |  |  | 287 |  |
| Lead | 83 | 94 | 283 | 6 | 214 | 27 | 50 | 552 | 585 | 317 | 535 | 13 | 73 | 634 | 367 | 16 | 1921 | 51 | 46 |  | 12 | 607 | 191 | 1095 | 19 | 32 | 81 | 1359 | 16 | 18 |  |
| Lead dissolved |  | 46 |  |  |  |  |  | 238 |  |  | 110 |  | 61 |  |  |  | 779 |  |  |  |  | 621 |  |  | 3 | 73 | 681 |  | 11 |  | 12 |
| Mercury | 161 | 89 | 20 | 6 | 163 | 6 | 54 | 182 | 408 | 184 | 513 | 2 | 124 | 640 | 263 | 16 | 1921 | 51 | 19 |  | 12 | 442 |  | 940 | 11 | 8 | 75 | 26 | 28 | 9 |  |
| Mercury dissolved |  | 46 |  |  |  |  |  | 209 |  |  | 53 |  | 17 |  |  |  | 4 |  |  |  |  | 568 |  |  | 3 | 68 |  |  | 11 | 12 |  |
| Mercury dissolved |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 462 |  |  |  |  |
| Naphthalene |  | 27 |  |  | 113 | 51 |  | 282 |  | 309 |  |  | 36 |  | 293 |  | 433 |  |  |  | 12 | 1013 |  | 1059 | 19 | 12 |  |  |  | 372 |  |
| Nickel | 172 | 94 | 213 | 6 | 258 | 59 | 8 | 1030 | 916 | 317 | 937 | 11 | 77 | 642 | 396 | 16 | 1794 | 53 | 30 | 15 | 12 | 990 | 187 | 1092 |  | 32 | 81 | 1360 | 16 | 12 |  |
| Nickel dissolved |  | 46 |  |  |  |  |  | 221 |  |  | 103 |  | 61 |  |  |  | 777 |  |  |  |  | 621 |  |  | 3 | 69 | 678 |  | 11 |  | 11 |
| Para-tert-octylphenol |  | 27 |  |  |  |  |  |  |  | 318 | 7 |  |  |  |  |  | 133 |  |  |  | 12 | 878 |  | 12 |  |  |  |  |  | 12 |  |
| Pentachlorobenzene |  | 4 |  |  |  |  |  | 126 | 4 | 271 |  |  | 36 |  |  |  | 577 |  |  |  | 12 | 1033 |  | 896 | 2 | 8 |  |  |  | 12 |  |
| Pentachlorophenol |  | 27 |  |  |  |  |  | 129 |  | 273 | 146 |  | 44 |  | 127 |  | 722 | 13 |  |  | 12 | 907 |  | 784 | 3 |  |  |  |  | 288 |  |
| Simazine |  | 28 |  | 8 | 170 |  |  | 291 | 4 | 307 | 180 | 2 | 37 |  | 138 |  | 1360 | 32 |  |  | 12 | 1025 |  | 690 |  |  | 372 |  | 45 | 288 |  |
| Σ Cyclodienes |  | 16 | 37 |  | 417 |  |  |  | 16 | 1226 | 854 |  | 186 | 135 |  |  | 4541 | 96 |  |  | 48 | 4079 |  | 768 |  |  | 1116 |  | 24 | 876 |  |
| Σ DDT |  | 16 |  |  | 232 |  |  |  | 16 | 1090 | 482 |  | 178 | 131 |  |  | 1416 | 71 |  |  | 12 | 3752 |  | 589 |  |  | 1116 |  | 51 | 600 |  |
| Σ HCH |  | 28 |  |  | 26 |  |  |  | 4 | 307 | 32 |  | 62 | 52 |  |  | 879 | 36 |  | 13 |  | 671 |  |  |  |  | 372 |  |  | 12 |  |
| Σ Benzo(b)fluoranthene, Benzo(k)fluoranthene |  | 54 |  |  | 142 |  |  |  |  | 618 | 12 |  | 72 |  | 280 |  | 1279 |  |  |  | 24 | 2106 |  | 457 |  |  | 406 |  |  | 744 |  |
| Σ Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene |  | 54 |  |  | 142 |  |  |  |  | 618 | 12 |  | 72 |  | 280 |  | 1314 |  |  |  | 24 | 2107 |  | 379 |  |  | 406 |  |  | 744 |  |
| Tributyltin cation |  | 23 |  |  |  |  |  |  |  | 100 | 134 |  |  |  |  |  |  |  |  |  | 12 | 220 |  |  |  |  |  |  |  | 12 |  |
| Trichloromethane |  | 28 |  |  | 120 |  |  | 271 |  | 307 | 177 |  | 52 |  | 122 |  | 1043 |  |  |  | 12 | 873 |  | 1025 |  |  |  |  |  | 48 |  |
| Trifluralin |  | 28 |  | 12 | 96 |  |  | 383 | 4 | 307 | 169 |  |  |  |  |  | 1090 |  |  |  | 12 | 1046 |  | 287 | 2 |  |  |  | 45 | 288 |  |

## Table 3.4.5 Available lakes samples for countries within the 2010–2011 period

| Substance | BA | BE | BG | CH | CY | DE | EE | ES | FI | FR | GB | GR | HR | HU | IE | IS | IT | LT | LV | MK | MT | NL | NO | PL | PT | RO | RS | SE | SI | SK | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-tetrachloroethene | | 24 | | | 34 | | | 247 | | 273 | | | 16 | | 237 | | 563 | | | | 12 | 376 | | 1025 | | | | | | 48 | |
| 1,2-dichloroethane | | 24 | | | 68 | | | 298 | | 273 | 135 | | 16 | | 237 | | 492 | | | | 12 | 377 | | 966 | | | | | | 48 | |
| 4-nonylphenol | | 12 | | | | | | 42 | | 291 | | | | | | | 115 | | | | 12 | | | | | | | | | 11 | |
| Alachlor | | 24 | | | 62 | | | 383 | | 289 | | | 8 | | | | 653 | | | | 12 | 454 | | 518 | 7 | 8 | | | 44 | 12 | |
| Anthracene | | 23 | | | 25 | | | 332 | | 275 | | | | | 140 | | 397 | | | | 12 | 454 | | 1018 | 37 | 7 | | | | 96 | |
| Atrazine | | 24 | 6 | | 46 | | | 439 | | 273 | | | | | 138 | | 657 | | | | 12 | 454 | | 682 | 5 | | | | 20 | 12 | |
| Benzene | | 24 | | | 68 | | | 279 | | 273 | 135 | | | | 237 | | 431 | | | | 12 | 377 | | 588 | 3 | | | | | 12 | |
| Benzo(a)pyrene | | 23 | | | 25 | 58 | | 155 | | 275 | 6 | | | | 140 | | 435 | | | | 12 | 447 | | 1013 | 35 | 7 | | | | 96 | |
| Cadmium | 47 | 46 | 131 | | 34 | | 14 | | 106 | 97 | 152 | | | | 264 | 8 | 1178 | | | | 12 | 441 | 22 | 1030 | 10 | 24 | | 202 | 4 | | |
| Cadmium dissolved | | 46 | | | | | | 226 | | 1 | 81 | | 17 | | | | 4 | | | | | 420 | | | 3 | 79 | | | 11 | 24 | 16 |
| Cadmium dissolved | | | | | | | | | | | | | | | | | | | | | | | | | | | 454 | | | | |
| Chlorfenvinphos | | | | | 46 | | | 157 | | 289 | | | 8 | | | | 354 | | | | 12 | 428 | | 257 | | | | | 20 | 12 | |
| Chlorpyrifos | | 23 | 12 | | 30 | | | 401 | | 273 | | | 8 | | 127 | | 621 | | | | 12 | 428 | | 259 | 2 | | | | 20 | 12 | |
| DDT, p,p' | | | | | 34 | | | 405 | | 272 | 135 | | 4 | | | | 301 | | | | 12 | 454 | | 1000 | | 7 | | | 24 | 12 | |
| Di (2-ethylhexyl) phthalate (DEHP) | 9 | 12 | | | | 15 | | 37 | | 50 | 8 | | | | 58 | | 108 | | | 15 | 12 | 454 | | 306 | | | | | | 286 | |
| Dichloromethane | | 24 | | | 34 | | | 257 | | 273 | 134 | | 16 | | 237 | | 345 | | | | 12 | 377 | | 1010 | 3 | | | | | 48 | |
| Diuron | | 24 | | | 24 | | | 391 | | 273 | 9 | | | | 138 | | 238 | | | | 12 | 403 | | 234 | 17 | | | | | 12 | |
| Endosulfan | | 24 | | | 34 | | | | | 302 | | | 4 | | | | 412 | | | | 12 | 453 | | 439 | | | | | | 12 | |
| Fluoranthene | | 23 | | | 25 | 51 | | 447 | | 275 | 16 | | | | 140 | | 421 | | | | 12 | 454 | | 1036 | 35 | 12 | | | | 96 | |
| Hexachlorobenzene (HCB) | | | | | 60 | | | 113 | | 273 | | | 8 | | | | 540 | | | | 12 | 454 | | 899 | 2 | 7 | | | | 12 | |
| Hexachlorobutadiene (HCBD) | | | | | 68 | | | 96 | | 289 | | | 16 | | 237 | | 486 | | | | 12 | 454 | | 632 | 3 | | | | | 48 | |
| Hexachlorocyclohexane (HCH) | | 12 | | | 34 | | | | | | | | | | | | 313 | | | | 12 | | | 524 | | | | | | | |
| Isoproturon | | 24 | | | 24 | | | 296 | | 272 | | | | | 138 | | 126 | | | | 12 | 403 | | 162 | | | | | | 11 | |
| Lead | 58 | 46 | 138 | | 55 | 26 | 14 | 552 | 88 | 267 | 137 | | | | 264 | 8 | 691 | | | | 12 | 441 | 22 | 1033 | 10 | 31 | | 202 | 4 | | |
| Lead dissolved | | 46 | | | | | | 238 | | | 74 | | 17 | | | | 715 | | | | | 420 | | | 3 | 73 | 464 | | 11 | | 10 |
| Mercury | 29 | 46 | 17 | | 30 | 3 | 14 | 182 | 89 | 147 | 77 | | | | 242 | 8 | 1139 | | | | 12 | 308 | | 940 | | 8 | | 10 | 4 | | |
| Mercury dissolved | | 46 | | | | | | 209 | | | 53 | | 17 | | | | 4 | | | | | 394 | | | 3 | 68 | | | 11 | 12 | |
| Mercury dissolved | | | | | | | | | | | | | | | | | | | | | | | | | | | 462 | | | | |
| Naphthalene | | 23 | | | 68 | 51 | | 282 | | 275 | | | | | 237 | | 324 | | | | 12 | 454 | | 1002 | 17 | 12 | | | | 96 | |
| Nickel | | 46 | 114 | | 72 | 56 | 8 | 1030 | 159 | 267 | 137 | | | | 264 | 8 | 686 | | | 15 | 12 | 441 | 22 | 1032 | | 31 | | 202 | 4 | | |
| Nickel dissolved | | 46 | | | | | | 221 | | | 74 | | 17 | | | | 713 | | | | | 420 | | | 3 | 69 | 461 | | 11 | | 10 |
| Para-tert-octylphenol | | 24 | | | | | | | | 303 | 7 | | | | | | 133 | | | | 12 | 391 | | | | | | | | 12 | |
| Pentachlorobenzene | | | | | | | | 126 | | 271 | | | | | | | 427 | | | | 12 | 454 | | 832 | 2 | 8 | | | | 12 | |
| Pentachlorophenol | | 24 | | | | | | 129 | | 273 | | | 8 | | 127 | | 425 | | | | 12 | 391 | | 735 | 3 | | | | | 12 | |
| Simazine | | 24 | | | 46 | | | 291 | | 273 | | | | | 138 | | 653 | | | | 12 | 454 | | 680 | | | | | 20 | 12 | |
| Σ Cyclodienes | | | 37 | | 180 | | | | | 1090 | 6 | | 20 | | | | 2322 | | | | 48 | 1809 | | 530 | | | | | 24 | 48 | |
| Σ DDT | | | | | 102 | | | | | 1090 | 405 | | 12 | | | | 823 | | | | 12 | 1816 | | 539 | | | | | 51 | 48 | |
| Σ HCH | | 24 | | | 26 | | | | | 273 | 6 | | 4 | | | | 444 | | | 13 | | 454 | | | | | | | | 12 | |
| Σ Benzo(b)fluoranthene, Benzo(k)fluoranthene | | 46 | | | 50 | | | | | 550 | 12 | | | | 280 | | 859 | | | | 24 | 908 | | 332 | | | | | | 192 | |
| Σ Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene | | 46 | | | 50 | | | | | 550 | 12 | | | | 280 | | 886 | | | | 24 | 908 | | 330 | | | | | | 192 | |
| Tributyltin cation | | 23 | | | | | | | | 100 | 134 | | | | | | | | | | 12 | 220 | | | | | | | | 12 | |
| Trichloromethane | | 24 | | | 34 | | | 271 | | 273 | 143 | | 16 | | 122 | | 620 | | | | 12 | 377 | | 971 | | | | | | 48 | |
| Trifluralin | | 24 | | | 31 | | | 383 | | 273 | | | | | | | 384 | | | | 12 | 456 | | 273 | 2 | | | | 20 | 12 | |

## Table 3.4.6 Available lakes stations with data within the 2002–2011 period

| Substance | AL | AT | BA | BE | BG | CH | CY | CZ | DE | DK | EE | ES | FI | FR | GB | GR | HR | HU | IE | IS | IT | LI | LT | LU | LV | ME | MK | NL | NO | PL | PT | RO | RS | SE | SI | SK | TR | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-tetrachloroethene | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 37 | 0 | 71 | 0 | 0 | 1 | 0 | 22 | 0 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| 1,2-dichloroethane | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 52 | 0 | 71 | 60 | 0 | 3 | 0 | 22 | 0 | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 89 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 0 |
| 4-nonylphenol | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 1 | 83 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 0 |
| Alachlor | 0 | 0 | 0 | 1 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 95 | 1 | 85 | 0 | 0 | 4 | 0 | 0 | 0 | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 51 | 4 | 5 | 0 | 0 | 6 | 23 | 0 | 0 |
| Anthracene | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 89 | 0 | 82 | 2 | 0 | 3 | 0 | 12 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 93 | 8 | 4 | 0 | 0 | 0 | 8 | 0 | 0 |
| Atrazine | 0 | 0 | 0 | 1 | 1 | 1 | 16 | 0 | 0 | 0 | 0 | 115 | 1 | 83 | 11 | 7 | 3 | 13 | 12 | 0 | 73 | 0 | 8 | 0 | 0 | 0 | 0 | 20 | 0 | 67 | 1 | 0 | 78 | 0 | 5 | 23 | 0 | 0 |
| Benzene | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 52 | 0 | 81 | 70 | 0 | 3 | 11 | 34 | 0 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 61 | 2 | 0 | 0 | 0 | 0 | 23 | 0 | 0 |
| Benzo(a)pyrene | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 4 | 0 | 0 | 28 | 0 | 82 | 3 | 0 | 3 | 0 | 12 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 92 | 13 | 4 | 68 | 0 | 0 | 23 | 0 | 0 |
| Cadmium | 0 | 0 | 11 | 4 | 14 | 0 | 16 | 0 | 1 | 0 | 14 | 0 | 19 | 32 | 62 | 4 | 7 | 35 | 45 | 1 | 130 | 0 | 17 | 0 | 12 | 0 | 0 | 20 | 137 | 91 | 8 | 3 | 73 | 146 | 3 | 1 | 0 | 0 |
| Cadmium dissolved | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 0 | 1 | 5 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 2 | 7 | 78 | 0 | 1 | 2 | 0 | 5 |
| Chlorfenvinphos | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 39 | 1 | 85 | 11 | 0 | 4 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 24 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0 |
| Chlorpyrifos | 0 | 0 | 0 | 1 | 1 | 0 | 10 | 0 | 0 | 0 | 0 | 98 | 1 | 75 | 7 | 0 | 4 | 0 | 17 | 0 | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 25 | 1 | 0 | 0 | 0 | 5 | 23 | 0 | 0 |
| DDT, p,p' | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 103 | 1 | 71 | 56 | 0 | 5 | 12 | 0 | 0 | 44 | 0 | 13 | 0 | 0 | 0 | 0 | 20 | 0 | 88 | 0 | 5 | 78 | 0 | 6 | 1 | 0 | 0 |
| Di (2-ethylhexyl) phthalate (DEHP) | 0 | 0 | 1 | 1 | 0 | 0 | 9 | 0 | 3 | 0 | 0 | 17 | 2 | 14 | 1 | 0 | 0 | 0 | 17 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 5 | 19 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 0 |
| Dichloromethane | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 32 | 0 | 71 | 52 | 0 | 3 | 0 | 30 | 0 | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 91 | 2 | 0 | 0 | 0 | 0 | 23 | 0 | 0 |
| Diuron | 0 | 0 | 0 | 1 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 47 | 1 | 82 | 18 | 0 | 3 | 0 | 12 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 28 | 7 | 0 | 0 | 0 | 0 | 23 | 0 | 0 |
| Endosulfan | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 1 | 76 | 4 | 0 | 4 | 0 | 0 | 0 | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Fluoranthene | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 4 | 0 | 0 | 98 | 0 | 82 | 11 | 0 | 3 | 0 | 12 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 93 | 8 | 5 | 68 | 0 | 0 | 8 | 0 | 0 |
| Hexachlorobenzene (HCB) | 0 | 0 | 0 | 1 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 24 | 1 | 71 | 2 | 0 | 4 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 80 | 1 | 5 | 78 | 0 | 0 | 1 | 0 | 0 |
| Hexachlorobutadiene (HCBD) | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 19 | 1 | 75 | 2 | 0 | 3 | 0 | 22 | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 61 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| Hexachlorocyclohexane (HCH) | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 31 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Isoproturon | 0 | 0 | 0 | 1 | 0 | 1 | 10 | 0 | 0 | 0 | 0 | 48 | 1 | 81 | 14 | 0 | 3 | 0 | 12 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 0 |
| Lead | 0 | 0 | 7 | 4 | 24 | 4 | 16 | 0 | 5 | 0 | 13 | 109 | 18 | 76 | 29 | 9 | 7 | 35 | 38 | 1 | 134 | 0 | 16 | 0 | 11 | 0 | 0 | 20 | 137 | 94 | 11 | 4 | 73 | 146 | 3 | 3 | 0 | 0 |
| Lead dissolved | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 10 | 0 | 6 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 2 | 7 | 78 | 0 | 1 | 0 | 0 | 5 |
| Mercury | 0 | 0 | 15 | 4 | 4 | 4 | 16 | 0 | 4 | 0 | 13 | 8 | 27 | 46 | 40 | 2 | 6 | 35 | 24 | 1 | 134 | 0 | 16 | 0 | 4 | 0 | 0 | 20 | 0 | 80 | 8 | 3 | 71 | 3 | 4 | 2 | 0 | 0 |
| Mercury dissolved | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 2 | 8 | 78 | 0 | 1 | 1 | 0 | 0 |
| Naphthalene | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 4 | 0 | 0 | 52 | 0 | 82 | 0 | 0 | 3 | 0 | 34 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 90 | 8 | 5 | 0 | 0 | 0 | 23 | 0 | 0 |
| Nickel | 0 | 0 | 11 | 4 | 20 | 4 | 16 | 0 | 5 | 0 | 5 | 154 | 22 | 76 | 50 | 8 | 7 | 35 | 45 | 1 | 130 | 0 | 18 | 0 | 8 | 0 | 5 | 20 | 136 | 94 | 0 | 4 | 73 | 146 | 3 | 2 | 0 | 0 |
| Nickel dissolved | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 10 | 0 | 6 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 2 | 7 | 78 | 0 | 1 | 0 | 0 | 4 |
| Para-tert-octylphenol | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 1 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Pentachlorobenzene | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 1 | 71 | 0 | 0 | 3 | 0 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 74 | 1 | 5 | 0 | 0 | 0 | 1 | 0 | 0 |
| Pentachlorophenol | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 71 | 9 | 0 | 4 | 0 | 17 | 0 | 41 | 0 | 5 | 0 | 0 | 0 | 0 | 18 | 0 | 66 | 2 | 0 | 0 | 0 | 0 | 23 | 0 | 0 |
| Σ Cyclodienes | 0 | 0 | 0 | 1 | 3 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 1 | 81 | 30 | 0 | 5 | 13 | 0 | 0 | 68 | 0 | 8 | 0 | 0 | 0 | 0 | 20 | 0 | 36 | 0 | 0 | 78 | 0 | 6 | 23 | 0 | 0 |
| Σ DDT | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 1 | 71 | 56 | 0 | 5 | 12 | 0 | 0 | 45 | 0 | 13 | 0 | 0 | 0 | 0 | 20 | 0 | 57 | 0 | 0 | 78 | 0 | 6 | 23 | 0 | 0 |
| Σ HCH | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 81 | 5 | 0 | 5 | 9 | 0 | 0 | 53 | 0 | 10 | 0 | 0 | 0 | 5 | 20 | 0 | 0 | 0 | 0 | 78 | 0 | 0 | 1 | 0 | 0 |
| Σ Benzo(b)fluoranthene, Benzo(k)fluoranthene | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 82 | 3 | 0 | 3 | 0 | 12 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 48 | 0 | 0 | 68 | 0 | 0 | 23 | 0 | 0 |
| Σ Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 82 | 3 | 0 | 3 | 0 | 12 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 42 | 0 | 0 | 68 | 0 | 0 | 23 | 0 | 0 |
| Simazine | 0 | 0 | 0 | 1 | 0 | 1 | 16 | 0 | 0 | 0 | 0 | 32 | 1 | 81 | 11 | 2 | 3 | 0 | 12 | 0 | 72 | 0 | 8 | 0 | 0 | 0 | 0 | 20 | 0 | 66 | 0 | 0 | 78 | 0 | 5 | 23 | 0 | 0 |
| Tributyltin cation | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Trichloromethane | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 41 | 0 | 81 | 60 | 0 | 3 | 0 | 12 | 0 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 90 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| Trifluralin | 0 | 0 | 0 | 1 | 0 | 1 | 10 | 0 | 0 | 0 | 0 | 95 | 1 | 81 | 11 | 0 | 0 | 0 | 0 | 0 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 30 | 1 | 0 | 0 | 0 | 5 | 23 | 0 | 0 |

## Table 3.4.7 Available lakes stations with data within the 2010–2011 period

| Substance | AL | AT | BA | BE | BG | CH | CY | CZ | DE | DK | EE | ES | FI | FR | GB | GR | HR | HU | IE | IS | IT | LI | LT | LU | LV | ME | MK | NL | NO | PL | PT | RO | RS | SE | SI | SK | TR | XK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,2,2-tetrachloroethene | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 37 | 0 | 71 | 0 | 0 | 1 | 0 | 22 | 0 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 88 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| 1,2-dichloroethane | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 52 | 0 | 71 | 52 | 0 | 1 | 0 | 22 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 85 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| 4-nonylphenol | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Alachlor | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 95 | 0 | 75 | 0 | 0 | 1 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 50 | 4 | 5 | 0 | 0 | 6 | 1 | 0 | 0 |
| Anthracene | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 89 | 0 | 72 | 0 | 0 | 0 | 0 | 12 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 88 | 8 | 4 | 0 | 0 | 0 | 8 | 0 | 0 |
| Atrazine | 0 | 0 | 0 | 1 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 115 | 0 | 71 | 0 | 0 | 0 | 0 | 12 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 67 | 1 | 0 | 0 | 0 | 5 | 1 | 0 | 0 |
| Benzene | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 52 | 0 | 71 | 52 | 0 | 0 | 0 | 22 | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 57 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Benzo(a)pyrene | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 4 | 0 | 0 | 28 | 0 | 72 | 3 | 0 | 0 | 0 | 12 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 87 | 8 | 4 | 0 | 0 | 0 | 8 | 0 | 0 |
| Cadmium | 0 | 0 | 5 | 3 | 9 | 0 | 8 | 0 | 0 | 0 | 10 | 0 | 12 | 24 | 13 | 0 | 0 | 0 | 22 | 1 | 99 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 17 | 85 | 4 | 3 | 0 | 102 | 1 | 0 | 0 | 0 |
| Cadmium dissolved | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 0 | 1 | 5 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 2 | 7 | 78 | 0 | 1 | 2 | 0 | 4 |
| Chlorfenvinphos | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 39 | 0 | 75 | 0 | 0 | 1 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 24 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0 |
| Chlorpyrifos | 0 | 0 | 0 | 1 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 98 | 0 | 71 | 0 | 0 | 1 | 0 | 17 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 25 | 1 | 0 | 0 | 0 | 5 | 1 | 0 | 0 |
| DDT, p,p' | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 103 | 0 | 71 | 52 | 0 | 1 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 88 | 0 | 5 | 0 | 0 | 6 | 1 | 0 | 0 |
| Di (2-ethylhexyl) phthalate (DEHP) | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 17 | 0 | 14 | 1 | 0 | 0 | 0 | 17 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 5 | 19 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 0 |
| Dichloromethane | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 32 | 0 | 71 | 52 | 0 | 1 | 0 | 22 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 87 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| Diuron | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 47 | 0 | 71 | 2 | 0 | 0 | 0 | 12 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 28 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Endosulfan | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 0 | 0 | 1 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Fluoranthene | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 4 | 0 | 0 | 98 | 0 | 72 | 11 | 0 | 0 | 0 | 12 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 88 | 8 | 5 | 0 | 0 | 0 | 8 | 0 | 0 |
| Hexachlorobenzene (HCB) | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 24 | 0 | 71 | 0 | 0 | 1 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 76 | 1 | 5 | 0 | 0 | 0 | 1 | 0 | 0 |
| Hexachlorobutadiene (HCBD) | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 19 | 0 | 75 | 0 | 0 | 1 | 0 | 22 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 60 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| Hexachlorocyclohexane (HCH) | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Isoproturon | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 48 | 0 | 71 | 0 | 0 | 0 | 0 | 12 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Lead | 0 | 0 | 5 | 3 | 12 | 0 | 8 | 0 | 4 | 0 | 10 | 109 | 11 | 66 | 12 | 0 | 0 | 0 | 22 | 1 | 96 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 17 | 88 | 4 | 4 | 0 | 102 | 1 | 0 | 0 | 0 |
| Lead dissolved | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 6 | 0 | 3 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 2 | 7 | 78 | 0 | 1 | 0 | 0 | 4 |
| Mercury | 0 | 0 | 5 | 3 | 2 | 0 | 8 | 0 | 3 | 0 | 10 | 8 | 10 | 38 | 11 | 0 | 0 | 0 | 22 | 1 | 97 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 80 | 0 | 3 | 0 | 3 | 1 | 0 | 0 | 0 |
| Mercury dissolved | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 2 | 8 | 78 | 0 | 1 | 1 | 0 | 0 |
| Naphthalene | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 4 | 0 | 0 | 52 | 0 | 72 | 0 | 0 | 0 | 0 | 22 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 85 | 6 | 5 | 0 | 0 | 0 | 8 | 0 | 0 |
| Nickel | 0 | 0 | 0 | 3 | 8 | 0 | 8 | 0 | 4 | 0 | 5 | 154 | 14 | 66 | 10 | 0 | 0 | 0 | 22 | 1 | 92 | 0 | 0 | 0 | 0 | 0 | 5 | 19 | 17 | 88 | 0 | 4 | 0 | 102 | 1 | 0 | 0 | 0 |
| Nickel dissolved | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 6 | 0 | 3 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 2 | 7 | 78 | 0 | 1 | 0 | 0 | 4 |
| Para-tert-octylphenol | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 1 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Pentachlorobenzene | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 69 | 1 | 5 | 0 | 0 | 0 | 1 | 0 | 0 |
| Pentachlorophenol | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 71 | 0 | 0 | 1 | 0 | 17 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 63 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Σ Cyclodienes | 0 | 0 | 0 | 0 | 3 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 3 | 0 | 1 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 24 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 0 |
| Σ DDT | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 52 | 0 | 1 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 51 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 0 |
| Σ HCH | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 3 | 0 | 1 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 5 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Σ Benzo(b)fluoranthene, Benzo(k)fluoranthene | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 3 | 0 | 0 | 0 | 12 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 |
| Σ Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 3 | 0 | 0 | 0 | 12 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 |
| Simazine | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 32 | 0 | 71 | 0 | 0 | 0 | 0 | 12 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 66 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0 |
| Tributyltin cation | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Trichloromethane | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 41 | 0 | 71 | 53 | 0 | 1 | 0 | 12 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 86 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| Trifluralin | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 95 | 0 | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 28 | 1 | 0 | 0 | 0 | 5 | 1 | 0 | 0 |

# 4 Current State

## *4.1 Hazardous substances in groundwater across Europe in 2002–2011*

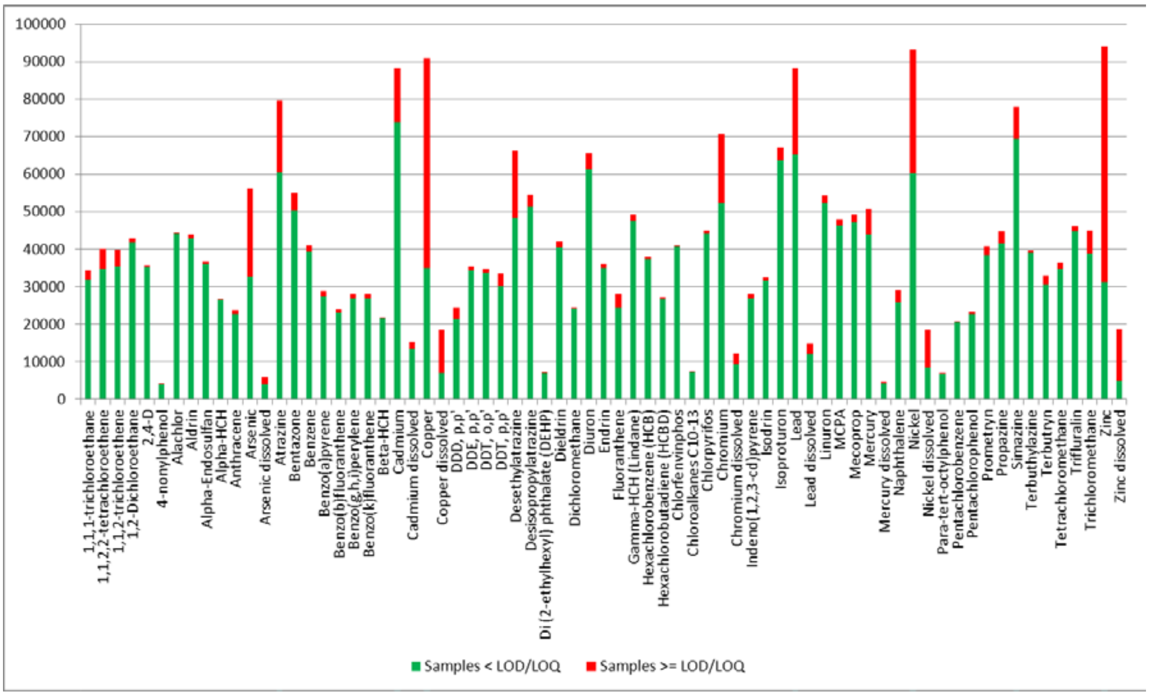
### 4.1.1 Overview

For each hazardous substance in groundwater, the number and percentage of samples with negative (samples < LOQ) and positive (samples >= LOQ) findings within the 2002–2011 period are shown in figures 4.1.1.1 and 4.1.1.2. The number and percentage of monitoring stations with negative (all samples in station < LOQ within 2002–2011 period) and positive findings (at least one sample in station >= LOQ within the 2002–2011 period) are shown in figures 4.1.1.3 and 4.1.1.4. Most substances are quantified in less than 10% of samples and only metals, some pesticides and 3 chlorinated compounds are quantified in higher proportion. As a higher percentage of stations is found in all cases, it is probable that many stations have rare quantification.

The maximum concentrations in groundwater are shown in figure 4.1.1.5. Metals and metalloids (As, Cu, Pb, Ni, Zn), 1,1,2,2-tetrachloroethene, pentachlorophenol, PAHs (anthracene, fluoranthene) and bentazone were reported in concentrations higher than 1000 µg/l.

Pesticides, polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), metals and metalloids are substances most frequently occurring and exceeding drinking water standards in groundwater across Europe. The most significant pollutants are triazine pesticides, especially atrazine and its metabolites, benzo(a)pyrene and lead. Those substances have exceeded the drinking water standards in more than 2% of monitoring stations during the last ten years.

**Figure 4.1.1.1 Number of negative/positive samples in groundwater in 2002–2011**




Note: The figures 4.1.1.1 – 4.1.1.4 do not reflect Austrian data. Contrary to the WISE-SoE dataset definition, Austrian data were reported as stations' annual averages (in order to avoid bias due to risk-based monitoring frequency). No specification of how many samples had been used for the annual average calculations and how many samples had been found below and above the LOD/LOQ have been provided to the ETC/ICM.

**Figure 4.1.1.2 Percentage of negative/positive samples in groundwater in 2002–2011**

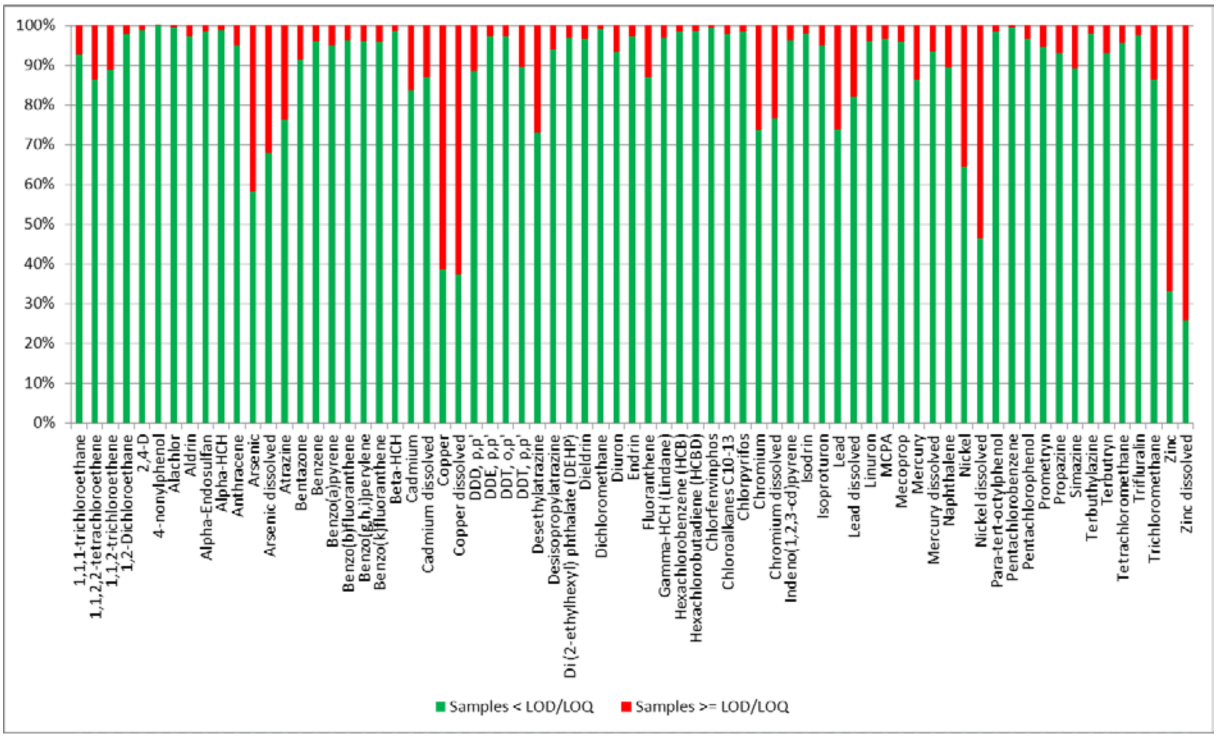



**Figure 4.1.1.3 Number of stations with negative/positive findings in groundwater in 2002–2011**

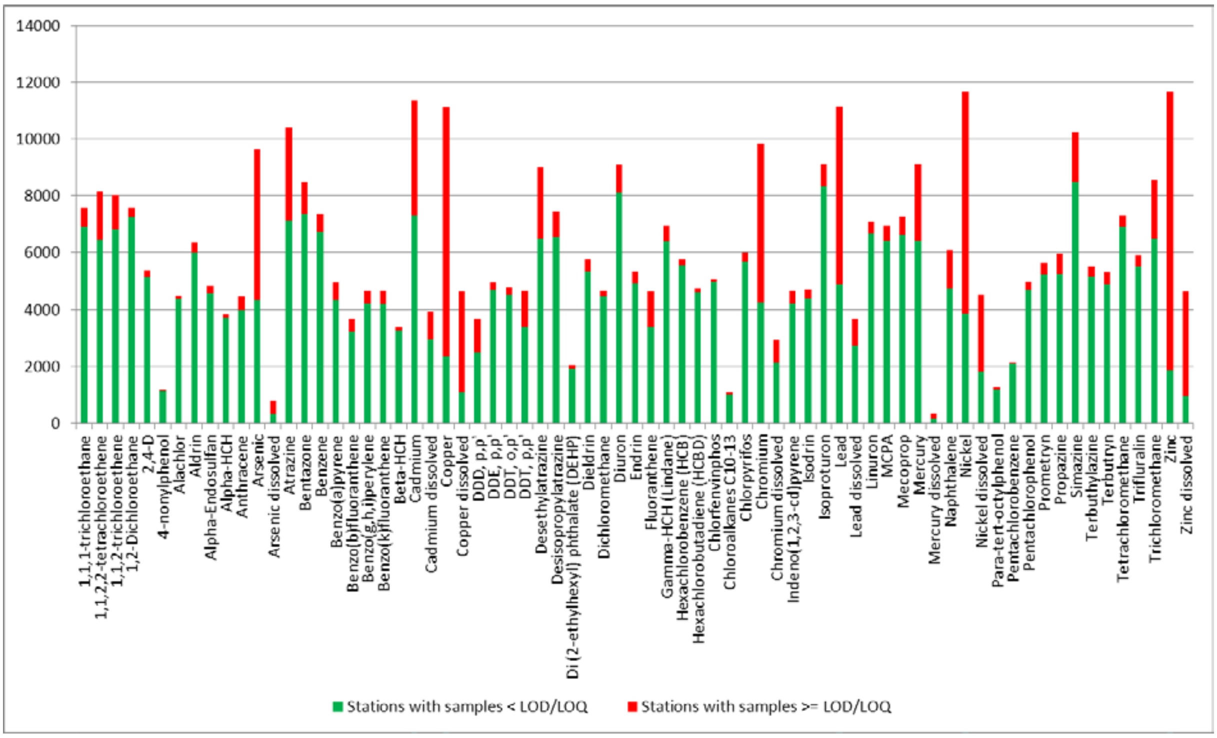


**Figure 4.1.1.4 Percentage of stations with negative/positive findings in groundwater in 2002–2011**

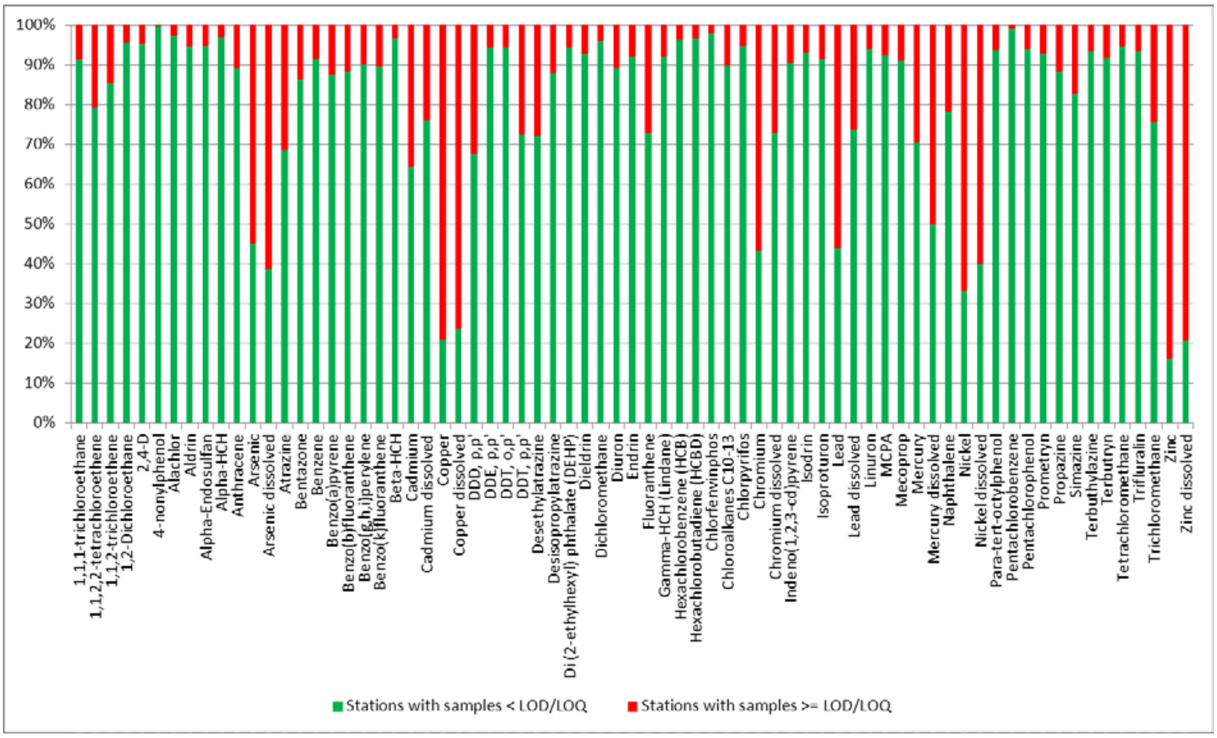



**Figure 4.1.1.5 Maximum reported groundwater concentrations in the 2002 –2011 period**

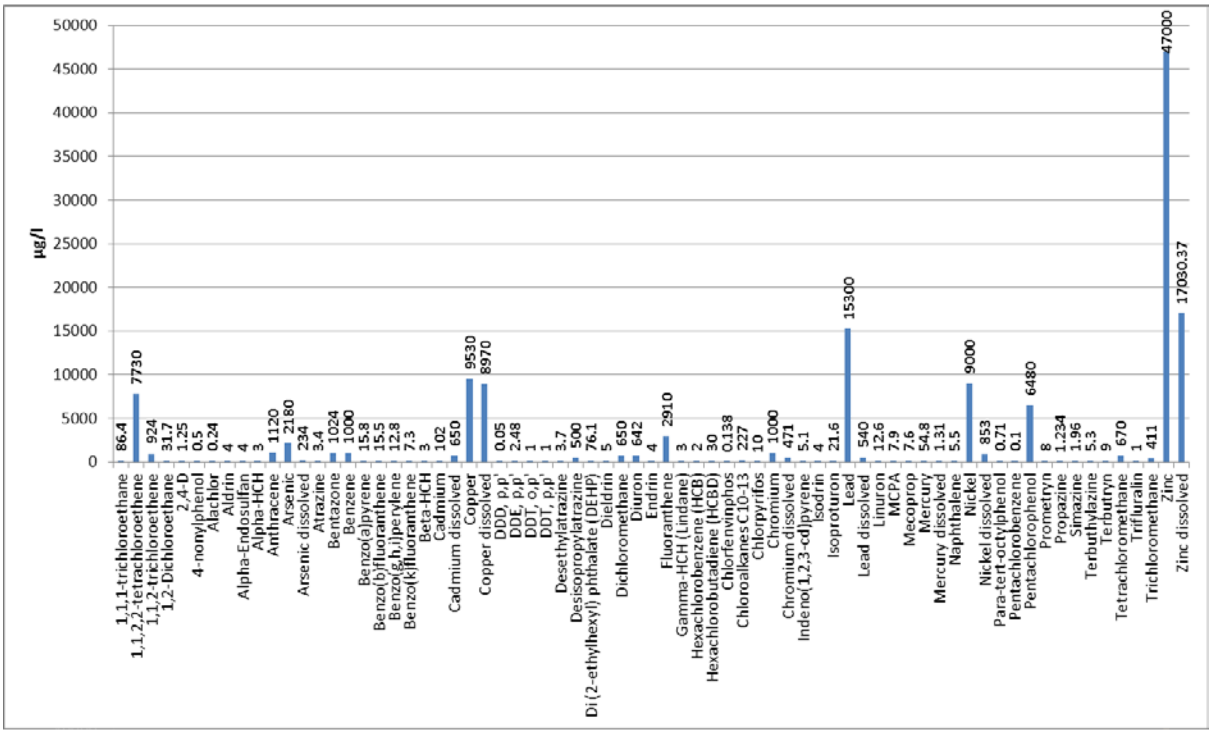


**Table 4.1.1.1 Maximum concentrations (µg/l) reported by countries in the 2002–2011**

| Country | 1,1,1-trichloroethane | 1,1,2,2-tetrachloroethene | 1,1,2-trichloroethene | 1,2-dichloroethane | 2,4-D | 4-nonylphenol | Alachlor | Aldrin | Alpha-Endosulfan | Alpha-HCH | Anthracene | Arsenic |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AL | | | | | | | | | | | | |
| AT | | | | 5 | | | 0.05 | 0.02 | | | | |
| BA | <0.01 | <0.01 | | | | | | 0.005 | 0.005 | | | 0.37 |
| BE | 4.8 | 29.6 | 9.69 | 13 | 0.029 | | <0.005 | <0.007 | | | 0.124 | 32.59 |
| BG | | 33 | 2.38 | | 0.01 | | 0.04 | 0.01 | 0.01 | 0.01 | | 400 |
| CY | | 45.6 | 1.05 | | | | 0.24 | | | | | 48 |
| CZ | | 80.4 | 64.5 | 6.58 | 0.45 | | 0.045 | 0.0041 | 0.032 | 0.035 | 1.2 | 76 |
| DE | 3.5 | | | 0.5 | <0.10 | | <0.02 | <0.001 | <0.001 | <0.005 | <0.02 | 252 |
| DK | 0.4 | 0.83 | 0.36 | <0.02 | 0.02 | | | | | | | 34 |
| EE | | | | | | | | | | | | 10.5 |
| ES | | | | | | | | | | | | |
| FI | | | | | | | | | | | | |
| FR | 31 | 63.4 | 184 | 2.7 | 0.57 | 0.5 | 0.2 | 0.03 | 0.14 | 0.07 | 5.2 | 1000 |
| GB | 86.4 | 7730 | 924 | 6.62 | 1.25 | 0.461 | | 4 | 4 | 3 | 1120 | 1790 |
| GR | | | | | | | | | | | | 170 |
| HR | 0.2 | 1.74 | | <5.00 | | | <0.10 | <0.01 | | <0.01 | <0.005 | 7.1 |
| HU | | | | | | | | | | | | |
| CH | 0.8 | 4.7 | 1.24 | | <0.02 | | <0.01 | | | | | 8.2 |
| IE | 0.8 | 0.253 | <1.00 | <1.00 | 0.1 | | | | | | 0.03 | 234 |
| IS | | | | <1.00 | | | | | | | 0.0176 | |
| IT | 55 | 250 | 35 | 0.38 | <0.05 | | 0.09 | <0.10 | <0.05 | <0.10 | | 309 |
| LI | | | | | | | | | | | | |
| LT | | | | | | | | <0.005 | <0.004 | <0.005 | | 29 |
| LU | | | | | | | | | | | | |
| LV | | <0.10 | <0.10 | <1.00 | | | | | | | | 12 |
| ME | | | | | | | | | | | | |
| MK | | | | | | | | | | | | |
| MT | | | | | | | | | | | | |
| NL | | | | | | | | | | | | |
| NO | | | | | | | | | | | | |
| PL | | | | | | | | <0.002 | <0.001 | <0.01 | 0.026 | 24.21 |
| PT | | | | | | | | | <0.02 | | | 24 |
| RO | | | | | | | | | | | | |
| RS | | | | | | | | 0.002 | | <0.001 | | |
| SE | | | | | | | | | | | | |
| SI | 4.64 | 180 | 66 | <1.00 | 0.011 | | <0.05 | <0.01 | 0.04 | <0.003 | | 2 |
| SK | 76 | 116 | 40 | 31.7 | <0.01 | <1.00 | <0.025 | <0.025 | | | 0.086 | 2180 |
| TR | | | | | | | | | | | | |
| XK | | | | | | | | | | | | |

## Table 4.1.1.1 continued

| Country | Arsenic dissolved | Atrazine | Bentazone | Benzene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(g,h,i)perylene | Benzo(k)fluoranthene | Beta-HCH | Cadmium | Cadmium dissolved | Copper |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AL | | | | | | | | | | | | 48 |
| AT | | 2.8 | 5.105 | | | | | | | 12.284 | | 110 |
| BA | | | | | | | | | | 2.42 | | 240 |
| BE | | 0.935 | 1024 | 0.23 | 0.098 | 0.103 | 0.092 | 0.054 | | 2.29 | | 1613 |
| BG | | 0.711 | | | | | | | 0.01 | 5 | 5 | 184 |
| CY | | 0.399 | | | | | | | | 2.84 | | 2147 |
| CZ | | 2.3 | 0.945 | 2.7 | 1.58 | 3.5 | 1.3 | 3.2 | 0.169 | 7.3 | | 891 |
| DE | 164 | 0.33 | 3.97 | <1.00 | <0.01 | <0.01 | <0.01 | <0.01 | <0.005 | 13.2 | 650 | 1010 |
| DK | | 0.43 | 0.71 | 0.66 | <0.01 | | <0.01 | | | 14 | | 1300 |
| EE | | | | <0.20 | | | | | | <0.20 | | |
| ES | | | | | | | | | | | | |
| FI | | | | | | | | | | | | |
| FR | | 1.48 | 1.267 | 3.7 | 15.8 | 15.5 | 12.8 | 7.3 | 1.2 | 9 | | 1000 |
| GB | | 3 | 306 | 1000 | 2.61 | 0.027 | 1.22 | 1.19 | 3 | 102 | 11 | 9530 |
| GR | | | | | | | | | | 47 | | 3400 |
| HR | 51.4 | 0.13 | | <0.50 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | 1.9 | 0.084 | 28.8 |
| HU | | | | | | | | | | | | |
| CH | | 0.14 | 0.095 | <0.10 | | | | | | <0.20 | | 4.3 |
| IE | 234 | 0.07 | 0.19 | <1.00 | <0.09 | | | | | 1.8 | 8.6 | 491 |
| IS | <0.05 | | | <0.20 | <0.005 | <0.005 | <0.005 | <0.005 | | 0.0053 | <0.002 | 0.902 |
| IT | | 1.32 | 1.82 | 0.3 | 0.02 | <0.01 | <0.01 | <0.01 | 0.05 | 1.42 | 2.1 | 1180 |
| LI | | | | | | | | | | | | |
| LT | | 3.4 | | | | | | | <0.005 | <0.30 | <0.30 | 25 |
| LU | | | | | 0.002 | 0.002 | 0.002 | 0.002 | | | | |
| LV | | | | | | | | | | 0.44 | | <1.90 |
| ME | | | | | | | | | | | | |
| MK | | | | | | | | | | | 0.206 | |
| MT | | | | | | | | | | | | |
| NL | | | | | | | | | | | | |
| NO | | | | | | | | | | | | |
| PL | | | | | 0.215 | 0.276 | 0.18 | 0.114 | <0.01 | 5.12 | 43.81 | 20 |
| PT | | | | | | | | | | 0.7 | | 130 |
| RO | | | | | | | | | | | | |
| RS | 194.5 | 3.009 | | | | | | | 0.014 | 21 | 1.2 | 320 |
| SE | | | | | | | | | | | 0.153 | |
| SI | | 0.64 | 1.09 | <1.00 | | | | | <0.004 | 2.3 | | 60 |
| SK | | 0.68 | 0.25 | 55.8 | 0.31 | 0.35 | 0.33 | 0.19 | | 5.3 | | 397 |
| TR | | | | | | | | | | | | |
| XK | | | | | | | | | | | | |

**Table 4.1.1.1 continued**

| Country | Copper dissolved | DDD, p,p' | DDE, p,p' | DDT, o,p' | DDT, p,p' | Desethylatrazine | Desisopropylatrazine | Di (2-ethylhexyl) phthalate | Dieldrin | Dichloromethane | Diuron | Endrin |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AL | | | | | | | | | | | | |
| AT | | | | | | 3.175 | | | | 43 | 3.7 | |
| BA | | | | | | | | 0.06 | 0.005 | | | 0.005 |
| BE | | | <0.014 | | 0.001 | 0.695 | 0.278 | | <0.007 | | 0.834 | <0.01 |
| BG | 46 | 0.05 | 0.01 | 0.05 | 0.01 | <0.005 | <0.005 | | 0.01 | | 0.04 | 0.01 |
| CY | | | | | | | | | | | | |
| CZ | | 0.002 | 0.0045 | 0.003 | 0.003 | 0.635 | 1.5 | 26.9 | 0.0087 | 3.1 | 0.78 | 0.036 |
| DE | 100 | | | <0.0008 | <0.0012 | 0.49 | 0.32 | | <0.001 | 50 | 1.1 | <0.001 |
| DK | 1100 | | | | | 3.7 | 0.33 | 3.7 | | 0.041 | 0.057 | |
| EE | | | | | | | | | | | | |
| ES | | | | | | | | | | | | |
| FI | | | | | | | | | | | | |
| FR | | 0.011 | <0.10 | 0.022 | 0.085 | 1.67 | 0.73 | 19 | 0.14 | 176 | 6.9 | 2 |
| GB | 8970 | 0.01 | 0.055 | 1 | 1 | 1.25 | 500 | 76.1 | 5 | 650 | 642 | 4 |
| GR | | | | | | | | | | | | |
| HR | 15.8 | <0.05 | <0.05 | <0.003 | <0.05 | | | 0.25 | <0.05 | <1.50 | | <0.05 |
| HU | | | | | | | | | | | | |
| CH | | | | | | 0.27 | 0.26 | | | | 0.021 | |
| IE | 506 | | | | <0.05 | | | | <0.05 | | 3.06 | |
| IS | 0.497 | | | | | | | | | <6.00 | | |
| IT | 782 | <0.05 | <0.10 | <0.10 | <0.10 | 0.47 | <0.05 | | <0.10 | 15 | 0.08 | <0.10 |
| LI | | | | | | | | | | | | |
| LT | 8 | | | | | | | | <0.005 | | | <0.005 |
| LU | | | | | | | | | | | | |
| LV | | | | | | | | | | | | |
| ME | | | | | | | | | | | | |
| MK | 7.05 | | | | | | | | | | | |
| MT | | | | | | | | | | | | |
| NL | | | | | | | | | | | | |
| NO | | | | | | | | | | | | |
| PL | 53.77 | <0.001 | <0.001 | | <0.01 | | | | <0.001 | | | <0.005 |
| PT | 72 | | | | | | | | | | | |
| RO | | | | | | | | | | | | |
| RS | 337.3 | 0.027 | | 0.027 | 0.006 | | | | 0.028 | | | 0.024 |
| SE | 15 | | | | | | | | | | | |
| SI | | <0.004 | <0.004 | <0.01 | <0.005 | 0.44 | 0.05 | | 0.005 | 7.4 | 0.005 | <0.005 |
| SK | | | 2.48 | | <0.025 | 0.26 | 0.14 | <5.00 | <0.025 | 8.4 | 0.09 | <0.025 |
| TR | | | | | | | | | | | | |
| XK | 0.1 | | | | | | | | | | | |

### Table 4.1.1.1 continued

| Country | Fluoranthene | Gamma-HCH | Hexachlorobenzene | Hexachlorobutadiene | Chlorfenvinphos | Chloroalkanes C10-13 | Chlorpyrifos | Chromium | Chromium dissolved | Indeno(1,2,3-cd)pyrene | Isodrin | Isoproturon |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AL | | | | | | | | 63.5 | | | | |
| AT | | 0.05 | 0.025 | | | | | | | | | 0.18375 |
| BA | | | | | | | | 10.31 | | | | |
| BE | 0.333 | 0.386 | <5.00 | <1.00 | 0.001 | | | 10.4 | 7.8 | 0.07 | | 0.825 |
| BG | | 0.01 | 0.015 | | 0.01 | | 0.05 | 52.7 | | 0.0004 | 0.01 | |
| CY | | | | | <0.02 | | 0.22 | 87.6 | | | | |
| CZ | 8.9 | 0.013 | 0.006 | <100.00 | | 12.4 | 1.34 | 991 | | 1.7 | 0.01 | 0.569 |
| DE | 0.08 | 0.05 | <0.001 | <0.01 | <0.01 | | <0.01 | 32 | 25.8 | <0.01 | <0.001 | 21.6 |
| DK | <0.01 | | | | | | | 9 | | <0.01 | | 0.01 |
| EE | | | | | | | | | | | | |
| ES | | | | | | | | | | | | |
| FI | | | | | | | | | | | | |
| FR | 32.9 | 0.13 | 0.013 | 30 | 0.02 | 227 | 0.02 | 1000 | | 5.1 | 2 | 1.2 |
| GB | 2910 | 3 | 2 | 7 | 0.138 | | 10 | 297 | 471 | 1.64 | 4 | 7.58 |
| GR | | | | | | | | | | | | |
| HR | <0.005 | <0.01 | <0.01 | <0.09 | <0.03 | | <0.03 | 13.4 | 10.7 | <0.005 | <0.05 | |
| HU | | | | | | | | | | | | |
| CH | | | | | | | | 4.8 | | | | <0.05 |
| IE | | 0.03 | | | | | | 36 | 36 | | | 0.08 |
| IS | 0.0338 | | | | | | | | | <0.005 | | |
| IT | | <0.10 | | <0.10 | | | <0.10 | 190 | | <0.01 | | <0.05 |
| LI | | | | | | | | | | | | |
| LT | | <0.005 | <0.005 | | <1.00 | | <1.00 | | 4 | | | |
| LU | 0.002 | | | | | | | | | 0.002 | | |
| LV | | | | | | | | <1.40 | | | | |
| ME | | | | | | | | | | | | |
| MK | | | | | | | | | 5.4 | | | |
| MT | | | | | | | | | | | | |
| NL | | | | | | | | | | | | |
| NO | | | | | | | | | | | | |
| PL | 0.219 | <0.01 | | | <0.02 | | | 22.47 | | 0.125 | | |
| PT | | <0.02 | <0.02 | | | | | 220 | | | | |
| RO | | | | | | | | | | | | |
| RS | | 0.022 | <0.001 | | | | | | 20.1 | | | |
| SE | | | | | | | | 1.3 | | | | |
| SI | | <0.003 | <0.003 | 0.0006 | <0.05 | | <0.05 | 17 | | | | 0.24 |
| SK | 1.39 | 0.0125 | 0.0125 | 2.9 | <0.01 | | <0.02 | 67 | | 0.26 | <0.0125 | 0.07 |
| TR | | | | | | | | | | | | |
| XK | | | | | | | | | 0.05 | | | |

## Table 4.1.1.1 continued

| Country | Lead | Lead dissolved | Linuron | MCPA | Mecoprop | Mercury | Mercury dissolved | Naphthalene | Nickel | Nickel dissolved | Para-tert-octylphenol | Pentachlorobenzene |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AL | 140 | | | | | | | | 70 | | | |
| AT | 44 | | 0.4 | | | 0.77 | | | 74 | | | |
| BA | 3.54 | | | | | 0.3 | | | 2.7 | | | |
| BE | 38 | | 0.073 | 0.028 | 0.029 | 2 | 0.09 | 0.031 | 405.8 | | | |
| BG | 69.4 | 26 | | | | 2 | | | 190 | 25.5 | | |
| CY | 33.4 | | | | | 1 | | | 158 | | | |
| CZ | 230 | | 12.6 | 0.72 | 0.35 | 54.8 | | 0.65 | 150 | | | 0.1 |
| DE | 147 | 36 | <0.05 | <0.10 | 2.116 | 0.24 | | <0.10 | 200 | 190 | | |
| DK | 61 | | <0.01 | 0.28 | 7.6 | 0.0075 | | 0.37 | 490 | 490 | | |
| EE | 5.2 | | | | | <1.00 | | | | | | |
| ES | | | | | | | | | | | | |
| FI | | | | | | | | | | | | |
| FR | 360 | | 0.24 | 7.9 | 0.77 | 3.1 | | 0.57 | 292 | | 0.71 | 0.1 |
| GB | 15300 | 495 | 2.22 | 1.52 | 5.09 | 34.6 | | 5.5 | 9000 | 253 | 0.037 | <0.0005 |
| GR | 2700 | | | | | | | | 560 | | | |
| HR | 57.5 | 9 | | | | <0.10 | 0.009 | 0.18 | 5.1 | 7 | | <0.002 |
| HU | | | | | | | | | | | | |
| CH | <1.00 | | | <0.02 | 0.048 | <0.50 | | <0.05 | 11 | | | |
| IE | 43 | 84.1 | | 0.33 | 1.1 | 1.31 | 1.31 | <0.20 | 134.3 | 853 | | |
| IS | 0.0666 | 0.019 | | | | <0.002 | <0.002 | <0.20 | 0.191 | 0.32 | | |
| IT | 56.5 | 540 | <0.10 | <0.05 | <0.05 | 4 | | | 914 | 189 | | |
| LI | | | | | | | | | | | | |
| LT | <2.00 | 2 | | | | | | | | 95 | | |
| LU | | | | | | | | | | | | |
| LV | 21 | | | | | <0.06 | | | 18 | | | |
| ME | | | | | | | | | | | | |
| MK | | 34.4 | | | | | | | | 29.95 | | |
| MT | | | | | | | | | | | | |
| NL | | | | | | | | | | | | |
| NO | | | | | | | | | | | | |
| PL | 10 | 9.12 | | | | 1.383 | | | 189 | 217 | | |
| PT | 12 | <5.00 | | | | <0.50 | | | 460 | <5.00 | | |
| RO | | | | | | | | | | | | |
| RS | 106 | 15.8 | | | | 1.6 | 0.3 | | 34 | 41.1 | | |
| SE | | 4.4 | | | | | | | | 7.4 | | |
| SI | 35 | | <0.05 | <0.05 | 0.48 | 0.15 | | | 54 | | | |
| SK | 56 | | | <0.02 | | 23.9 | | 0.54 | 174 | | <1.00 | <0.025 |
| TR | | | | | | | | | | | | |
| XK | | | | | | | | | | | | |

**Table 4.1.1.1 continued**

| Country | Pentachlorophenol | Prometryn | Propazine | Simazine | Terbuthylazine | Terbutryn | Tetrachloromethane | Trifluralin | Trichloromethane | Zinc | Zinc dissolved |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AL | | | | | | | | | | 1160 | |
| AT | | | | 0.23625 | | | | | | 12000 | |
| BA | | | | | | | | | | 1630 | |
| BE | 0.034 | <0.003 | 0.026 | 0.347 | 1.595 | <0.003 | 0.6 | <0.015 | 22.5 | 7087 | |
| BG | | 0.039 | 0.292 | 0.229 | <0.005 | 0.0006 | 0.02 | 0.04 | | 2001 | 3930 |
| CY | | | 1.234 | 0.55 | | | | 0.15 | | 2242 | |
| CZ | 0.025 | 1.67 | | 0.095 | 5.3 | | 17.4 | 0.055 | 109 | 1700 | |
| DE | <0.05 | 0.13 | 0.04 | 0.067 | 0.16 | 0.03 | 0.025 | <0.01 | 23 | 23000 | 2200 |
| DK | 0.12 | | | 0.27 | 0.01 | | 0.07 | | 6.6 | 2000 | 2000 |
| EE | | | | | | | | | | | |
| ES | | | | | | | | | | | |
| FI | | | | | | | | | | | |
| FR | 2 | 0.19 | 0.09 | 1.3 | 0.26 | <0.10 | 670 | 0.1 | 254 | 40000 | |
| GB | 6480 | 8 | 0.093 | 1.96 | | 9 | 8.13 | 1 | 411 | 30800 | 14400 |
| GR | | | | | | | | | | 47000 | |
| HR | 2 | | | <0.03 | | | <0.30 | | 0.78 | 5619 | 4490 |
| HU | | | | | | | | | | | |
| CH | | | <0.01 | 0.027 | 0.014 | 0.04 | <0.05 | | 0.73 | 30 | |
| IE | | | | <0.025 | | | | | | 3783 | 3783 |
| IS | | | | | | | | | <1.00 | 2.16 | 0.605 |
| IT | | 0.02 | 0.03 | 0.53 | 1.4 | <0.10 | 2.7 | 0.015 | 250 | 8150 | 5300 |
| LI | | | | | | | | | | | |
| LT | | <1.00 | <1.00 | <1.00 | | | | <1.00 | | 116 | 590 |
| LU | | | | | | | | | | | |
| LV | | | | | | | | | <1.00 | 95 | |
| ME | | | | | | | | | | | |
| MK | | | | | | | | | | | 960 |
| MT | | | | | | | | | | | |
| NL | | | | | | | | | | | |
| NO | | | | | | | | | | | |
| PL | | | | | | | | | | 3046 | 17030.37 |
| PT | | | | | | | | | | 550 | 160 |
| RO | | | | | | | | | | | |
| RS | | | 0.013 | 0.29 | | | | | | 20 | 3866 |
| SE | | | | | | | | | | | 120 |
| SI | <0.10 | 0.239 | <0.05 | 0.17 | 0.649 | 0.18 | <0.20 | <0.05 | 12 | 13000 | |
| SK | 271 | 1.24 | | 0.27 | 0.34 | 0.09 | 0.95 | <0.02 | 31.2 | 3950 | |
| TR | | | | | | | | | | | |
| XK | | | | | | | | | | | 0.115 |

### 4.1.2 Occurrence and concentrations of hazardous substances in groundwater

Figures of the mean concentrations and numbers of stations with data from the period 2002–2011 based on the indicator are shown in figures 4.1.2.1a – 4.1.2.51a for selected hazardous substances found in groundwaters in Europe

Figures showing the percentage of stations in the 2010–2011 period for each country in each of the indicator categories for selected hazardous substances in groundwater are shown in figures 4.1.2.1b – 4.1.2.51b.

Maps of the maximum concentrations from the 2010–2011 period based on the indicator for selected hazardous substances in groundwater across Europe in individual countries are shown in figures 4.1.2.1c – 4.1.2.51c.

**1,1,2,2-tetrachloroethene**

The analysis is based on data from 15 countries for the 2002–2011 period and from 13 countries for 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 13.5 % of samples (Fig. 4.1.1.2) and in 20.8 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 4200 stations (Fig. 4.1.2.1a). 1,1,2,2-tetrachloroethene occurred in 12 of the 13 assessed countries (Fig. 4.1.2.1b) and exceeded the drinking water standard in 8 countries in 2010–2011 (Fig. 4.1.2.1c). The highest concentration of 7730 μg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**1,1,2-trichloroethene**

The analysis is based on data from 13 countries for the 2002–2011 and from 11 countries for 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 11.2 % of samples (Fig. 4.1.1.2) and in 14.7 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 4200 stations (Fig. 4.1.2.2a). 1,1,2,-trichloroethene occurred in 11 of the 11 assessed countries (Fig. 4.1.2.2b) and exceeded the drinking water standard in 5 countries in 2010–2011 (Fig. 4.1.2.2c). The highest concentration of 924 μg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**1,2-dichloroethane**

The analysis is based on data from 14 countries for the 2002–2011 period and 11 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 2.3 % of samples (Fig. 4.1.1.2) and in 4.5 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 4000 stations (Fig. 4.1.2.3a). 1,2,-dichloroethane occurred in 5 of the 11 assessed countries (Fig. 4.1.2.3b) and exceeded the drinking water standard in 1 country in 2010–2011 (Fig. 4.1.2.3c). The highest concentration of 31.7 μg/l was reported by Slovakia in the 2002–2011 period, see table 4.1.1.1.

**2,4-D**

The analysis is based on data from 12 countries for the 2002–2011 period and 9 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 1.2 % of samples (Fig. 4.1.1.2) and in 4.8 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 2500 stations (Fig. 4.1.2.4a). 2,4-D occurred in 5 of the 9 assessed countries (Fig. 4.1.2.4b) and exceeded the drinking water standard in 3 countries in 2010–2011 (Fig. 4.1.2.4c). The highest concentration of 1.25 μg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Alachlor**

The analysis is based on data from 12 countries for the 2002–2011 period and 11 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 0.4 % of samples (Fig. 4.1.1.2) and in 2.8 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 3000 stations (Fig. 4.1.2.5a). Alachlor occurred in 5 of the 11 assessed countries (Fig. 4.1.2.5b) and exceeded the drinking water standard in 2 countries in 2010–2011 (Fig. 4.1.2.5c). The highest concentration of 0.24 μg/l was reported by Cyprus in the 2002–2011 period, see table 4.1.1.1.

**Aldrin**

The analysis is based on data from 15 countries for the 2002–2011 period and 9 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 5 % of samples (Fig. 4.1.1.2) and in 15.3 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 2400 stations (Fig. 4.1.2.6a). Aldrin occurred in 3 of the 9 assessed countries (Fig. 4.1.2.6b) and exceeded the drinking water standard in 1 country in 2010–2011 (Fig. 4.1.2.6c). The highest concentration of 4 μg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Alpha endosulfan**

The analysis is based on data from 11 countries for the 2002–2011 period and 6 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 1.7 % of samples (Fig. 4.1.1.2) and in 5.3 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 2000 stations (Fig. 4.1.2.7a). Alpha endosulfan occurred in 2 of the 6 assessed countries (Fig. 4.1.2.7b) and exceeded the drinking water standard in 1 country in 2010–2011 (Fig. 4.1.2.7c). The highest concentration of 4 μg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Alpha HCH**

The analysis is based on data from 11 countries for the 2002–2011 period and 8 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 1.2 % of samples (Fig. 4.1.1.2) and in 3.1 % of stations (Fig. 4.1.1.4). The number of reported stations has substantially increased since 2002 and lately has been oscillating around 2300 stations (Fig. 4.1.2.8a). Alpha HCH occurred in 4 of the 8 assessed countries (Fig. 4.1.2.8b) and exceeded the drinking water standard in 1 country in 2010–2011 (Fig. 4.1.2.8c). The highest concentration of 3 μg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Arsenic**

The analysis is based on data from 21 countries for the 2002–2011 period and 19 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 41.8 % of samples (Fig. 4.1.1.2) and in 54.9 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 5000 stations (Fig. 4.1.2.9a). Arsenic occurred in 19 of the 19 assessed countries (Fig. 4.1.2.9b) and exceeded the drinking water standard in 13 countries in 2010–2011 (Fig. 4.1.2.9c). The highest concentration of 2180 μg/l was reported by Slovakia in the 2002–2011 period, see table 4.1.1.1.

**Arsenic dissolved**

The analysis is based on data from 5 countries for the 2002–2011 period and 5 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 32.1 % of samples (Fig. 4.1.1.2) and in 61.3 % of stations (Fig. 4.1.1.4). The number of reported stations has been increasing since 2002 (Fig. 4.1.2.10a). Dissolved arsenic occurred in 4 of the 5 assessed countries (Fig. 4.1.2.10b) and exceeded the drinking water standard in 4 countries in 2010–2011 (Fig. 4.1.2.10c). The highest concentration of 234 μg/l was reported by Ireland in the 2002–2011 period, see table 4.1.1.1.

**Atrazine**

The analysis is based on data from 17 countries for the 2002–2011 period and 14 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 23.9 % of samples (Fig. 4.1.1.2) and in 31.5 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 5600 stations (Fig. 4.1.2.11a). Atrazine occurred in 14 of the 14 assessed countries (Fig. 4.1.2.11b) and exceeded the drinking water standard in 9 countries in 2010–2011 (Fig. 4.1.2.11c). The highest concentration of 3.4 μg/l was reported by Lithuania in the 2002–2011 period, see table 4.1.1.1.

**Bentazone**

The analysis is based on data from 12 countries for the 2002–2011 period and 11 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 8.6 % of samples (Fig. 4.1.1.2) and in 13.6 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 4400 stations (Fig. 4.1.2.12a). Bentazone occurred in 11 of the 11 assessed countries (Fig. 4.1.2.12b) and exceeded the drinking water standard in 10 countries in 2010–2011 (Fig. 4.1.2.12c). The highest concentration of 1024 µg/l was reported by Belgium in the 2002–2011 period, see table 4.1.1.1.

**Benzene**

The analysis is based on data from 14 countries for the 2002–2011 period and 13 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 4.1 % of samples (Fig. 4.1.1.2) and in 8.7 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 3700 stations (Fig. 4.1.2.13a). Benzene occurred in 5 of the 13 assessed countries (Fig. 4.1.2.13b) and exceeded the drinking water standard in 3 countries in 2010–2011 (Fig. 4.1.2.13c). The highest concentration of 1000 µg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Benzo(a)pyrene**

The analysis is based on data from 13 countries for the 2002–2011 period and 10 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 5.1 % of samples (Fig. 4.1.1.2) and in 12.4 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 2300 stations (Fig. 4.1.2.14a). Benzo(a)pyrene occurred in 7 of the 10 assessed countries (Fig. 4.1.2.14b) and exceeded the drinking water standard in 7 countries in 2010–2011 (Fig. 4.1.2.14c). The highest concentration of 15.8 µg/l was reported by France in the 2002–2011 period, see table 4.1.1.1.

**Beta HCH**

The analysis is based on data from 11 countries for the 2002–2011 period and 8 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 1.5 % of samples (Fig. 4.1.1.2) and in 3.4 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 1900 stations (Fig. 4.1.2.15a). Beta HCH occurred in 5 of the 8 assessed countries (Fig. 4.1.2.15b) and exceeded the drinking water standard in 5 countries in 2010–2011 (Fig. 4.1.2.15c). The highest concentration of 3 µg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1

**Cadmium**

The analysis is based on data from 24 countries for the 2002–2011 period and 15 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 16.3 % of samples (Fig. 4.1.1.2) and in 35.7 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 6000 stations (Fig. 4.1.2.16a). Cadmium occurred in 15 of the 15 assessed countries (Fig. 4.1.2.16b) and exceeded the drinking water standard in 4 countries in 2010–2011 (Fig. 4.1.2.16c). The highest concentration of 102 µg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Cadmium dissolved**

The analysis is based on data from 12 countries for the 2002–2011 period and 11 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 12.9 % of samples (Fig. 4.1.1.2) and in 24 % of stations (Fig. 4.1.1.4). The number of reported stations has rapidly increased since 2002 and lately has been oscillating around 2900 stations (Fig. 4.1.2.17a). Dissolved cadmium occurred in 9 of the 11 assessed countries (Fig. 4.1.2.17b) and exceeded the drinking water standard in 3 countries in 2010–2011 (Fig. 4.1.2.17c). The highest concentration of 650 µg/l was reported by Germany in the 2002–2011 period, see table 4.1.1.1.

**Chlorfenvinphos**

The analysis is based on data from 11 countries for the 2002–2011 period and 9 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 0.5 % of samples (Fig. 4.1.1.2) and in 2 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 2800 stations (Fig. 4.1.2.18a). Chlorfenvinphos occurred in 1 of the 9 assessed countries (Fig. 4.1.2.18b) and did not exceed the drinking water standard in 2010–2011 (Fig. 4.1.2.18c). The highest concentration of 0.138 µg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Chlorpyrifos**

The analysis is based on data from 11 countries for the 2002–2011 period and 8 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 1.6 % of samples (Fig. 4.1.1.2) and in 5.2 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 3500 stations (Fig. 4.1.2.19a). Chlorpyrifos occurred in 4 of the 8 assessed countries (Fig. 4.1.2.19b) and exceeded the drinking water standard in 1 country in 2010–2011 (Fig. 4.1.2.19c). The highest concentration of 10 µg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Chromium**

The analysis is based on data from 20 countries for the 2002–2011 period and 16 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 26.3 % of samples (Fig. 4.1.1.2) and in 56.7 % of stations (Fig. 4.1.1.4). The number of reported stations has rapidly increased since 2002 and lately has been oscillating around 5000 stations (Fig. 4.1.2.20a). Chromium occurred in 16 of the 16 assessed countries (Fig. 4.1.2.20b) and exceeded the drinking water standard in 8 countries in 2010–2011 (Fig. 4.1.2.20c). The highest concentration of 1000 µg/l was reported by France in the 2002–2011 period, see table 4.1.1.1.

**Chromium dissolved**

The analysis is based on data from 10 countries for the 2002–2011 period and 8 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 23.4 % of samples (Fig. 4.1.1.2) and in 27.2 % of stations (Fig. 4.1.1.4). The number of reported stations has been slightly increased since 2002 and rapidly increased since 2010 (Fig. 4.1.2.21a). Dissolved chromium occurred in 8 of the 8 assessed countries (Fig. 4.1.2.21b) and exceeded the drinking water standard in 1 country in 2010–2011 (Fig. 4.1.2.21c). The highest concentration of 471µg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Copper**

The analysis is based on data from 24 countries for the 2002–2011 period and 15 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 61.4 % of samples (Fig. 4.1.1.2) and in 79.1 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 5900 stations (Fig. 4.1.2.22a). Copper occurred in 15 of the 15 assessed countries (Fig. 4.1.2.22b) and exceeded the drinking water standard in 2 countries in 2010–2011 (Fig. 4.1.2.22c). The highest concentration of 9530 µg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Copper dissolved**

The analysis is based on data from 15 countries for the 2002–2011 period and 13 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 62.6 % of samples (Fig. 4.1.1.2) and in 76.2 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 3000 stations (Fig. 4.1.2.23a). Dissolved copper occurred in 13 of the 13 assessed countries (Fig. 4.1.2.23b) and exceeded the drinking water standard in 1 country in 2010–2011 (Fig. 4.1.2.23c). The highest concentration of 8970 µg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**DDD p,p'**

The analysis is based on data from 9 countries for the 2002–2011 period and 7 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 11.4 % of samples (Fig. 4.1.1.2) and in 32.4 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 1400 stations (Fig. 4.1.2.24a). DDD p,p' occurred in 2 of the 7 assessed countries (Fig. 4.1.2.24b) and did not exceed the drinking water standard in 2010–2011 (Fig. 4.1.2.24c). The highest concentration of 0.027µg/l was reported by the Republic of Serbia in the 2002–2011 period, see table 4.1.1.1.

**DDE p,p'**

The analysis is based on data from 10 countries for the 2002–2011 period and 8 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 2.8 % of samples (Fig. 4.1.1.2) and in 5.6 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 2200 stations (Fig. 4.1.2.25a). DDE p,p' occurred in 2 of the 8 assessed countries (Fig. 4.1.2.25b) and did not exceed the drinking water standard in 2010–2011 (Fig. 4.1.2.25c). The highest concentration of 2.48µg/l was reported by Slovakia in the 2002–2011 period, see table 4.1.1.1.

**DDT o,p'**

The analysis is based on data from 9 countries for the 2002–2011 period and 7 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 2.7 % of samples (Fig. 4.1.1.2) and in 5.7 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 2200 stations (Fig. 4.1.2.26a). DDT o,p' occurred in 2 of the 7 assessed countries (Fig. 4.1.2.26b) and did not exceed the drinking water standard in 2010–2011 (Fig. 4.1.2.26c). The highest concentration of 1 µg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**DDT p,p'**

The analysis is based on data from 13 countries for the 2002–2011 period and 9 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 10.4 % of samples (Fig. 4.1.1.2) and in 27.7 % of stations (Fig. 4.1.1.4). The number of reported stations has rapidly increased since 2002 and lately has been oscillating around 2200 stations (Fig. 4.1.2.27a). DDT p,p' occurred in 3 of the 9 assessed countries (Fig. 4.1.2.27b) and did not exceed the drinking water standard in 2010–2011 (Fig. 4.1.2.27c). The highest concentration of 1 µg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Desethylatrazine**

The analysis is based on data from 12 countries for the 2002–2011 period and 11 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 27 % of samples (Fig. 4.1.1.2) and in 28 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 5300 stations (Fig. 4.1.2.28a). Desethylatrazine occurred in 11 of the 11 assessed countries (Fig. 4.1.2.28b) and exceeded the drinking water standard in all 11 countries in 2010–2011 (Fig. 4.1.2.28c). The highest concentration of 3.7 μg/l was reported by Denmark in the 1999–2009 period, see table 4.1.1.1.

**Desisopropylatrazine**

The analysis is based on data from 11 countries for the 2002–2011 period and 10 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 6.1 % of samples (Fig. 4.1.1.2) and in 12 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 4600 stations (Fig. 4.1.2.29a). Desisopropylatrazine occurred in 8 of the 10 assessed countries (Fig. 4.1.2.29b) and exceeded the drinking water standard in 6 countries in 2010–2011 (Fig. 4.1.2.29c). The highest concentration of 500 μg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Dieldrin**

The analysis is based on data from 15 countries for the 2002–2011 period and 9 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 3.4 % of samples (Fig. 4.1.1.2) and in 7.3 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 2200 stations (Fig. 4.1.2.30a). Dieldrin occurred in 3 of the 9 assessed countries (Fig. 4.1.2.30b) and exceeded the drinking water standard in 2 countries in 2010–2011 (Fig. 4.1.2.30c). The highest concentration of 5 μg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Diuron**

The analysis is based on data from 13 countries for the 2002–2011 period and 10 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 6.7 % of samples (Fig. 4.1.1.2) and in 10.9 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 4100 stations (Fig. 4.1.2.31a). Diuron occurred in 7 of the 10 assessed countries (Fig. 4.1.2.31b) and exceeded the drinking water standard in 4 countries in 2010–2011 (Fig. 4.1.2.31c). The highest concentration of 642 μg/l was reported by France in the 2002–2011 period, see table 4.1.1.1.

**Endrin**

The analysis is based on data from 14 countries for the 2002–2011 period and 9 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 2.6 % of samples (Fig. 4.1.1.2) and in 8 % of stations (Fig. 4.1.1.4). The number of reported stations has been increasing since 2002 and lately has been oscillating around 2200 stations (Fig. 4.1.2.32a). Endrin occurred in 3 of the 9 assessed countries (Fig. 4.1.2.32b) and exceeded the drinking water standard in 1 country in 2010–2011 (Fig. 4.1.2.32c). The highest concentration of 4 μg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Gamma HCH**

The analysis is based on data from 16 countries for the 2002–2011 period and 11 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 5.2 % of samples (Fig. 4.1.1.2) and in 17.1 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 2700 stations (Fig. 4.1.2.33a). Gamma HCH occurred in 5 of the 11 assessed countries (Fig. 4.1.2.33b) and exceeded the drinking water standard in 1 country in 2010–2011 (Fig. 4.1.2.33c). The highest concentration of 3 μg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Hexachlorobenzene**

The analysis is based on data from 13 countries for the 2002–2011 period and 6 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 4.3 % of samples (Fig. 4.1.1.2) and in 14.7 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 2000 stations (Fig. 4.1.2.34a). Hexachlorobenzene occurred in 3 of the 6 assessed countries (Fig. 4.1.2.34b) and exceeded the drinking water standard in 1 country in 2010–2011 (Fig. 4.1.2.34c). The highest concentration of 2 µg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Isodrin**

The analysis is based on data from 7 countries for the 2002–2011 period and 5 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 2 % of samples (Fig. 4.1.1.2) and in 7 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 2000 stations (Fig. 4.1.2.35a). Isodrin occurred in 2 of the 5 assessed countries (Fig. 4.1.2.35b) and exceeded the drinking water standard in 1 country in 2010–2011 (Fig. 4.1.2.35c). The highest concentration of 4 µg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1

**Isoproturon**

The analysis is based on data from 12 countries for the 2002–2011 period and 9 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 6.5 % of samples (Fig. 4.1.1.2) and in 15.5 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 4100 stations (Fig. 4.1.2.36a). Isoproturon occurred in 7 of the 9 assessed countries (Fig. 4.1.2.36b) and exceeded the drinking water standard in 5 countries in 2010–2011 (Fig. 4.1.2.36c). The highest concentration of 21.6 µg/l was reported by Germany in the 2002–2011 period, see table 4.1.1.1.

**Lead**

The analysis is based on data from 25 countries for the 2002–2011 period and 16 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 26.2 % of samples (Fig. 4.1.1.2) and in 56 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 5500 stations (Fig. 4.1.2.37a). Lead occurred in 15 of the 16 assessed countries (Fig. 4.1.2.37b) and exceeded the drinking water standard in 12 countries in 2010–2011 (Fig. 4.1.2.37c). The highest concentration of 15300 µg/l was reported by the United Kingdom in the 1999–2009 period, see table 4.1.1.1.

**Lead dissolved**

The analysis is based on data from 13 countries for the 2002–2011 period and 12 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 18 % of samples (Fig. 4.1.1.2) and in 26.2 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 2800 stations (Fig. 4.1.2.38a). Dissolved lead occurred in 11 of the 12 assessed countries (Fig. 4.1.2.38b) and exceeded the drinking water standard in 5 countries in 2010–2011 (Fig. 4.1.2.38c). The highest concentration of 495 µg/l was reported by the United Kingdom in the 1999–2009 period, see table 4.1.1.1.

**Linuron**

The analysis is based on data from 9 countries for the 2002–2011 period and 7 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 6 % of samples (Fig. 4.1.1.2) and in 14.8 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 3700 stations (Fig. 4.1.2.39a). Linuron occurred in 4 of the 7 assessed countries (Fig. 4.1.2.39b) and exceeded the drinking water standard in 2 countries in 2010–2011 (Fig. 4.1.2.39c). The highest concentration of 12.6 μg/l was reported by the Czech Republic in the 2002–2011 period, see table 4.1.1.1.

**MCPA**

The analysis is based on data from 11 countries for the 2002–2011 period and 9 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 3.5 % of samples (Fig. 4.1.1.2) and in 7.7 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 3400 stations (Fig. 4.1.2.40a). MCPA occurred in 4 of the 9 assessed countries (Fig. 4.1.2.40b) and exceeded the drinking water standard in 3 countries in 2010–2011 (Fig. 4.1.2.40c). The highest concentration of 7.9 μg/l was reported by France in the 2002–2011 period, see table 4.1.1.1.

**Mecoprop**

The analysis is based on data from 10 countries for the 2002–2011 period and 8 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 4.3 % of samples (Fig. 4.1.1.2) and in 8.9 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 3300 stations (Fig. 4.1.2.41a). Mecoprop occurred in 5 of the 8 assessed countries (Fig. 4.1.2.41b) and exceeded the drinking water standard in 4 countries in 2010–2011 (Fig. 4.1.2.41c). The highest concentration of 7.6 μg/l was reported by Denmark in the 1999–2009 period, see table 4.1.1.1.

**Mercury**

The analysis is based on data from 22 countries for the 2002–2011 period and 16 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 13.6 % of samples (Fig. 4.1.1.2) and in 29.5 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 4100 stations (Fig. 4.1.2.42a). Mercury occurred in 11 of the 16 assessed countries (Fig. 4.1.2.42b) and exceeded the drinking water standard in 4 countries in 2010–2011 (Fig. 4.1.2.42c). The highest concentration of 54.8 μg/l was reported by the Czech Republic in the 2002–2011 period, see table 4.1.1.1.

**Mercury dissolved**

The analysis is based on data from 5 countries for the 2007–2011 period and 5 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 6.5 % of samples (Fig. 4.1.1.2) and in 50.1 % of stations (Fig. 4.1.1.4). The number of reported stations has been slightly increasing since 2007 (Fig. 4.1.2.43a). Dissolved mercury occurred in 4 of the 5 assessed countries (Fig. 4.1.2.43b) and did not exceed the drinking water standard 2010–2011 (Fig. 4.1.2.43c). The highest concentration of 1.31μg/l was reported by Ireland in the 2002–2011 period, see table 4.1.1.1.

**Nickel**

The analysis is based on data from 23 countries for the 2002–2011 period and 14 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 35.5 % of samples (Fig. 4.1.1.2) and in 67 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 6000 stations (Fig. 4.1.2.44a). Nickel occurred in 14 of the 14 assessed countries (Fig. 4.1.2.44b) and exceeded the drinking water standard in 13 countries in 2010–2011 (Fig. 4.1.2.44c). The highest concentration of 9000 μg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Nickel dissolved**

The analysis is based on data from 14 countries for the 2002–2011 period and 13 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 53.6 % of samples (Fig. 4.1.1.2) and in 60.2 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 3000 stations (Fig. 4.1.2.45a). Dissolved nickel occurred in 12 of the 13 assessed countries (Fig. 4.1.2.45b) and exceeded the drinking water standard in 9 countries in 2010–2011 (Fig. 4.1.2.45c). The highest concentration of 853 μg/l was reported by Ireland in the 2002–2011 period, see table 4.1.1.1.

**Prometryn**

The analysis is based on data from 10 countries for the 2002–2011 period and 8 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 5.5 % of samples (Fig. 4.1.1.2) and in 7.3 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 3300 stations (Fig. 4.1.2.46a). Prometryn occurred in 5 of the 8 assessed countries (Fig. 4.1.2.46b) and exceeded the drinking water standard in 3 countries in 2010–2011 (Fig. 4.1.2.46c). The highest concentration of 8 μg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Propazine**

The analysis is based on data from 11 countries for the 2002–2011 period and 9 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 6.9 % of samples (Fig. 4.1.1.2) and in 11.7 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 3300 stations (Fig. 4.1.2.47a). Propazine occurred in 7 of the 9 assessed countries (Fig. 4.1.2.47b) and exceeded the drinking water standard in 1 country in 2010–2011 (Fig. 4.1.2.47c). The highest concentration of 1.234 μg/l was reported by Cyprus in the 2002–2011 period, see table 4.1.1.1.

**Simazine**

The analysis is based on data from 17 countries for the 2002–2011 period and 14 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 10.8 % of samples (Fig. 4.1.1.2) and in 17.3 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 5500 stations (Fig. 4.1.2.48a). Simazine occurred in 12 of the 14 assessed countries (Fig. 4.1.2.48b) and exceeded the drinking water standard in 6 countries in 2010–2011 (Fig. 4.1.2.48c). The highest concentration of 1.96 μg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Terbuthylazine**

The analysis is based on data from 10 countries for the 2002–2011 period and 8 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 2 % of samples (Fig. 4.1.1.2) and in 6.6 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 2800 stations (Fig. 4.1.2.49a). Terbuthylazine occurred in 8 of the 8 assessed countries (Fig. 4.1.2.49b) and exceeded the drinking water standard in 3 countries in 2010–2011 (Fig. 4.1.2.49c). The highest concentration of 5.3 μg/l was reported by the Czech Republic in the 2002–2011 period, see table 4.1.1.1.

**Terbutryn**

The analysis is based on data from 9 countries for the 2002–2011 period and 7 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 7.1 % of samples (Fig. 4.1.1.2) and in 8.2 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 2500 stations (Fig. 4.1.2.50a). Terbutryn occurred in 3 of the 7 assessed countries (Fig. 4.1.2.50b) and exceeded the drinking water standard in 1 country in 2010–2011 (Fig. 4.1.2.50c). The highest concentration of 9 μg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Trifluralin**

The analysis is based on data from 11 countries for the 2002–2011 period and 10 countries for the 2010–2011 period, see tables 3.1.2 and 3.1.3. The substance was found in 2.6 % of samples (Fig. 4.1.1.2) and in 6.5 % of stations (Fig. 4.1.1.4). The number of reported stations has increased since 2002 and lately has been oscillating around 3000 stations (Fig. 4.1.2.51a). Trifluralin occurred in 5 of the 10 assessed countries (Fig. 4.1.2.51b) and exceeded the drinking water standard in 2 countries in 2010–2011 (Fig. 4.1.2.51c). The highest concentration of 1 μg/l was reported by the United Kingdom in the 2002–2011 period, see table 4.1.1.1.

**Figure 4.1.2.1a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for 1,1,2,2-tetrachloroethene in groundwater**

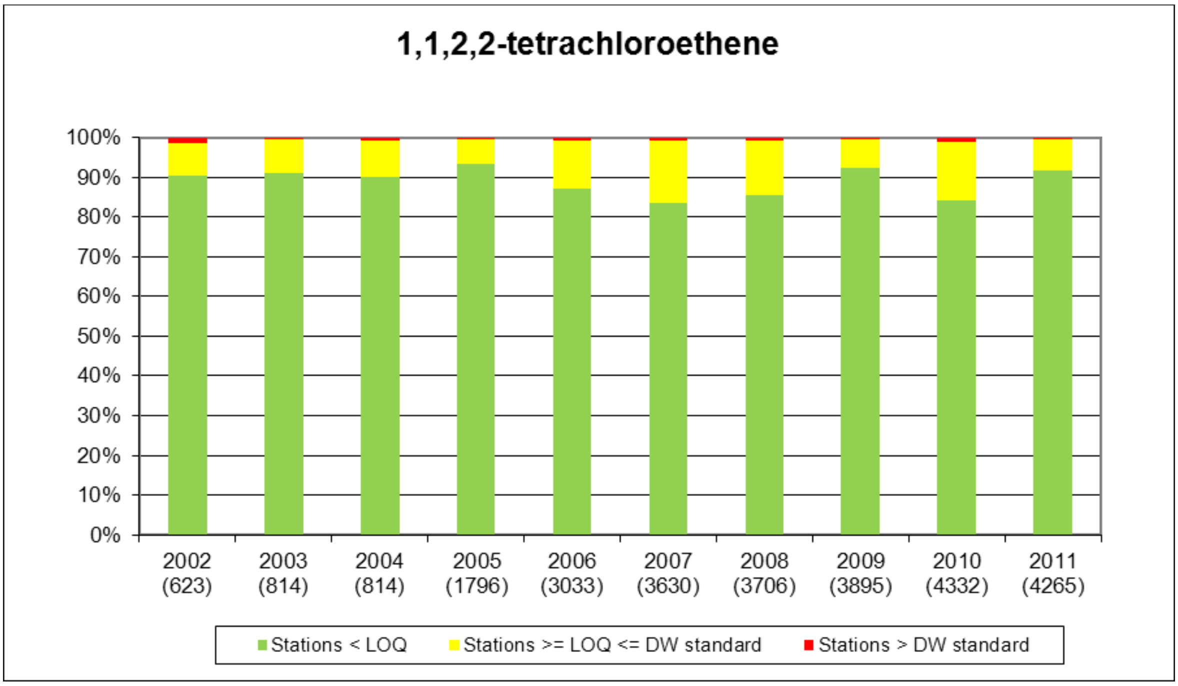



**Figure 4.1.2.1b Indicator for 1,1,2,2-tetrachloroethene in groundwater in 2010–2011 (number of stations per country shown in parenthesis )**

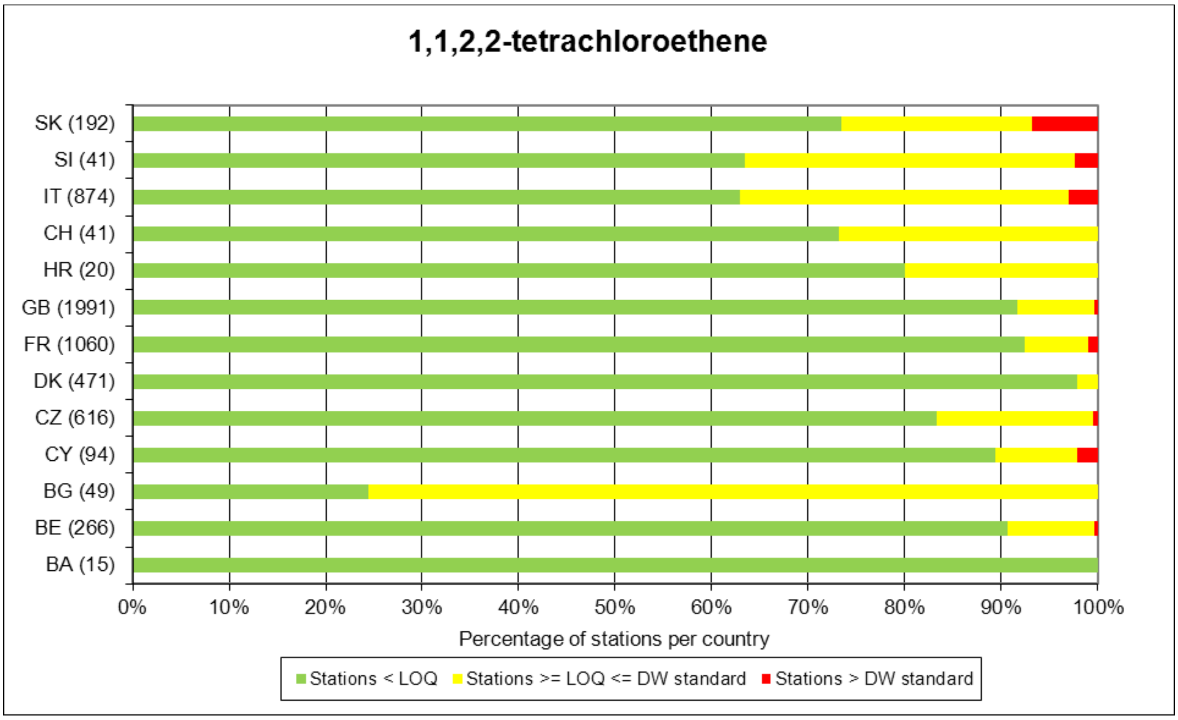


**Figure 4.1.2.1c Map of the indicator for 1,1,2,2-tetrachloroethene in groundwater in 2010–2011**

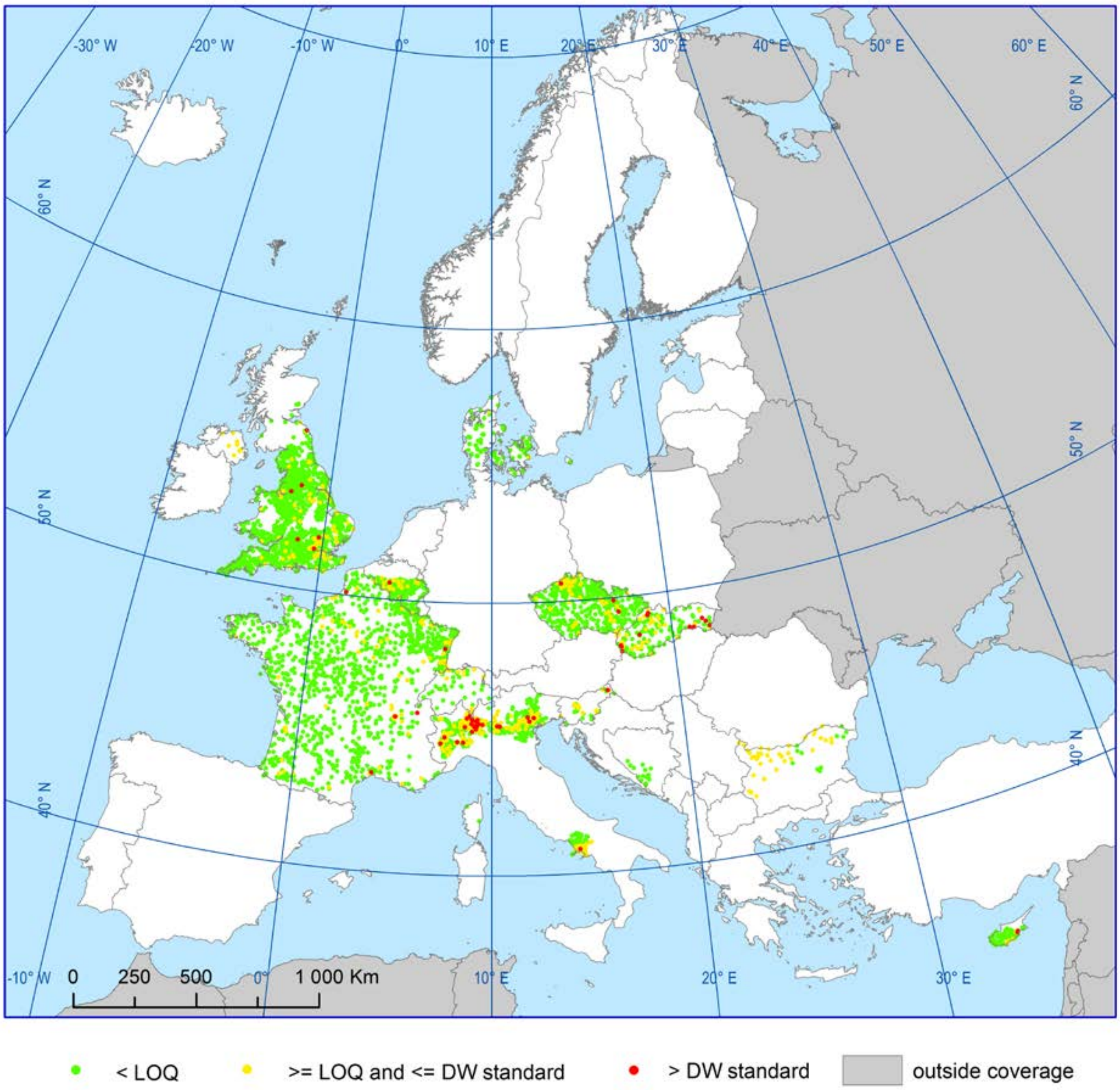


**Figure 4.1.2.2a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for 1,1,2-trichloroethene in groundwater**

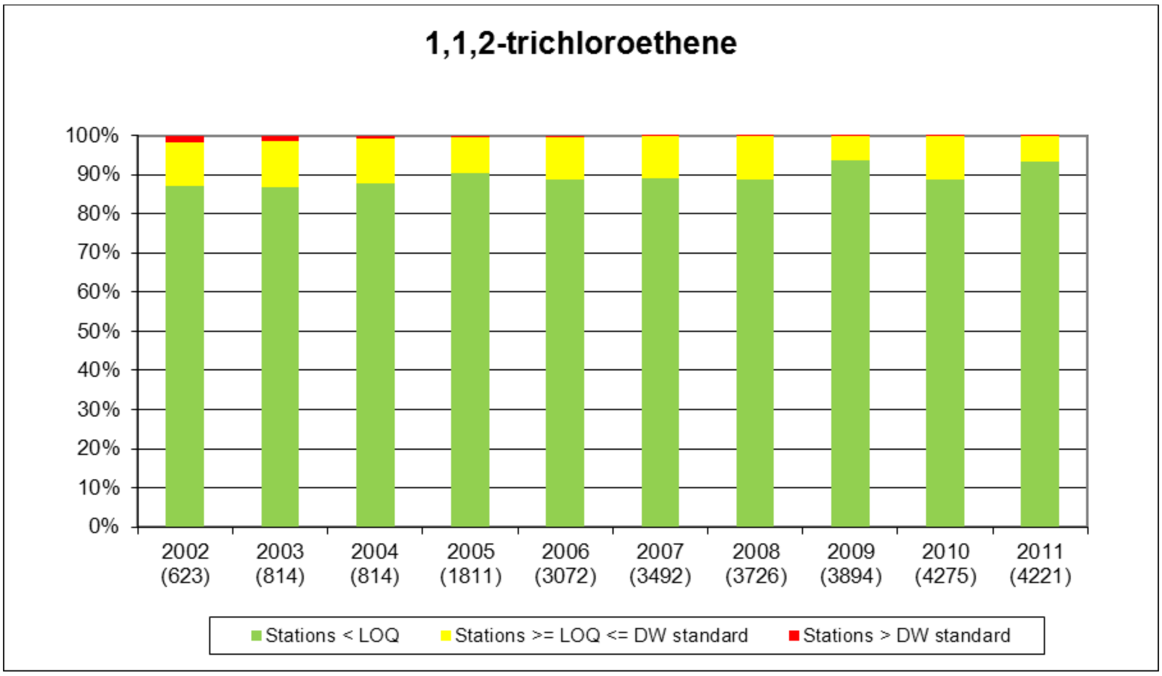



**Figure 4.1.2.2b Indicator for 1,1,2-trichloroethene in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

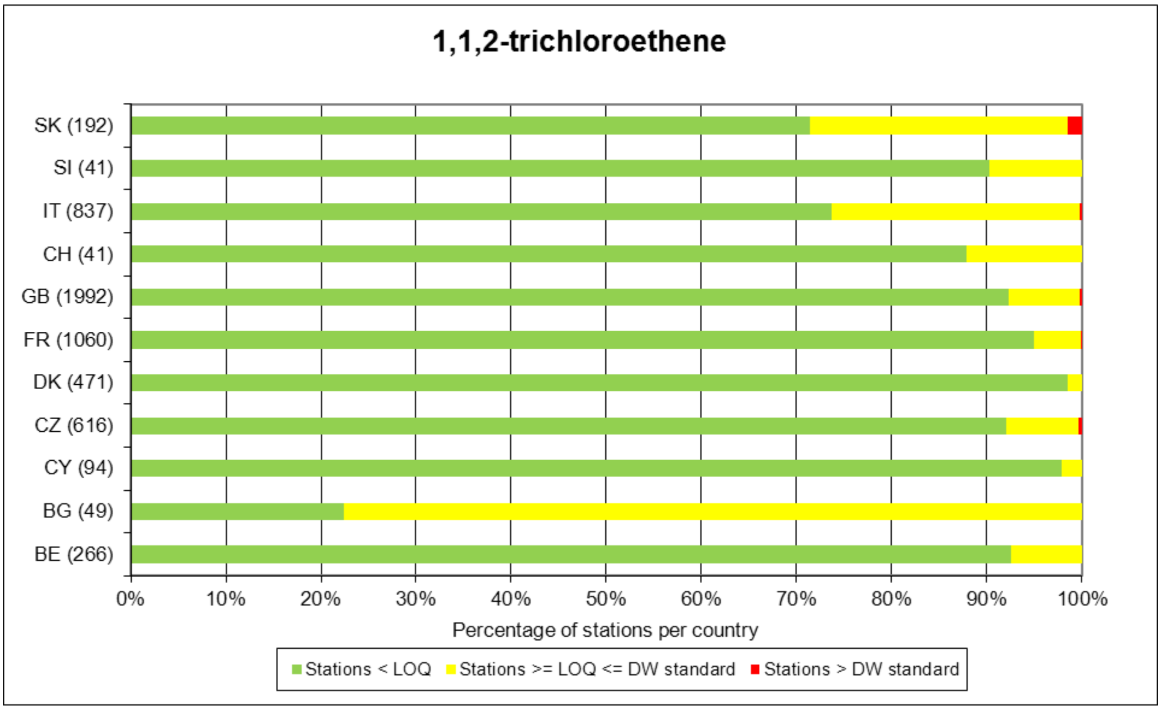


**Figure 4.1.2.2c Map of the indicator for 1,1,2-trichloroethene in groundwater in 2010–2011**

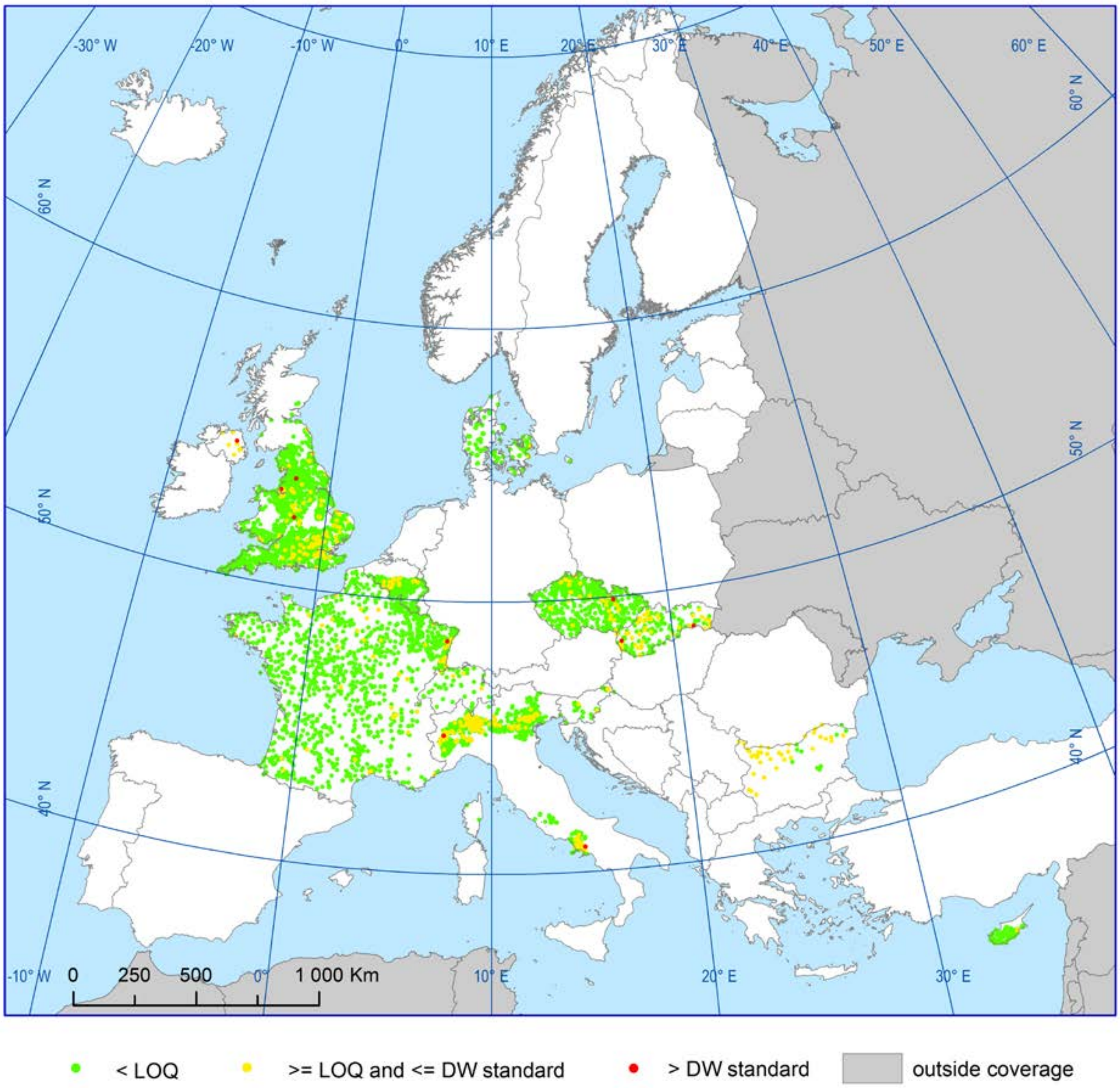


**Figure 4.1.2.3a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for 1,2-dichloroethane in groundwater**

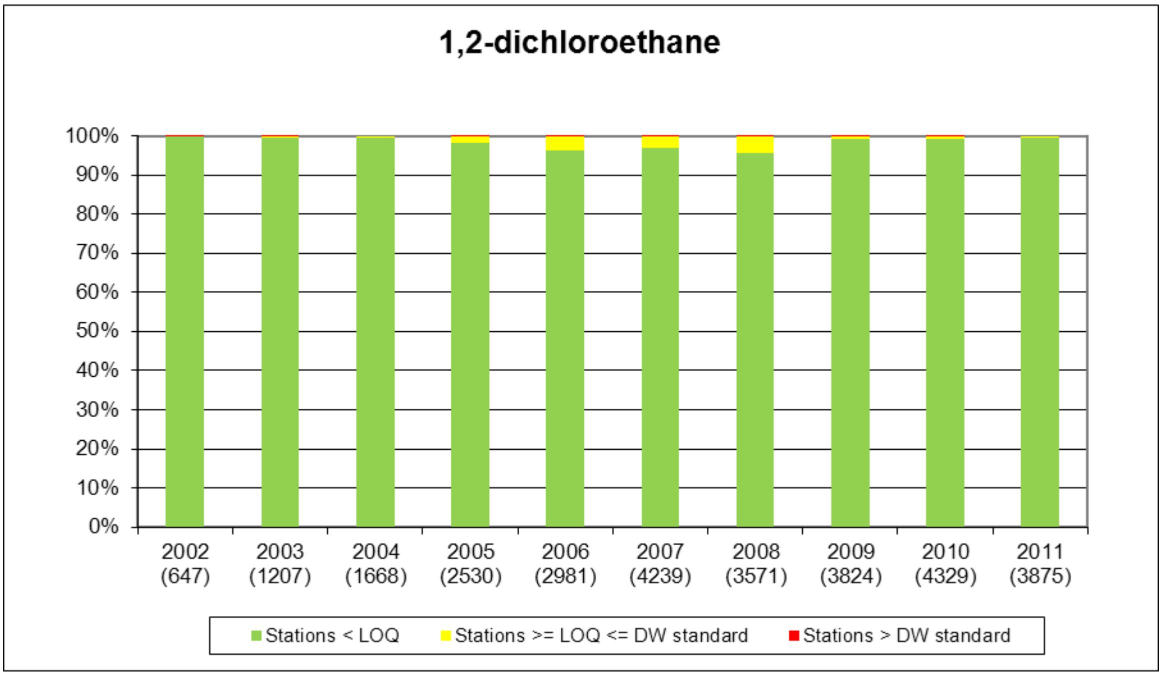



**Figure 4.1.2.3b Indicator for 1,2-dichloroethane in groundwater in 2010–2011 (number of stations per country shown in parenthesis )**

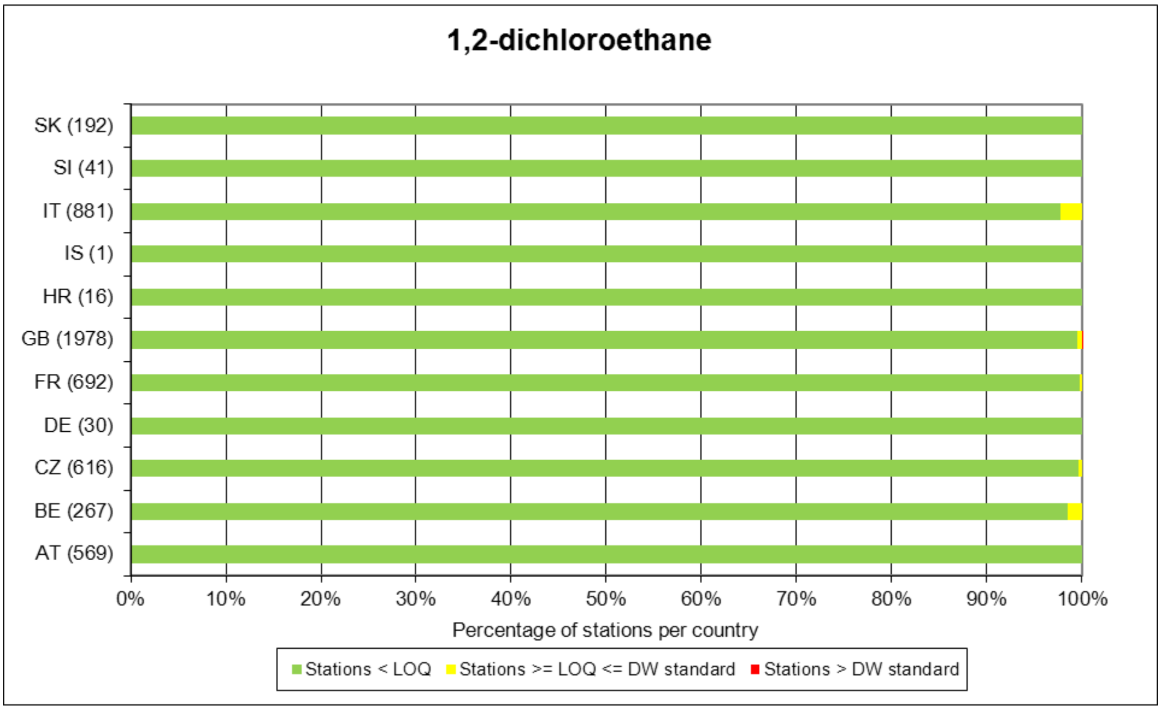


**Figure 4.1.2.3c Map of the indicator for 1,2-dichloroethane in groundwater in 2010–2011**

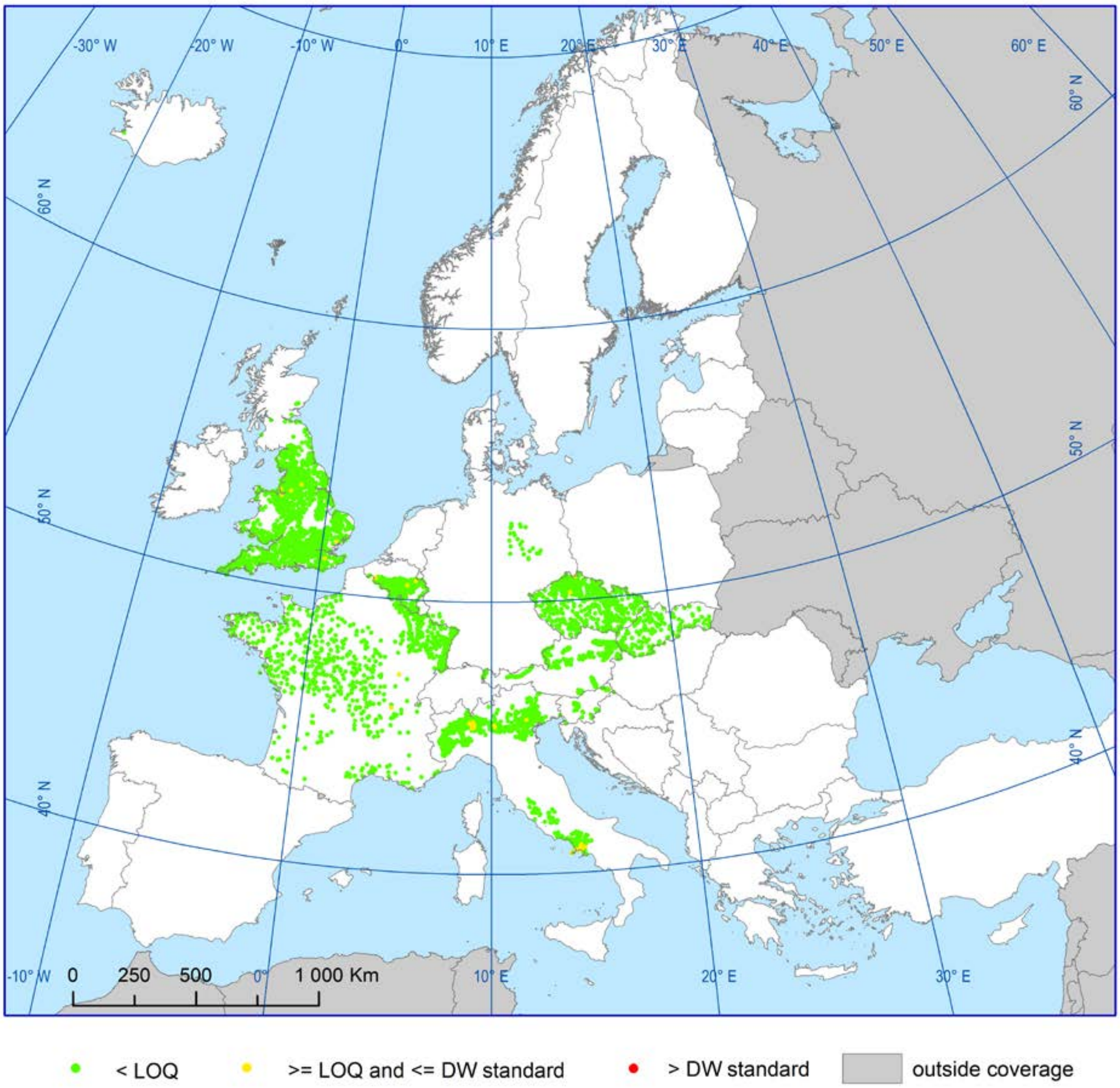


**Figure 4.1.2.4a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for 2,4-D in groundwater**

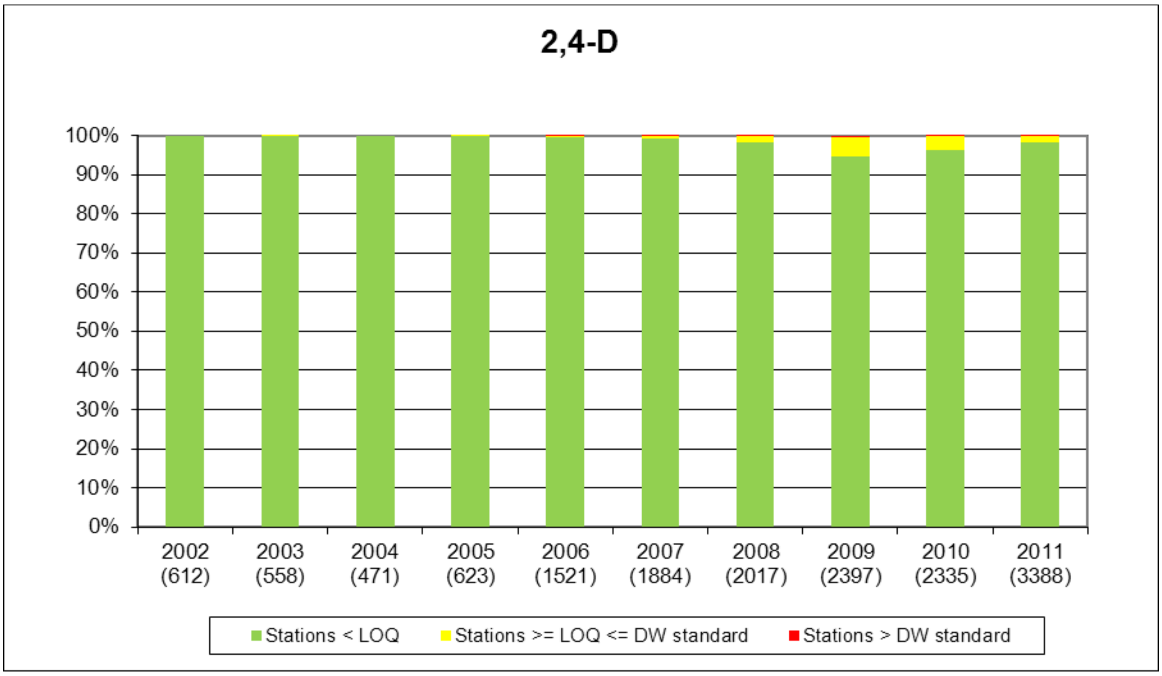



**Figure 4.1.2.4b Indicator for 2,4-D in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

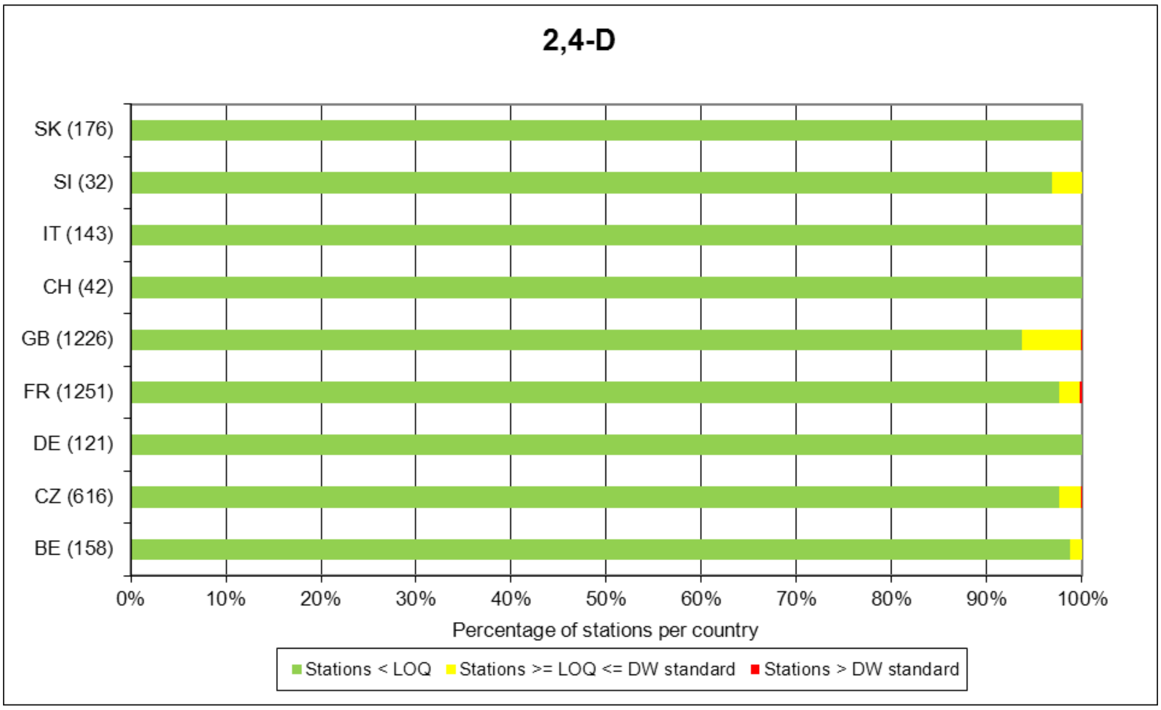


**Figure 4.1.2.4c Map of the indicator for 2,4-D in groundwater in 2010–2011**

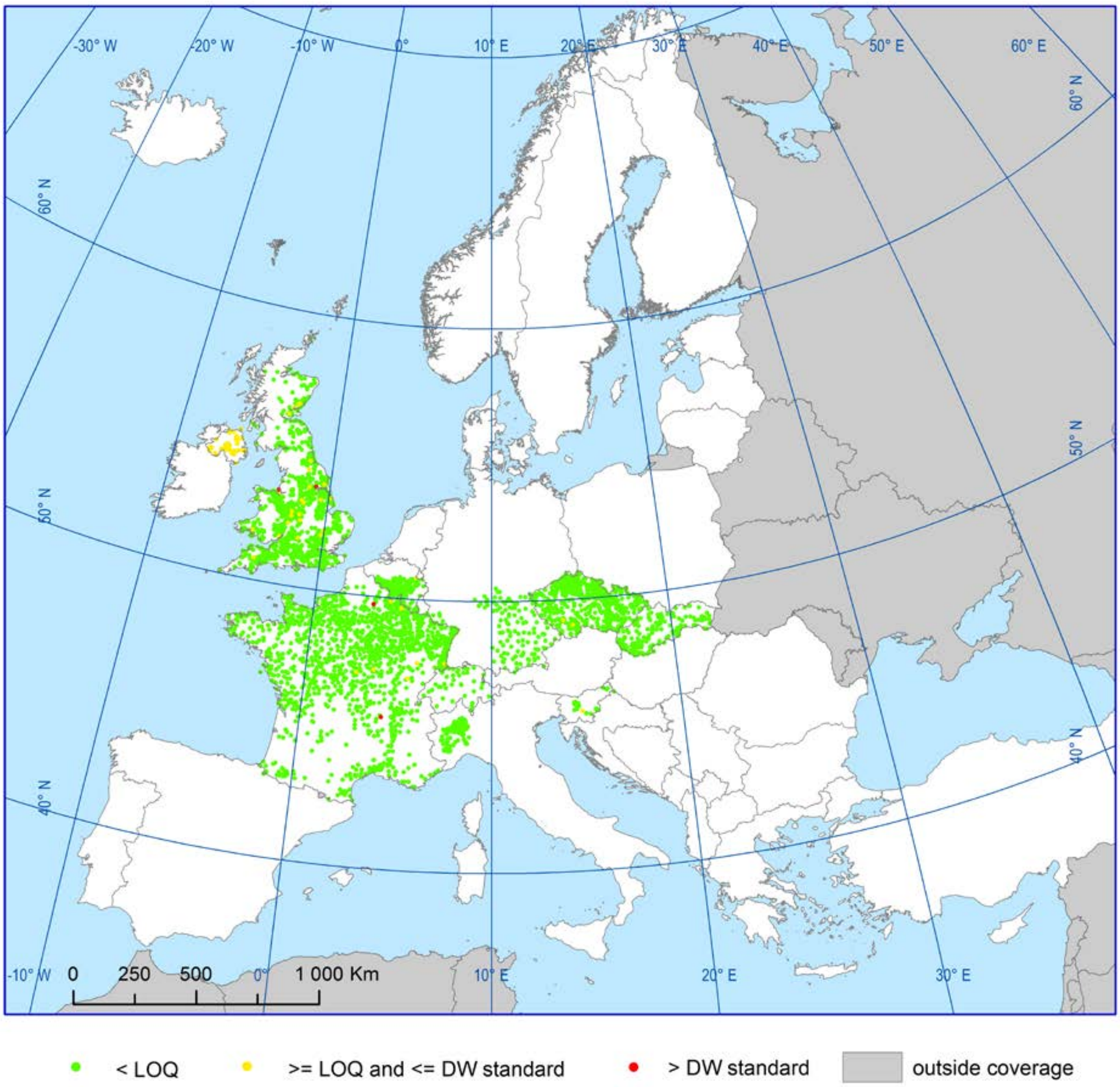


**Figure 4.1.2.5a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for alachlor in groundwater**

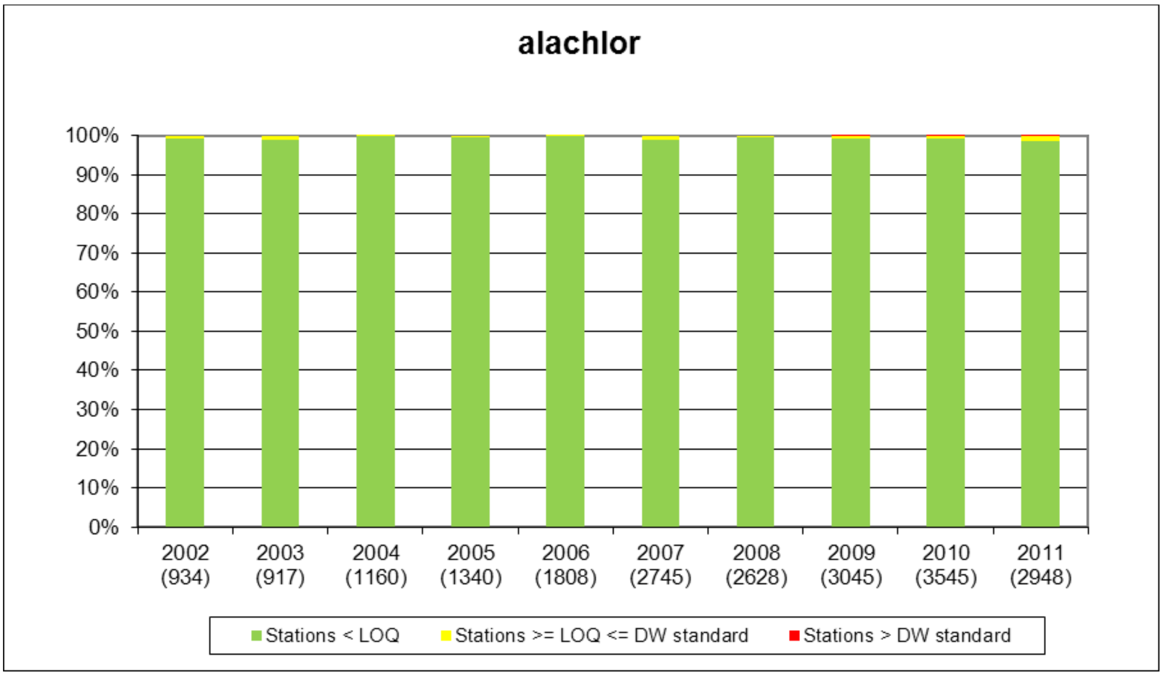



**Figure 4.1.2.5b Indicator for alachlor in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

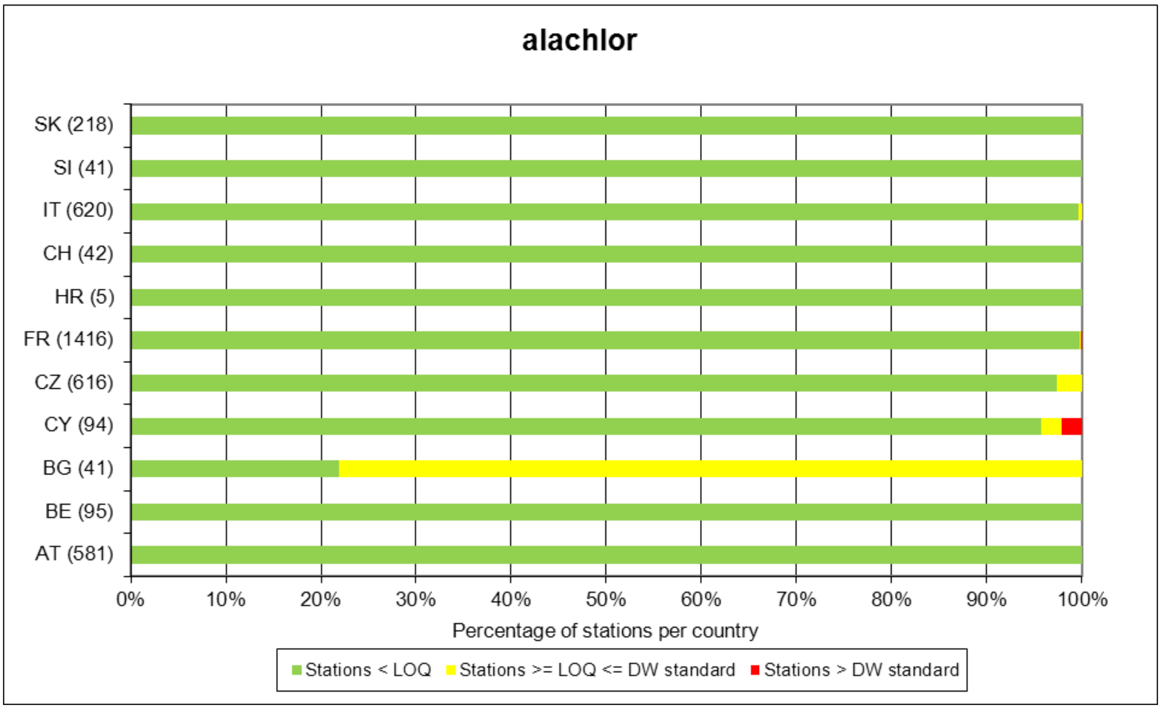


**Figure 4.1.2.5c Map of the indicator for alachlor in groundwater in 2010–2011**

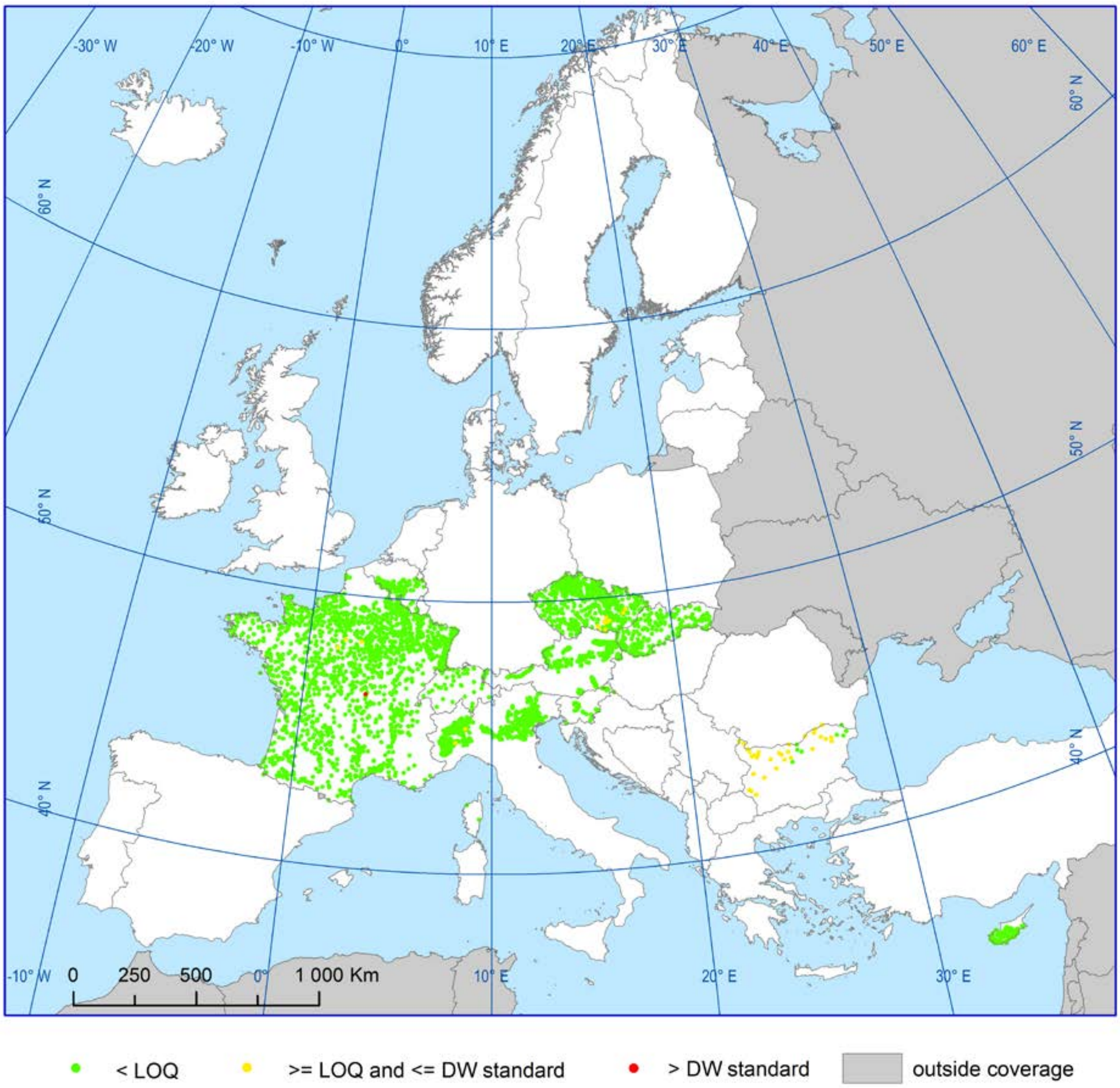


**Figure 4.1.2.6a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for aldrin in groundwater**

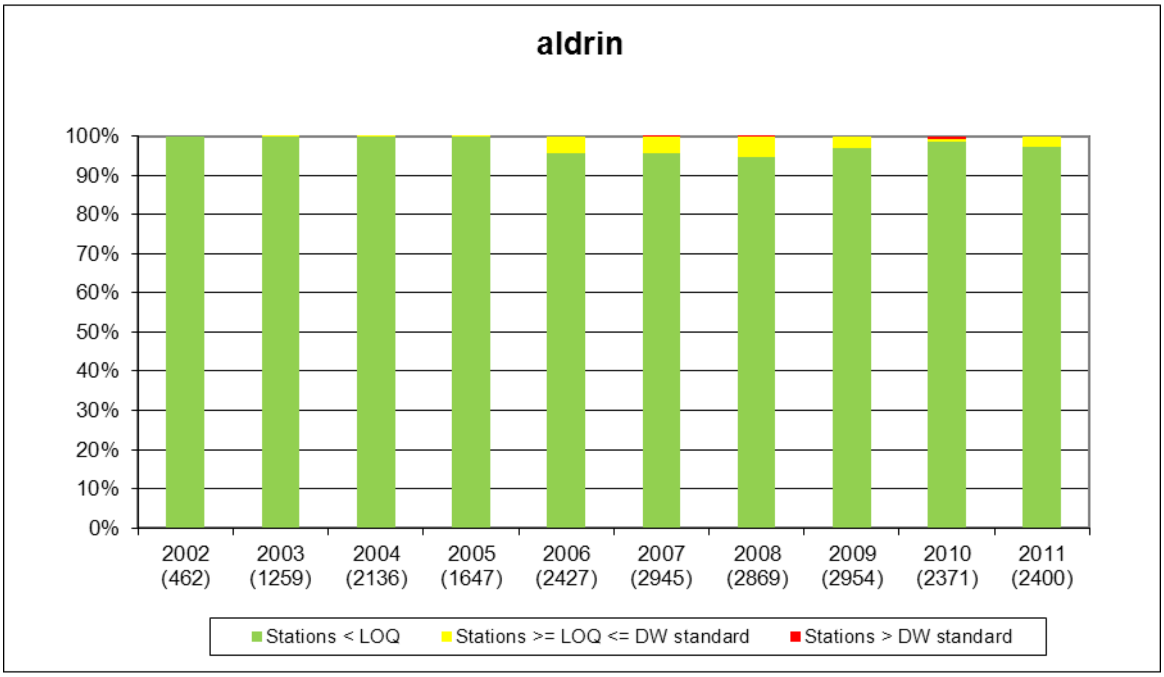



**Figure 4.1.2.6b Indicator for aldrin in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

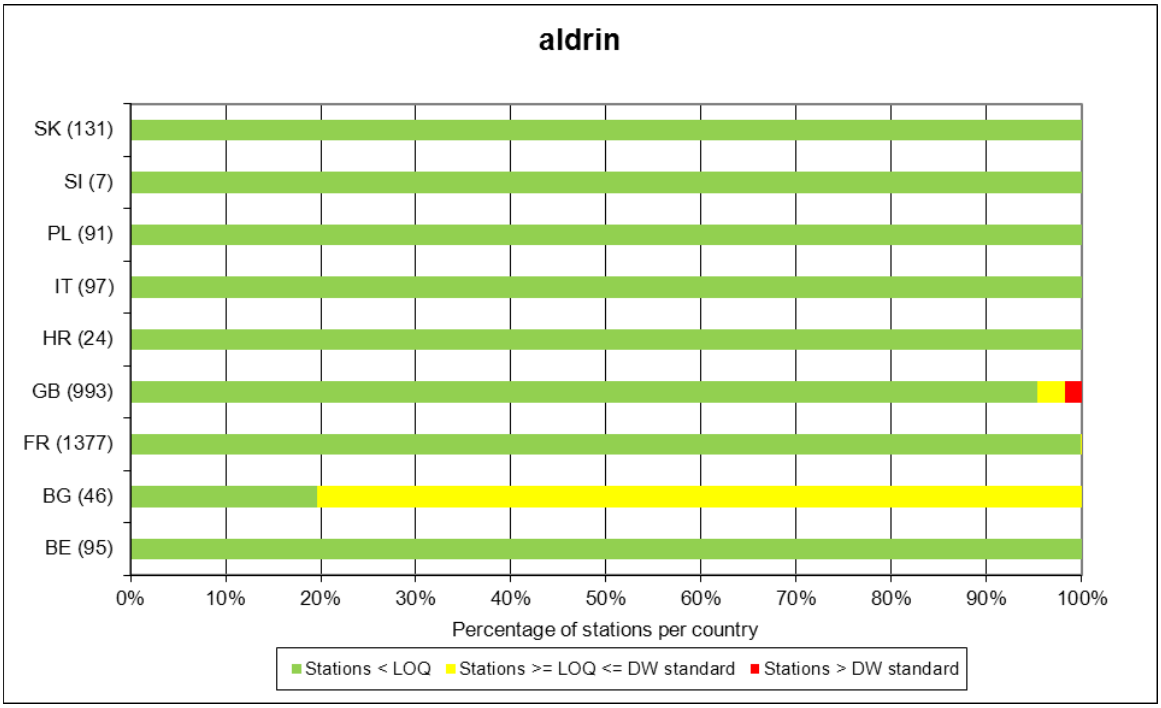


**Figure 4.1.2.6c Map of the indicator for aldrin in groundwater in 2010–2011**

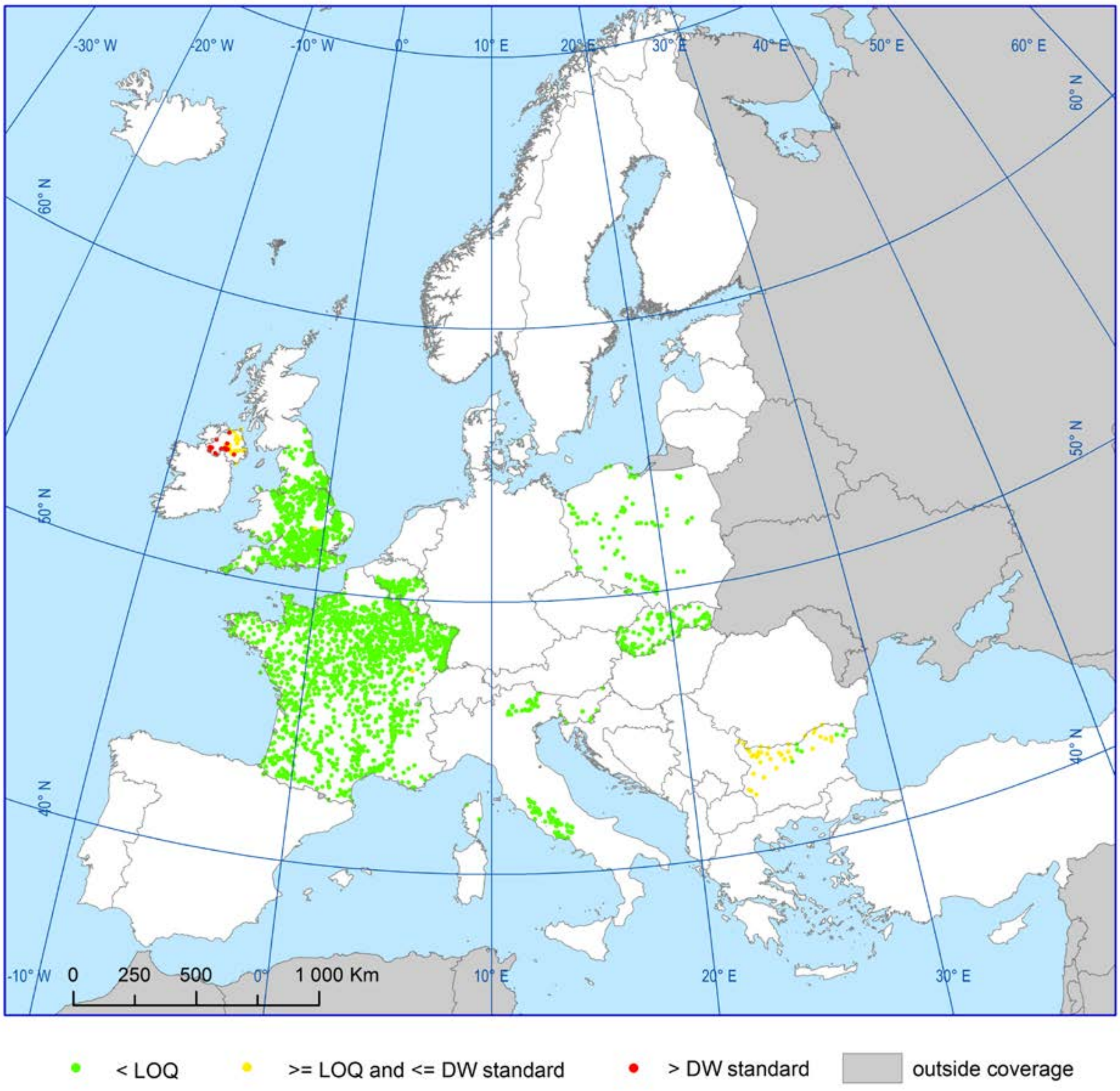


**Figure 4.1.2.7a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for alpha endosulfan in groundwater**

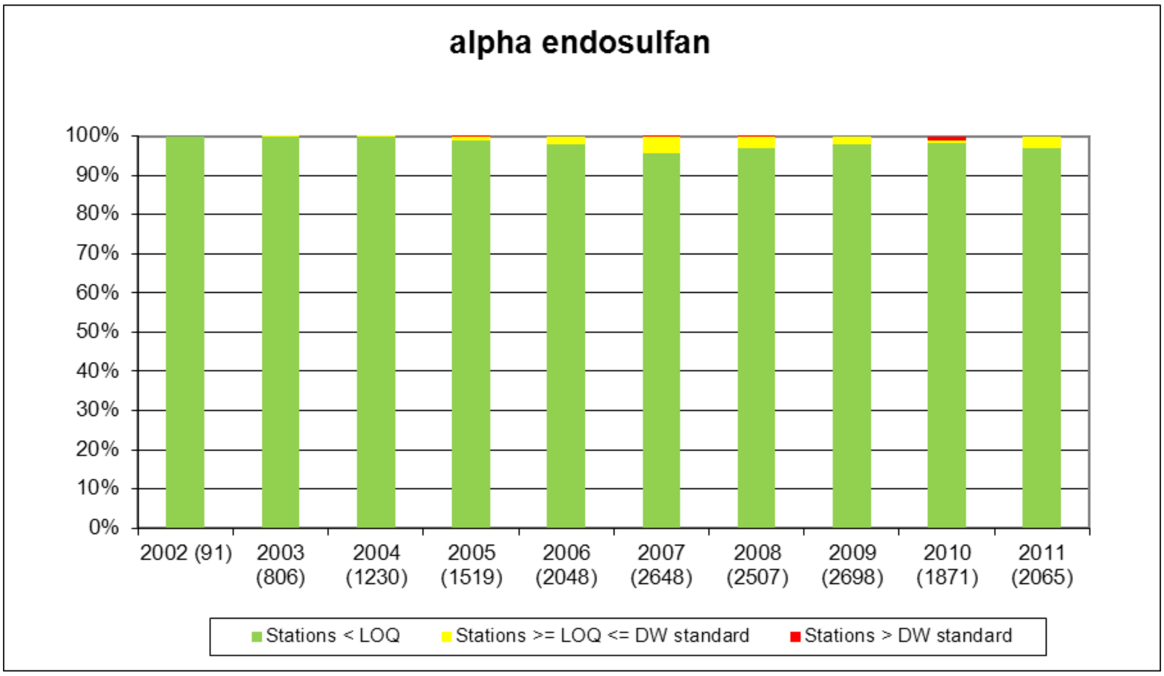



**Figure 4.1.2.7b Indicator for alpha endosulfan in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

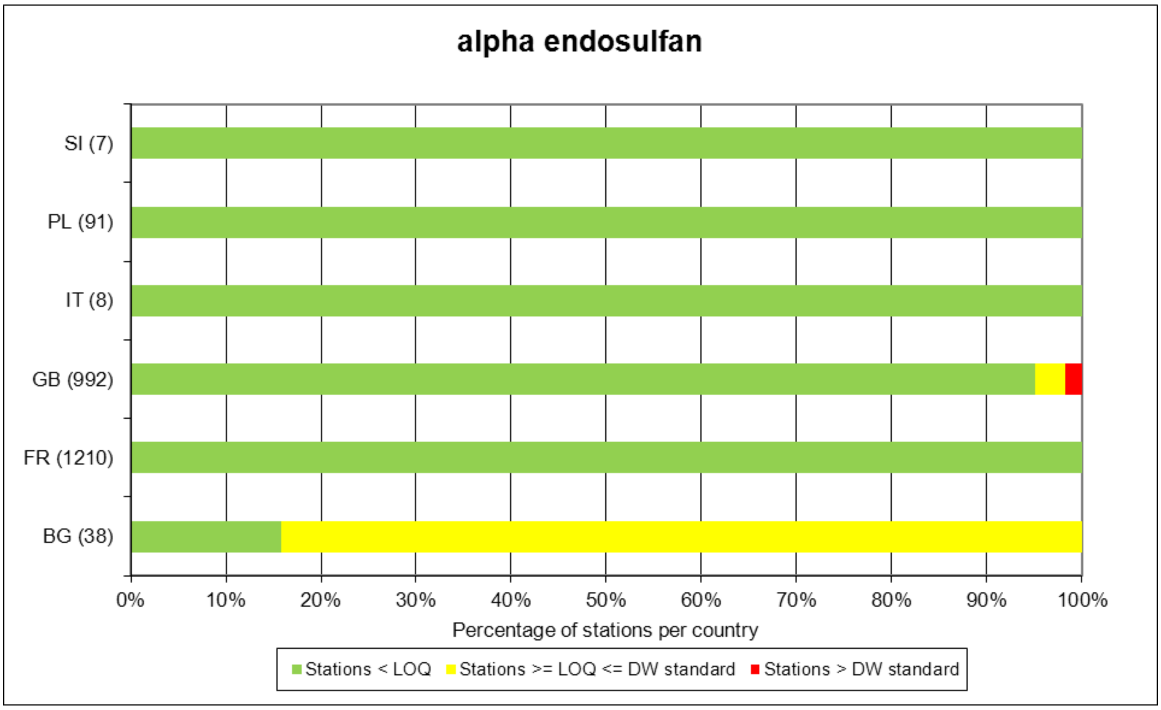


**Figure 4.1.2.7c Map of the indicator for alpha endosulfan in groundwater in 2010–2011**

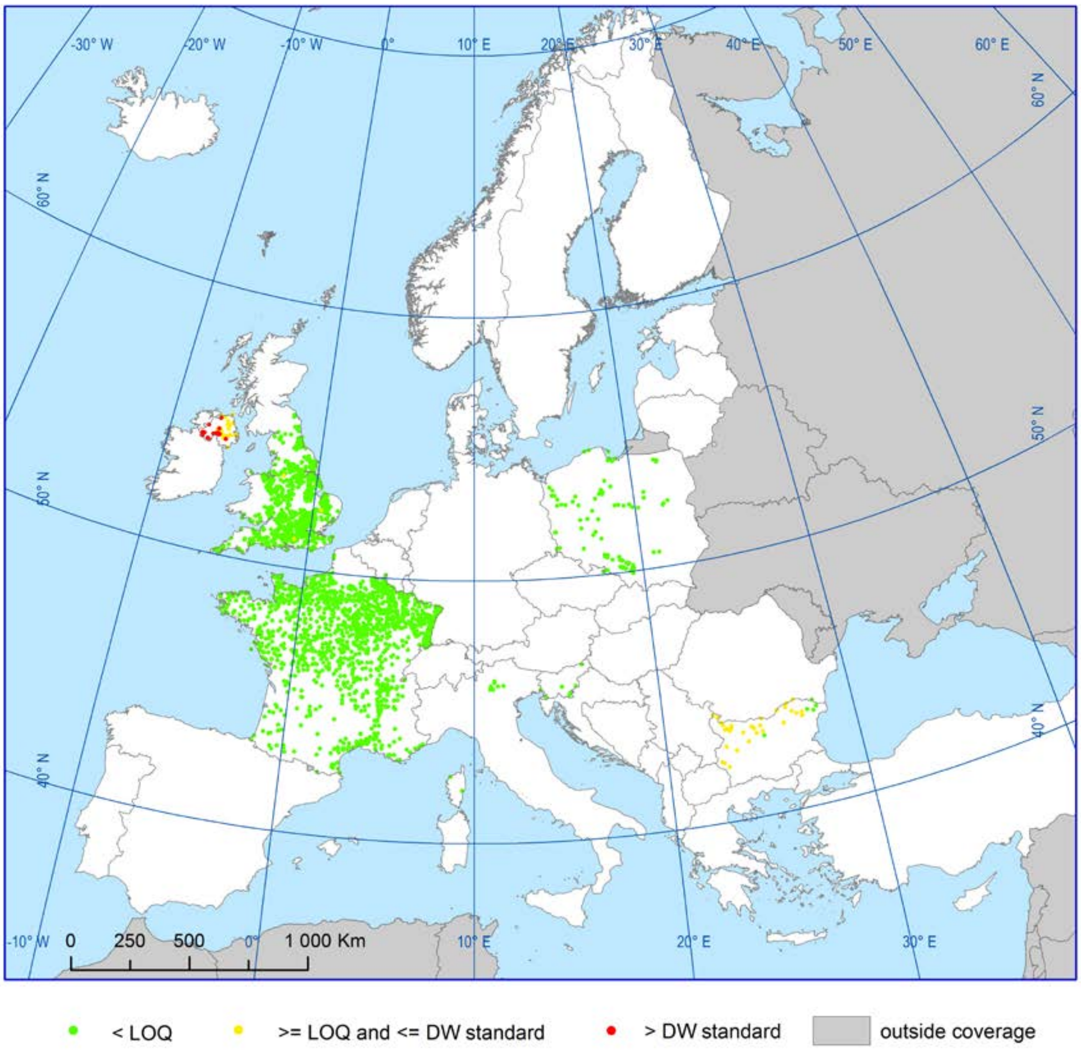


**Figure 4.1.2.8a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for alpha HCH in groundwater**

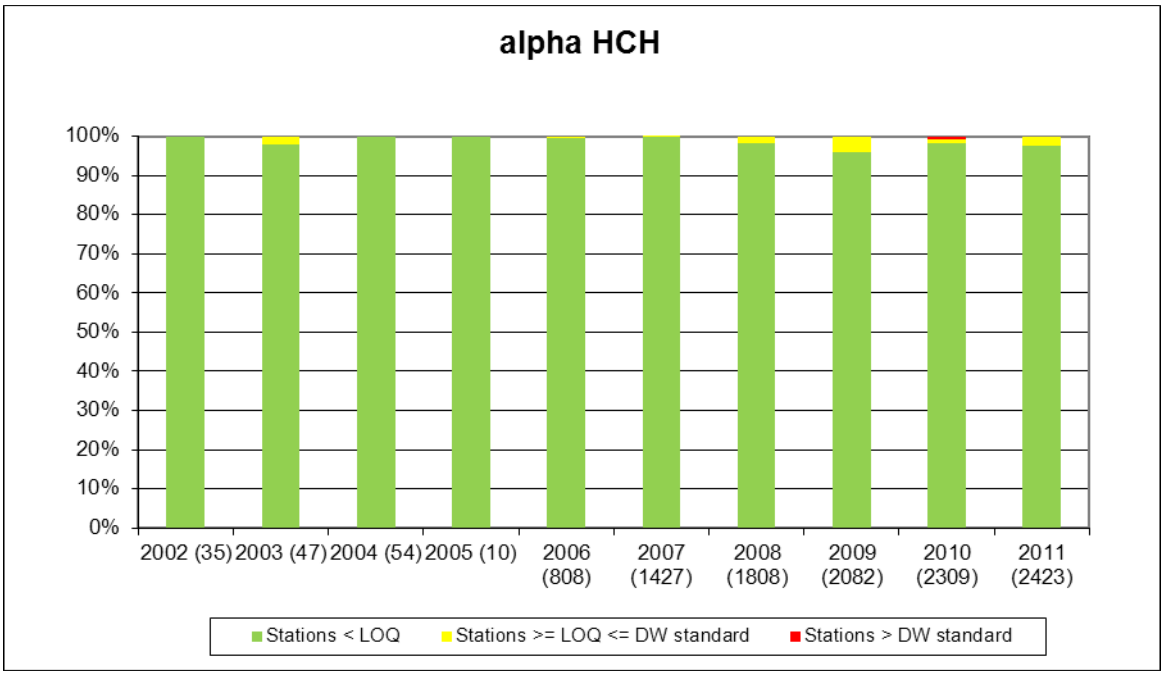



**Figure 4.1.2.8b Indicator for alpha HCH in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

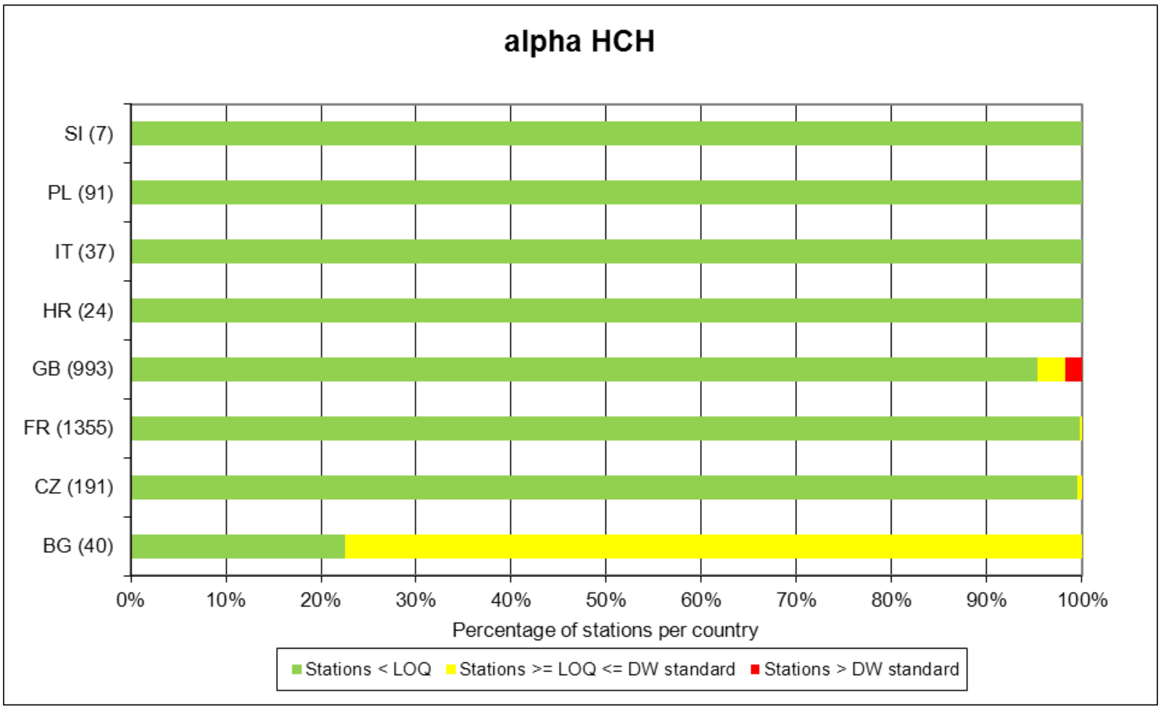
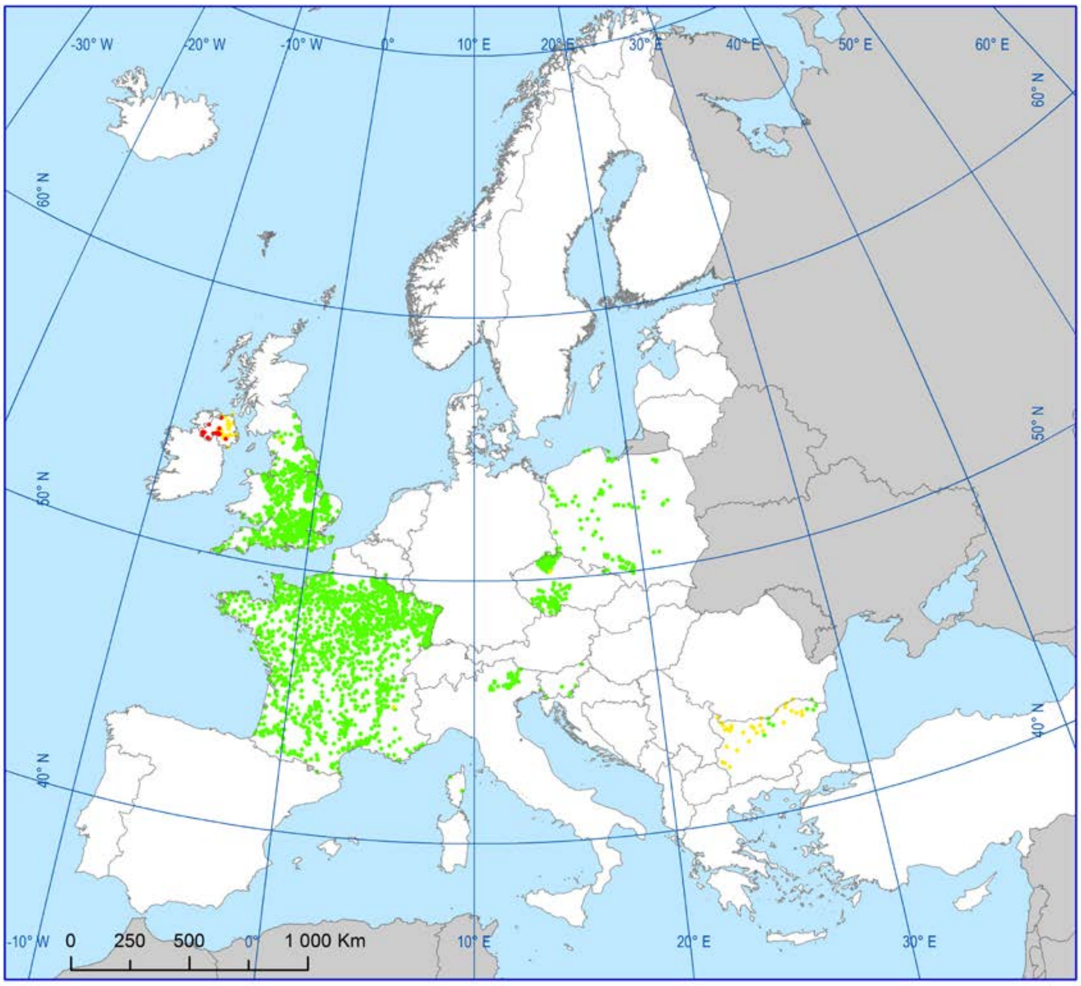


**Figure 4.1.2.8c Map of the indicator for alpha HCH in groundwater in 2010–2011**




< LOQ   >= LOQ and <= DW standard   > DW standard   outside coverage

**Figure 4.1.2.9a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for arsenic in groundwater**

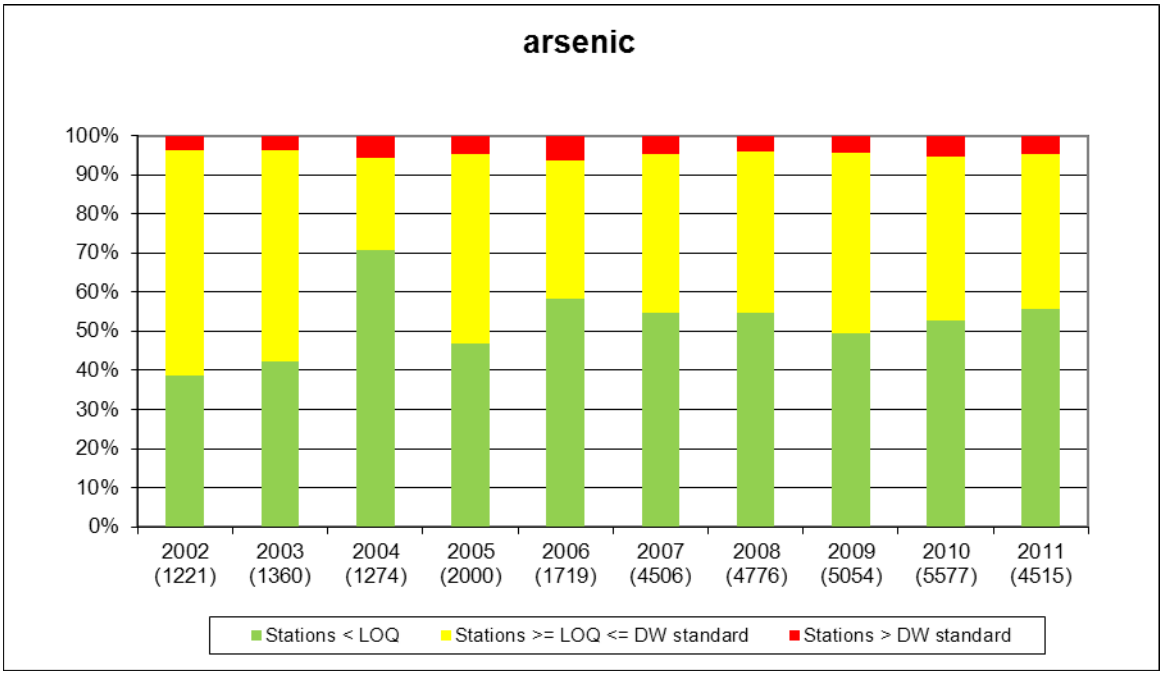



**Figure 4.1.2.9b Indicator for arsenic in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

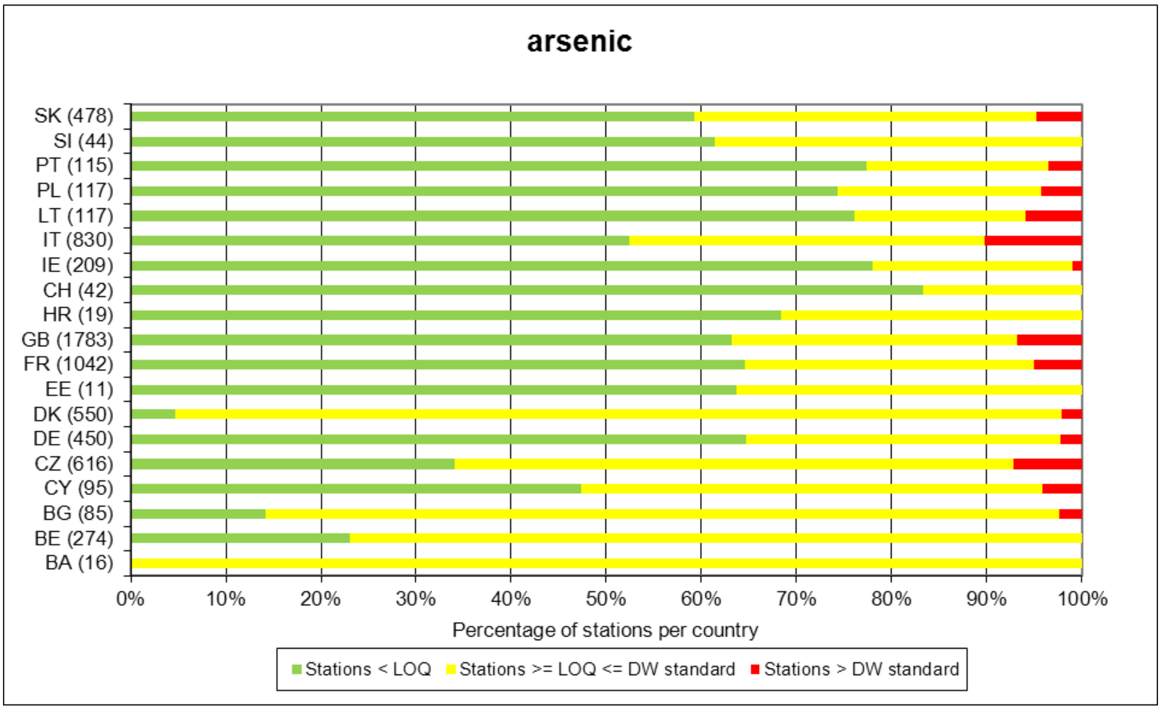


**Figure 4.1.2.9c Map of the indicator for arsenic in groundwater in 2010–2011**

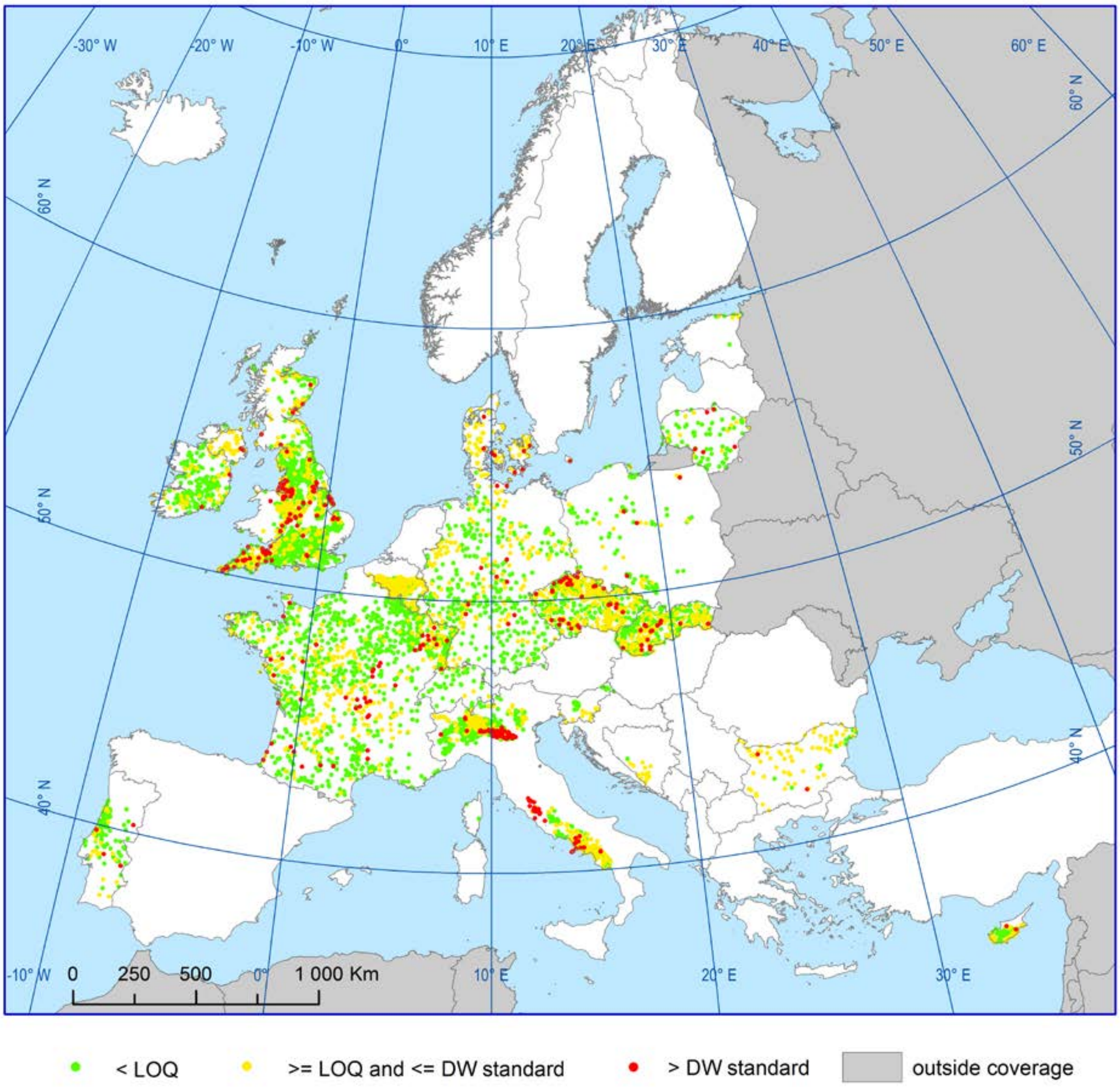


**Figure 4.1.2.10a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for dissolved arsenic in groundwater**

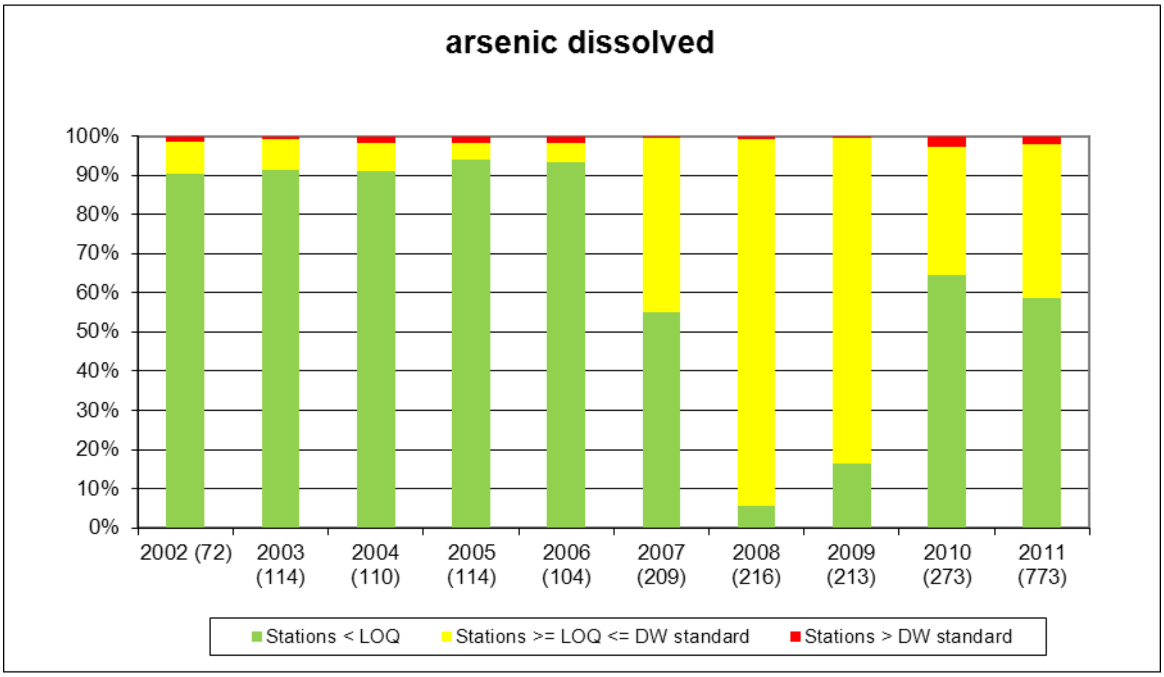



**Figure 4.1.2.10b Indicator for dissolved arsenic in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

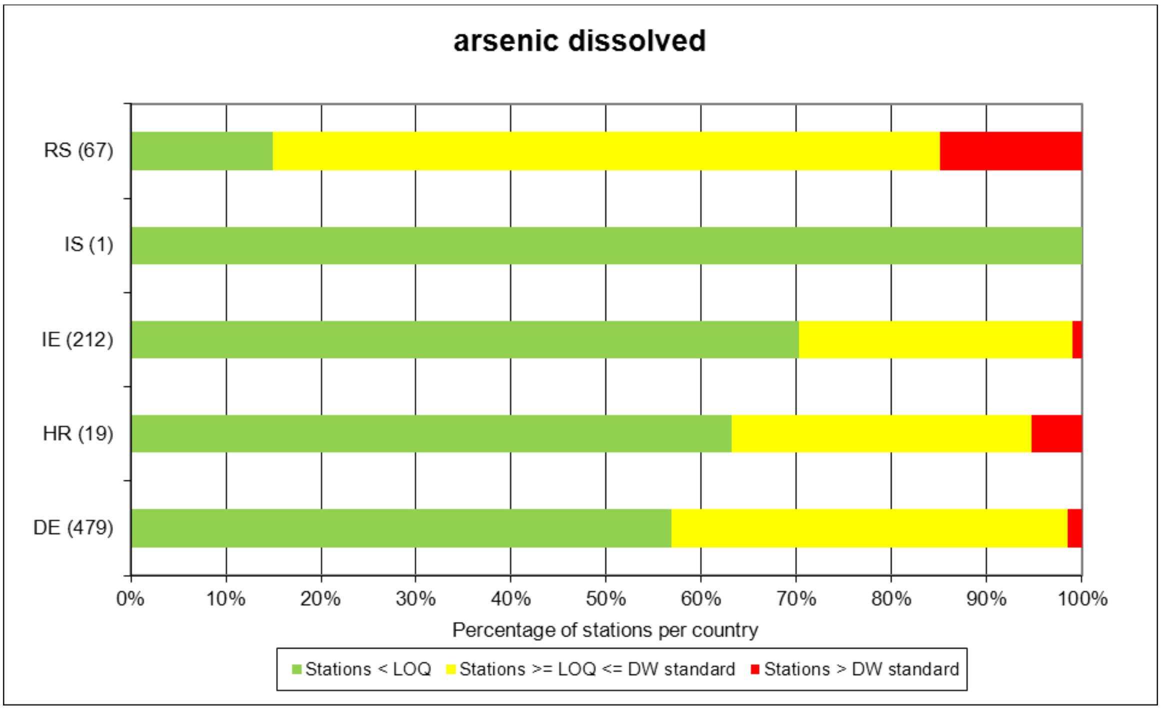


**Figure 4.1.2.10c Map of the indicator for dissolved arsenic in groundwater in 2010–2011**

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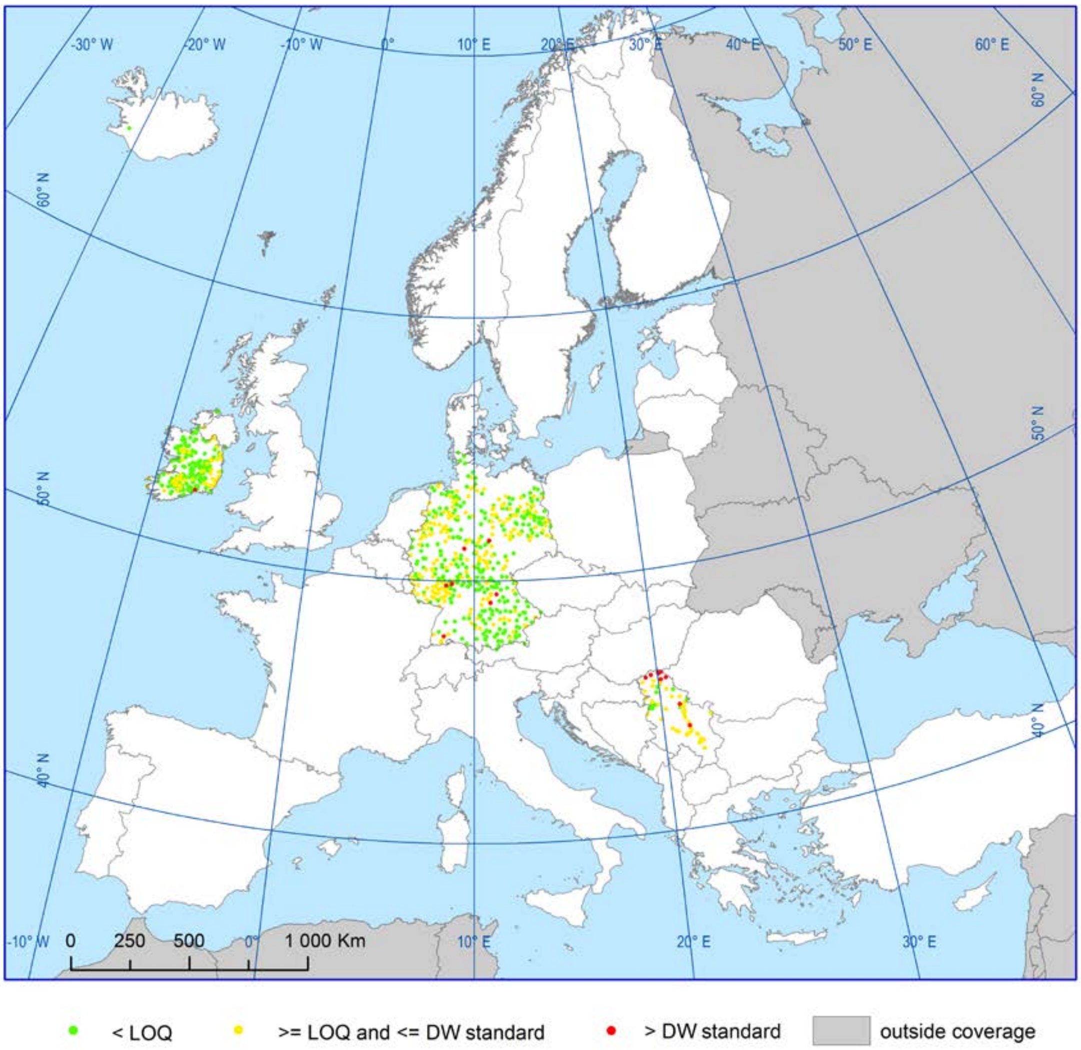


**Figure 4.1.2.11a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for atrazine in groundwater**

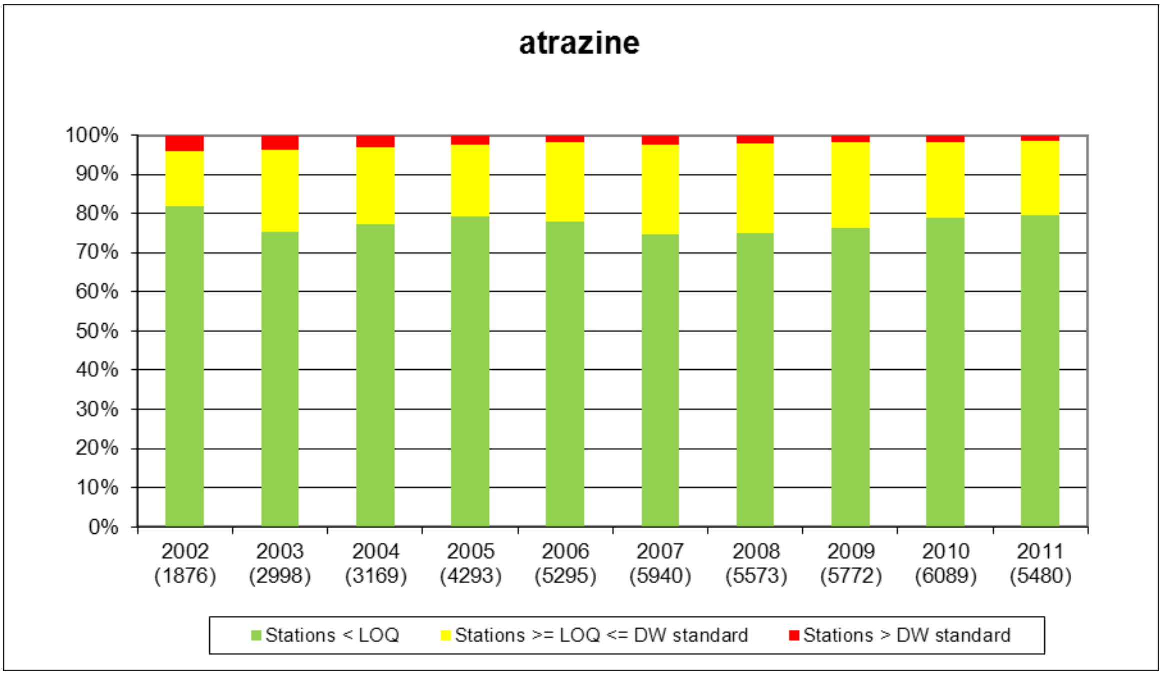



**Figure 4.1.2.11b Indicator for atrazine in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

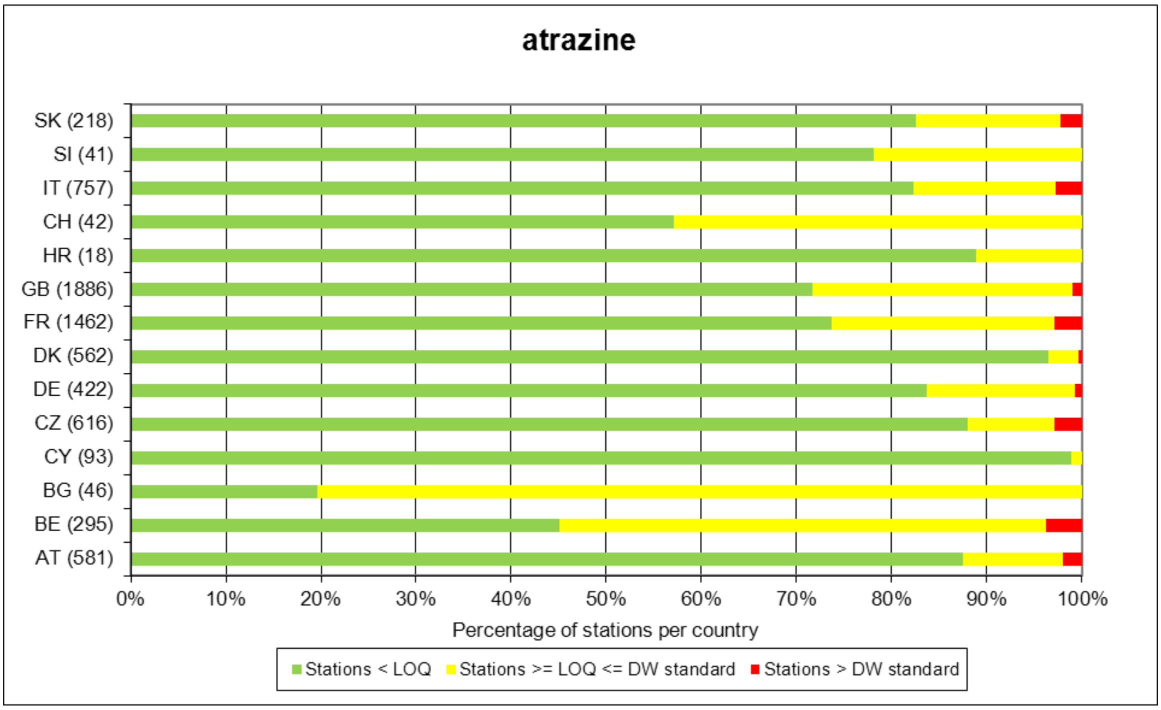


**Figure 4.1.2.11c Map of the indicator for atrazine in groundwater in 2010–2011**

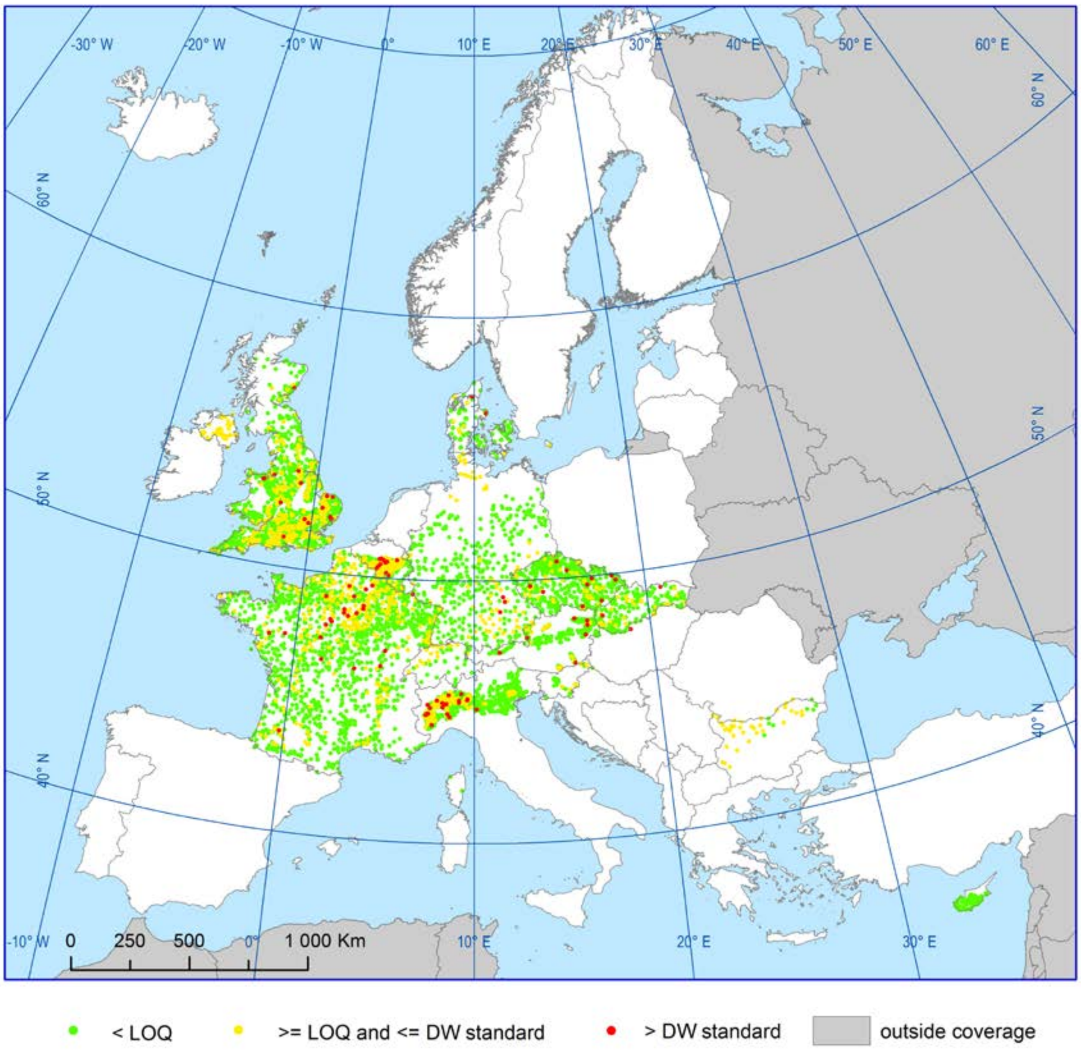


**Figure 4.1.2.12a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for bentazone in groundwater**

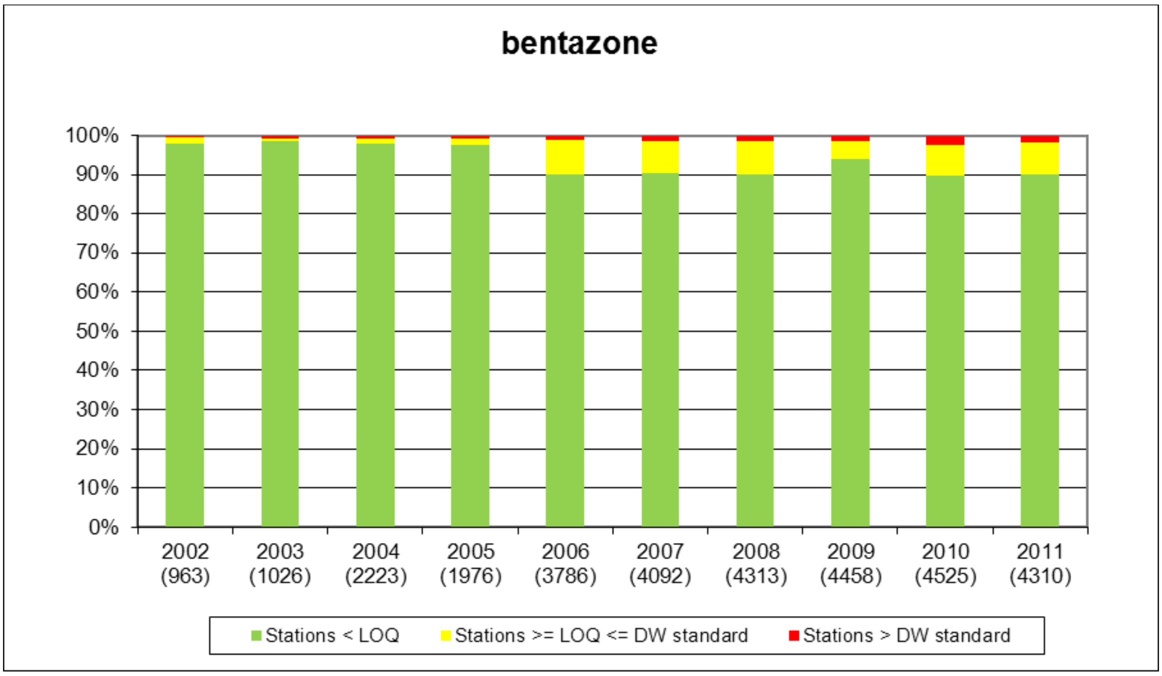



**Figure 4.1.2.12b Indicator for bentazone in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

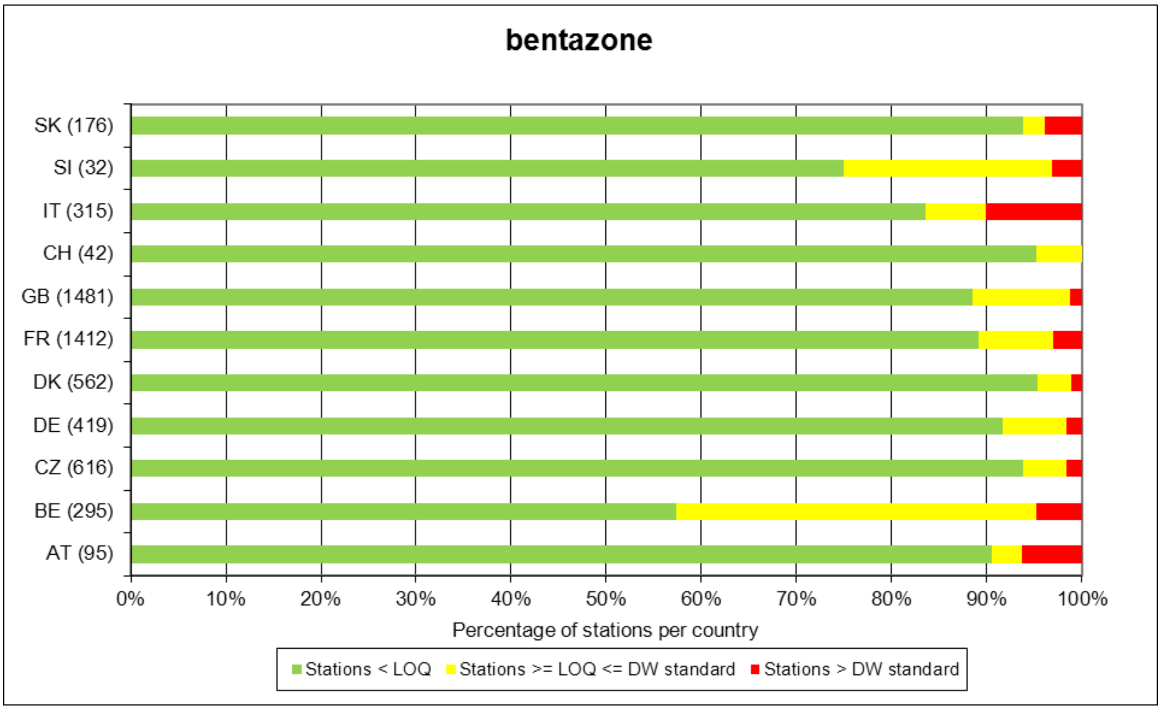


**Figure 4.1.2.12c Map of the indicator for bentazone in groundwater in 2010–2011**

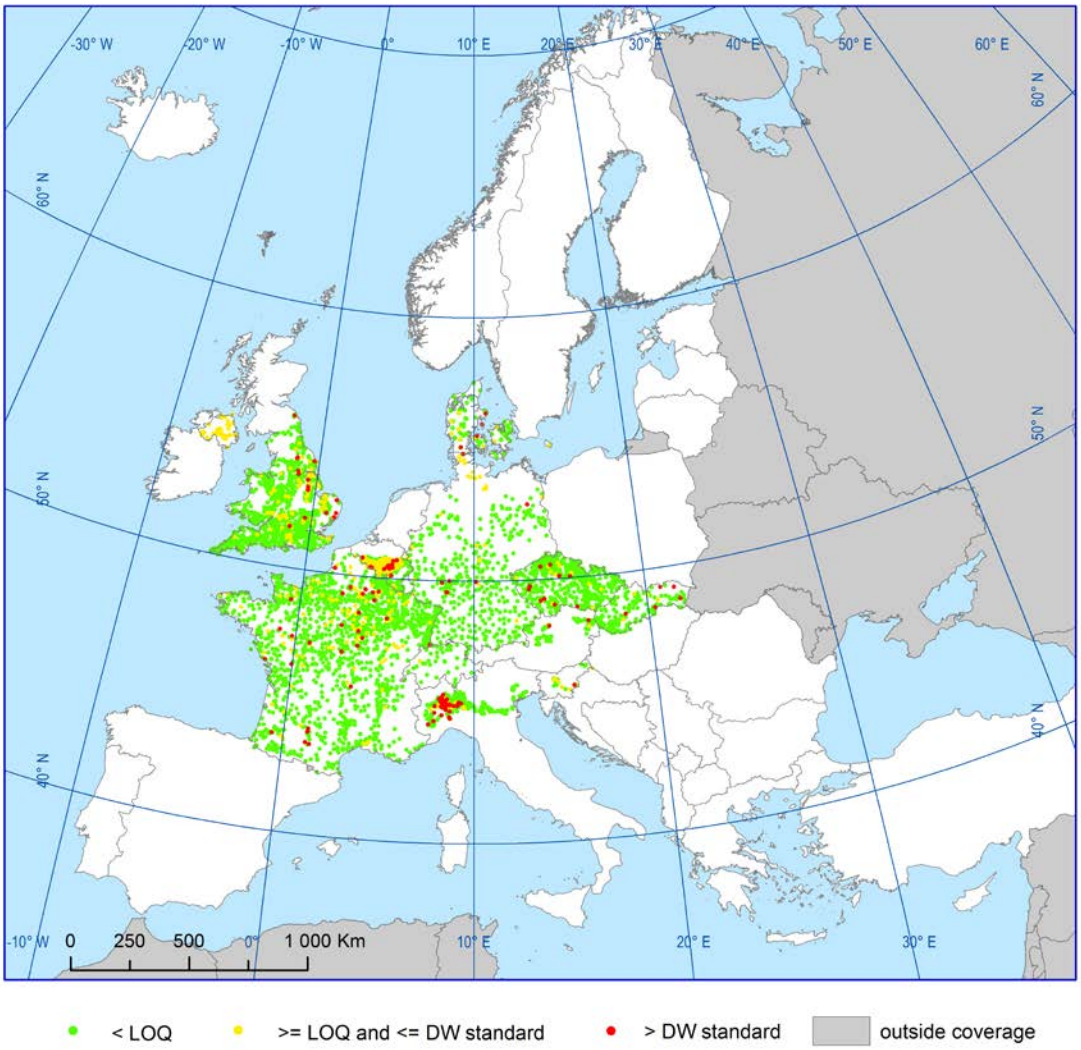


**Figure 4.1.2.13a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for benzene in groundwater**

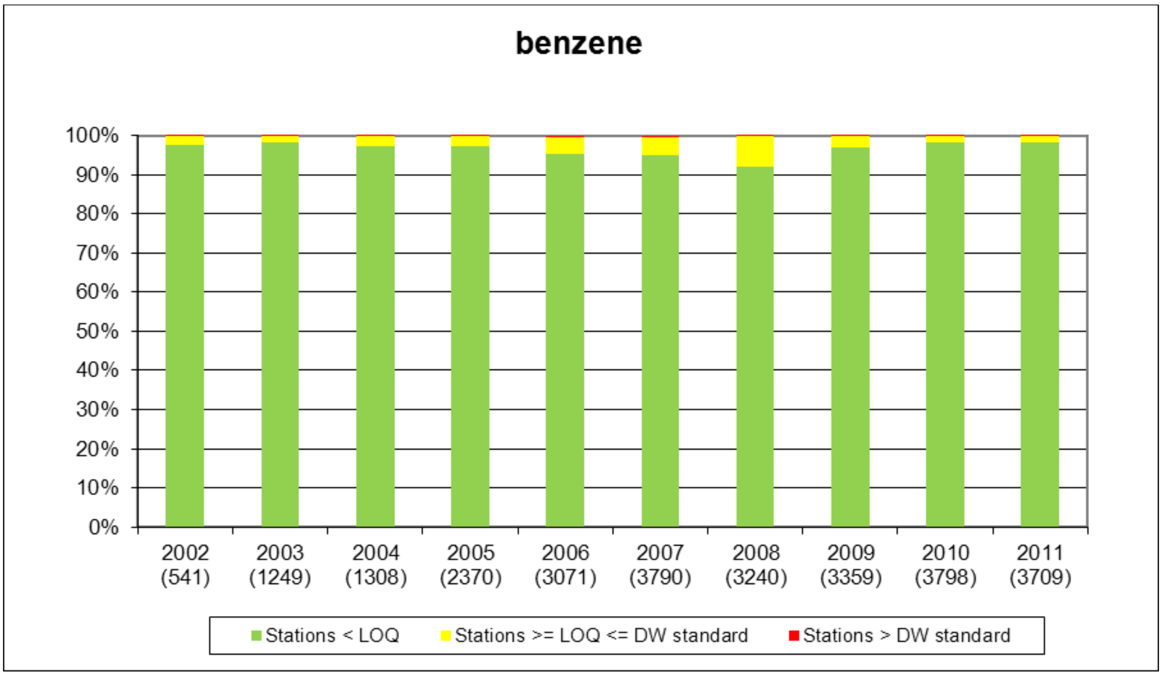



**Figure 4.1.2.13b Indicator for benzene in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

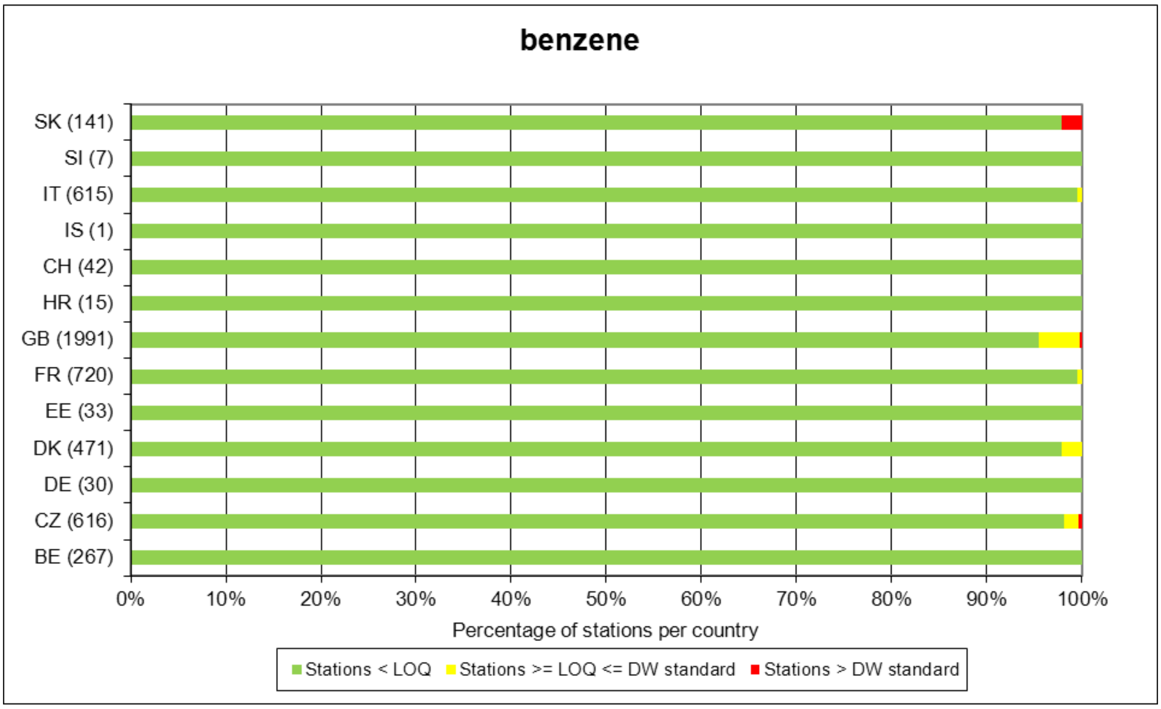


**Figure 4.1.2.13c Map of the indicator for benzene in groundwater in 2010–2011**

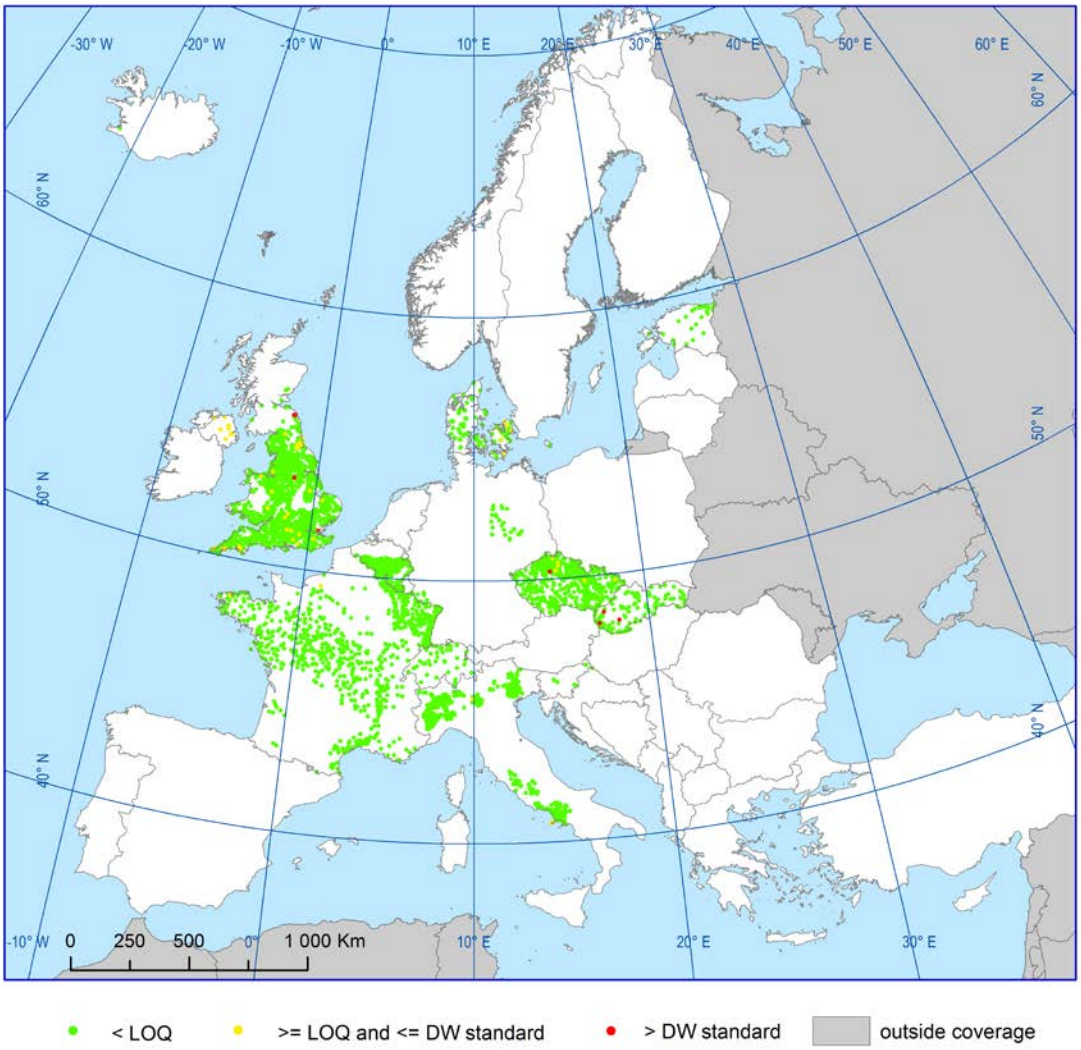


**Figure 4.1.2.14a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for benzo(a)pyrene in groundwater**

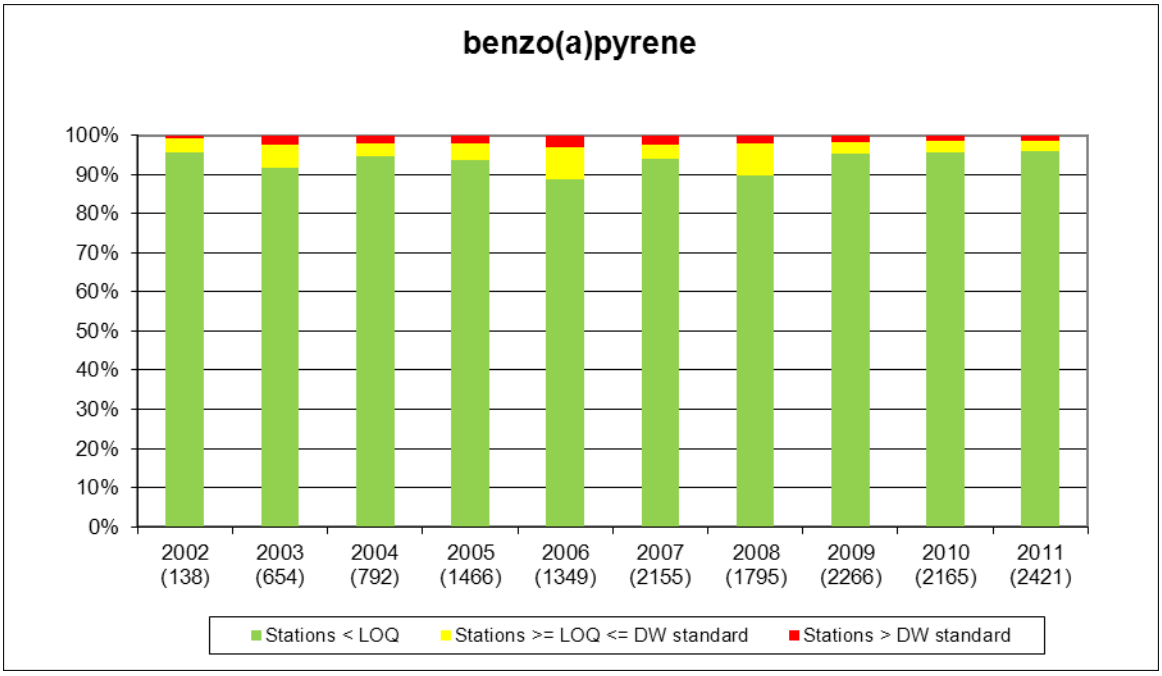



**Figure 4.1.2.14b Indicator for benzo(a)pyrene in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

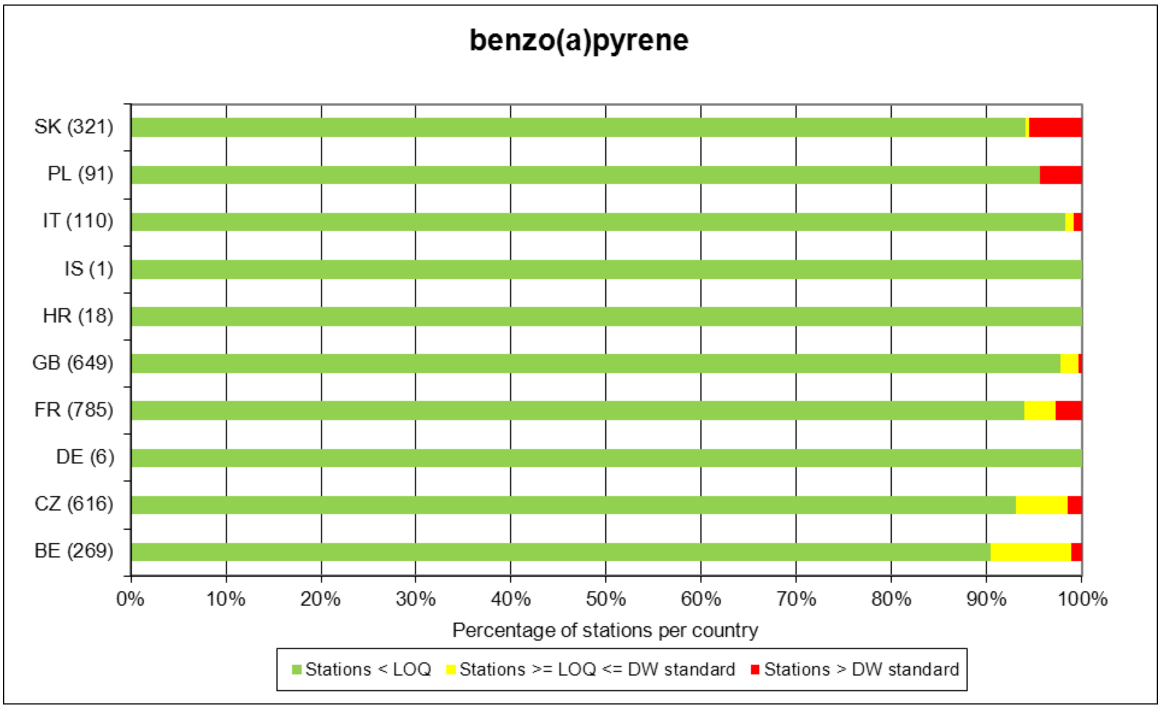


**Figure 4.1.2.14c Map of the indicator for benzo(a)pyrene in groundwater in 2010–2011**

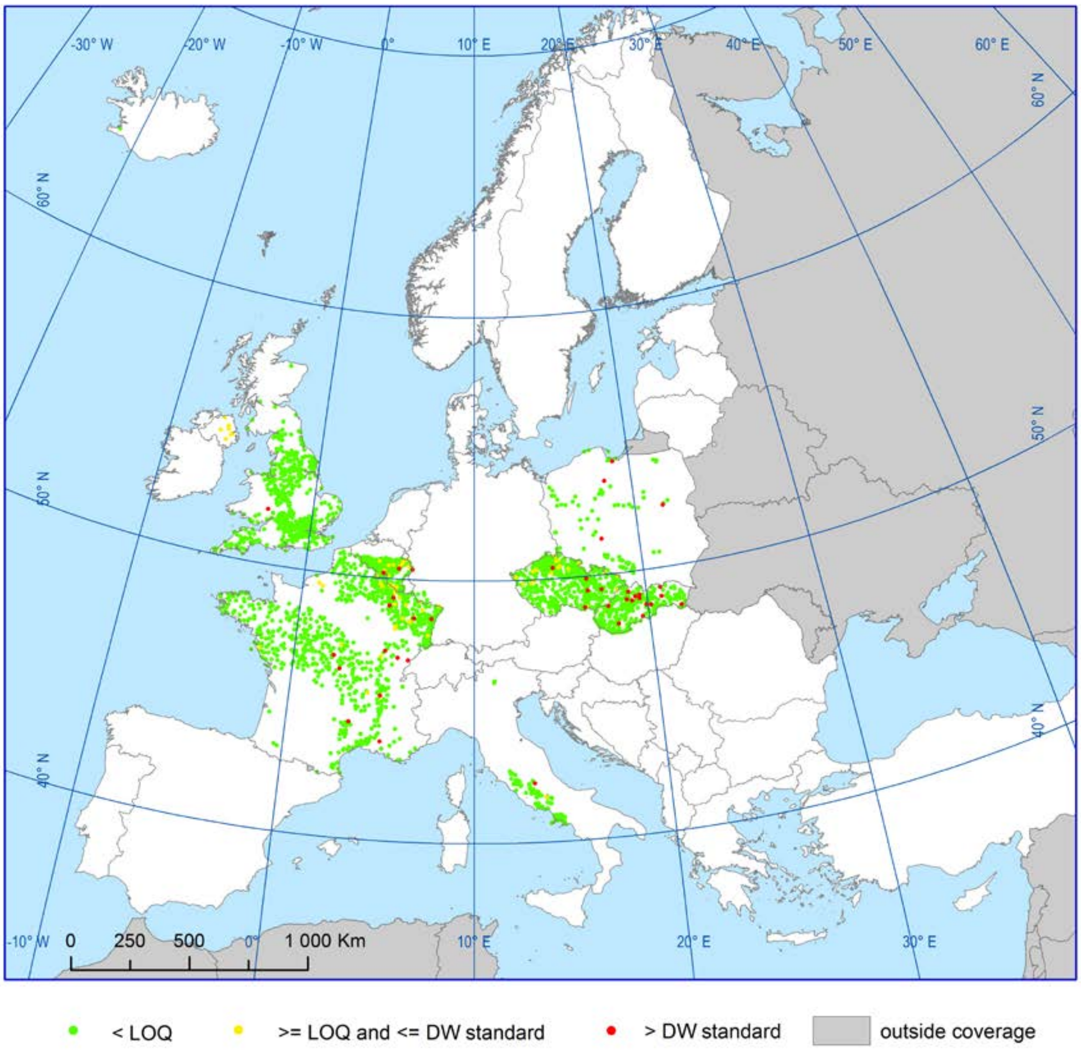


**Figure 4.1.2.15a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for beta HCH in groundwater**

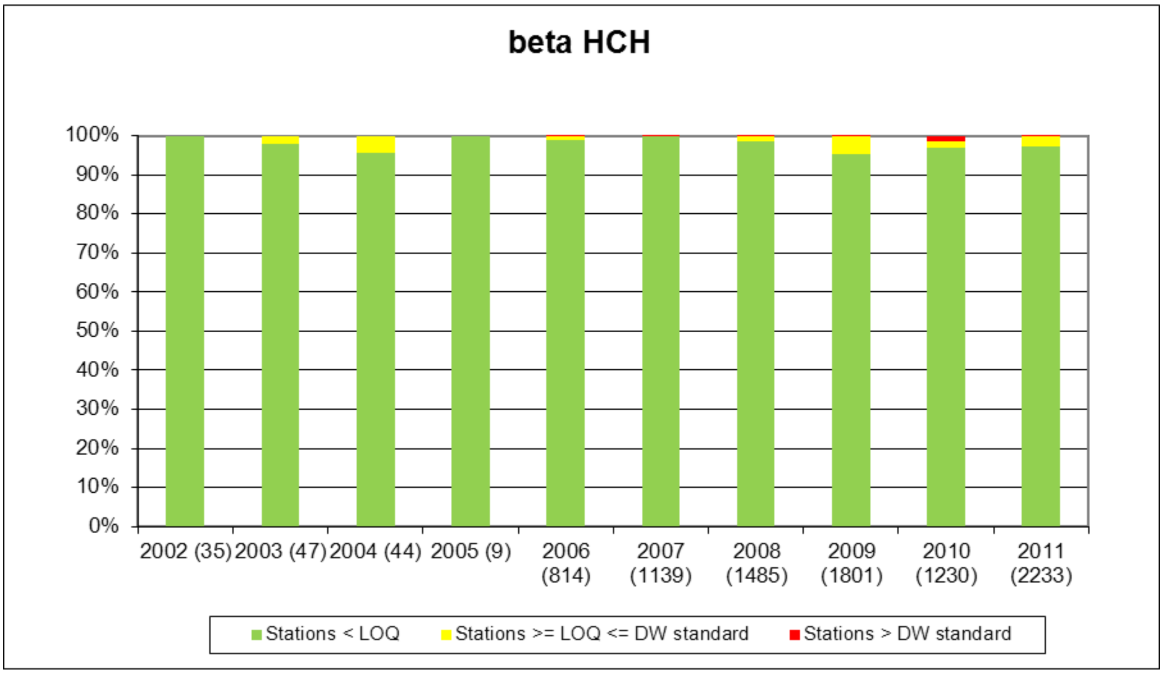



**Figure 4.1.2.15b Indicator for beta HCH in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

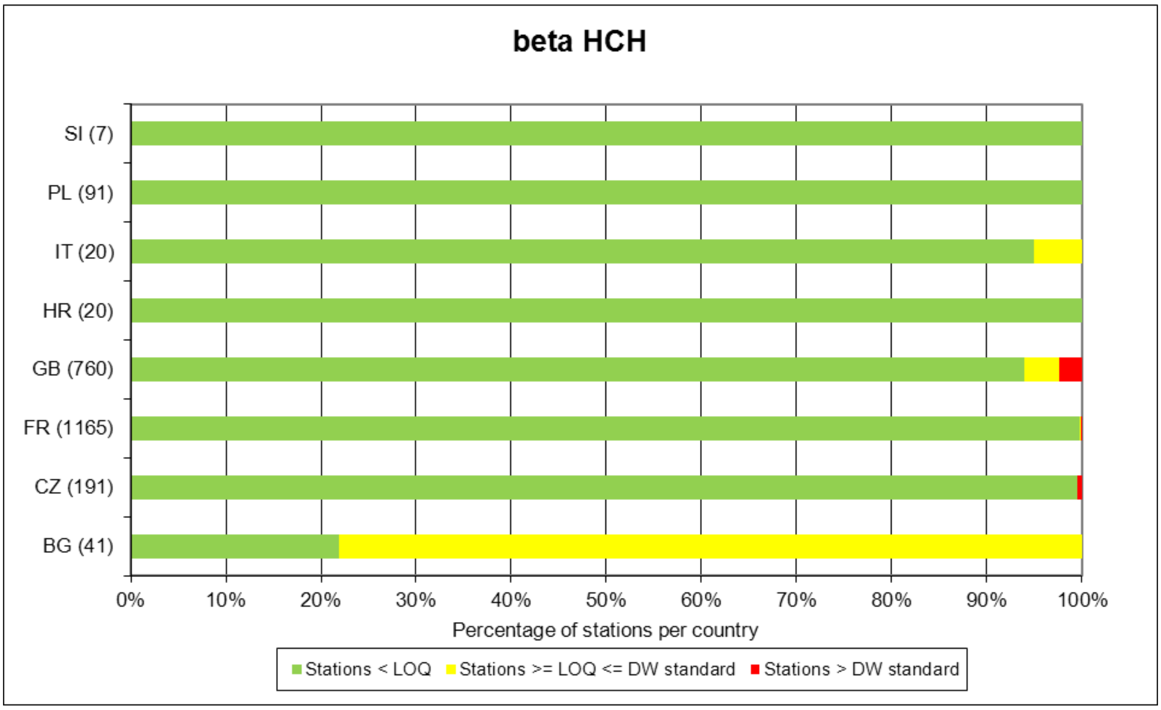


**Figure 4.1.2.15c Map of the indicator for beta HCH in groundwater in 2010–2011**

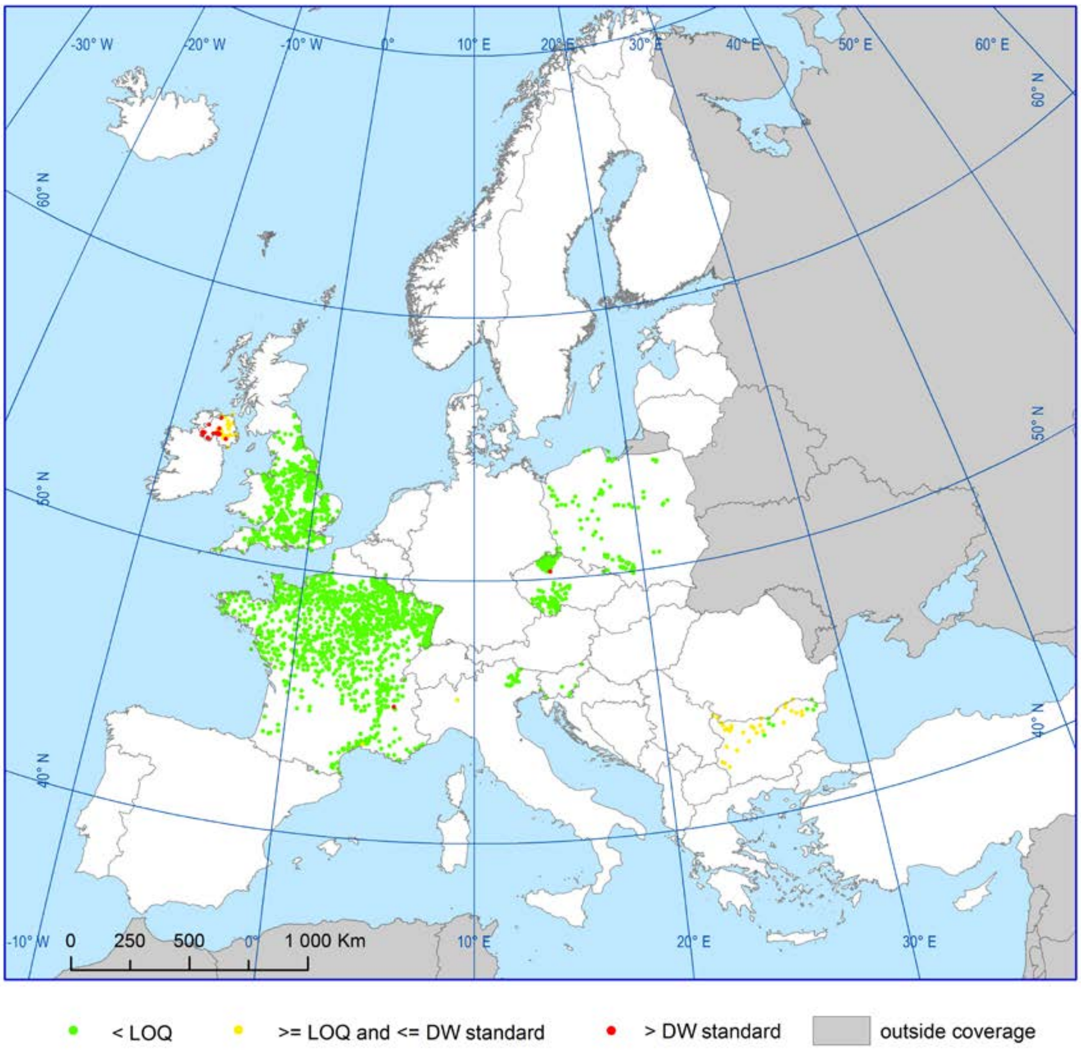


**Figure 4.1.2.16 Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for cadmium in groundwater**

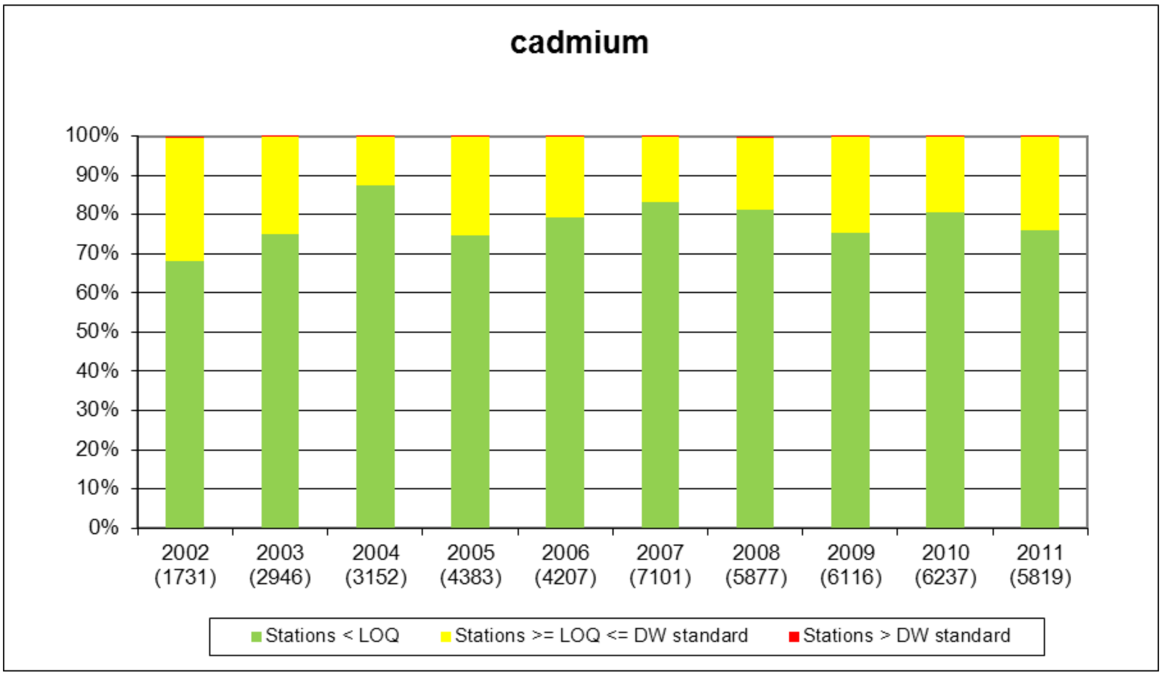



**Figure 4.1.2.16b Indicator for cadmium in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

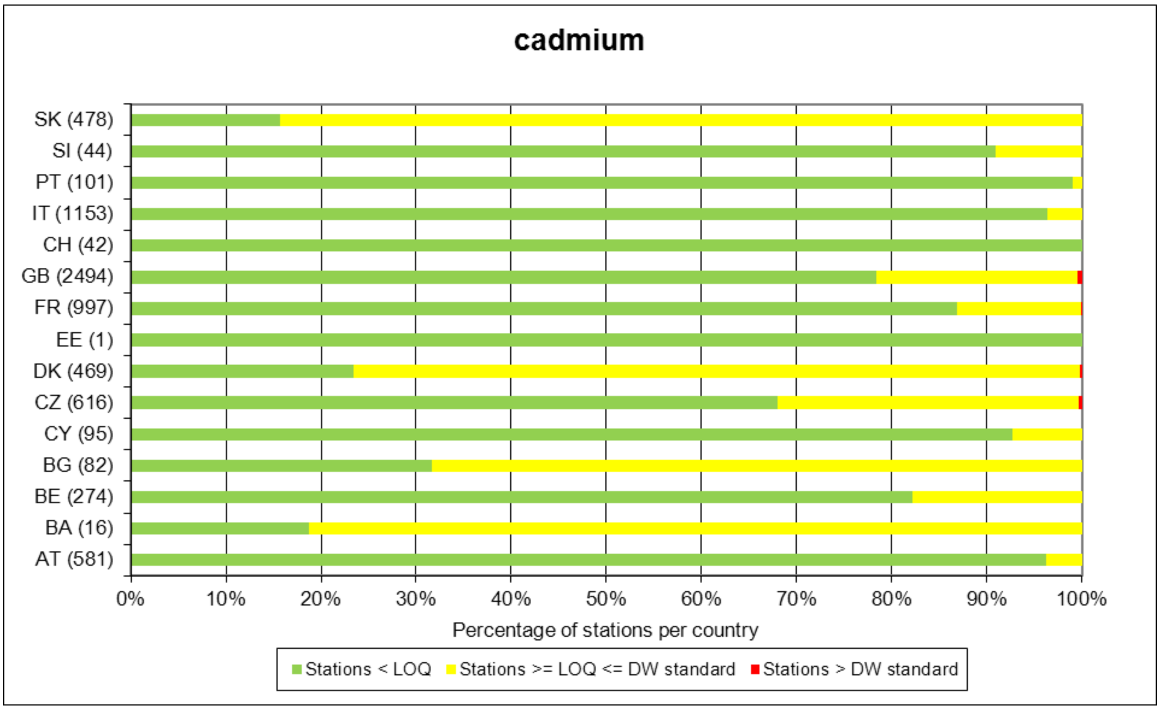


**Figure 4.1.2.16c Map of the indicator for cadmium in groundwater in 2010–2011**

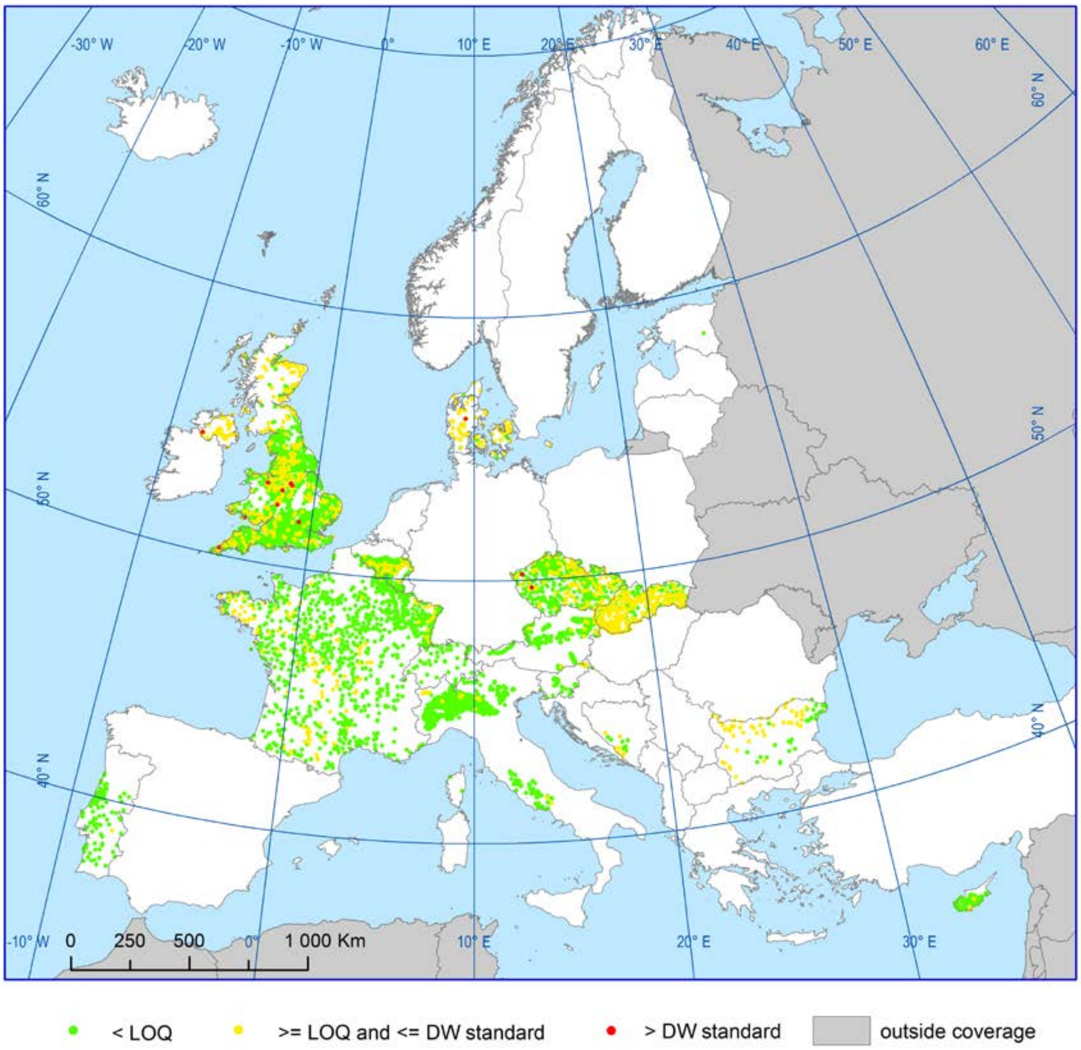


**Figure 4.1.2.17 Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for dissolved cadmium in groundwater**

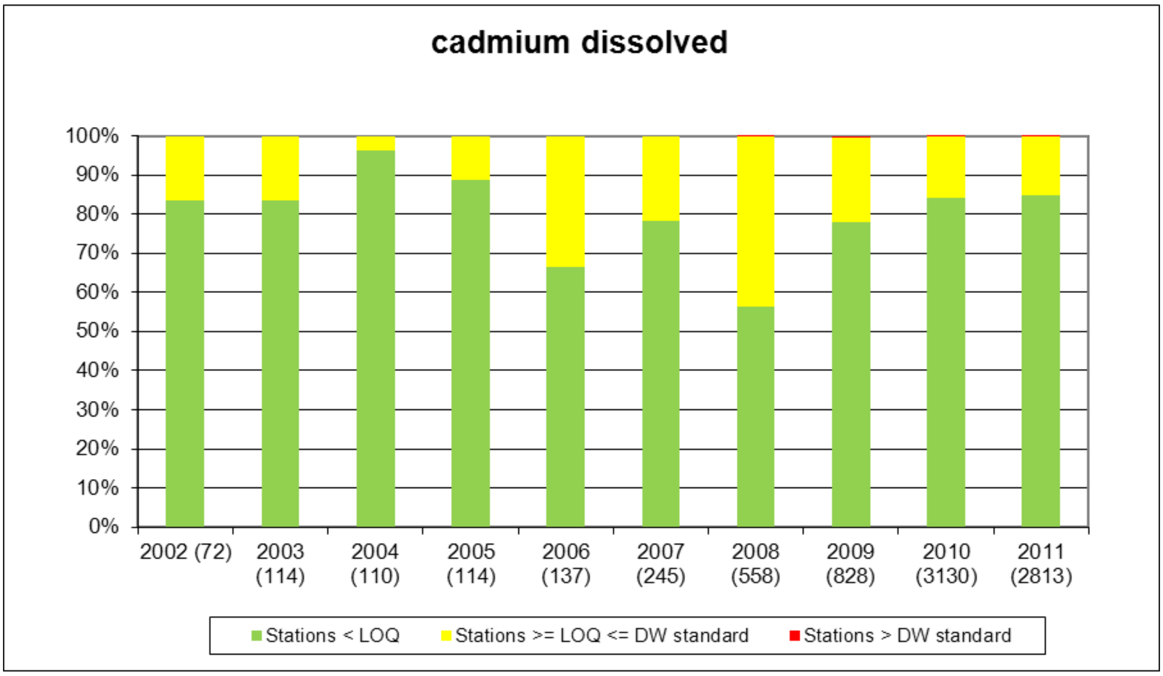



**Figure 4.1.2.17b Indicator for dissolved cadmium in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

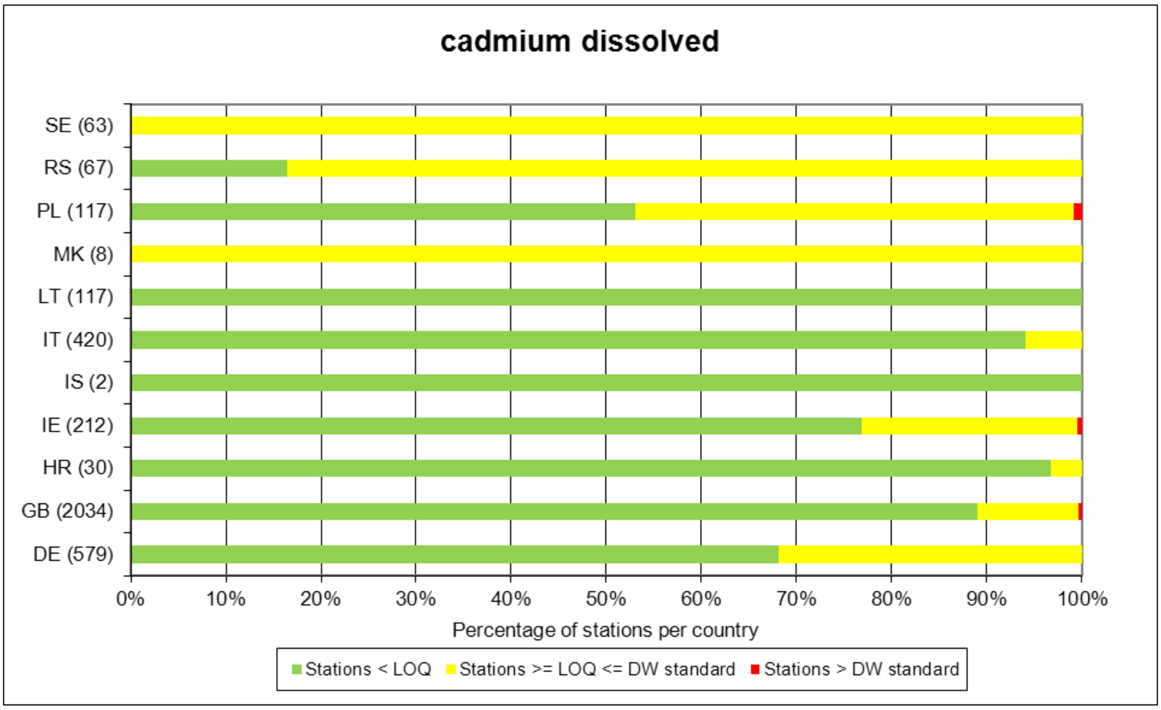


**Figure 4.1.2.17c Map of the indicator for dissolved cadmium in groundwater in 2010–2011**

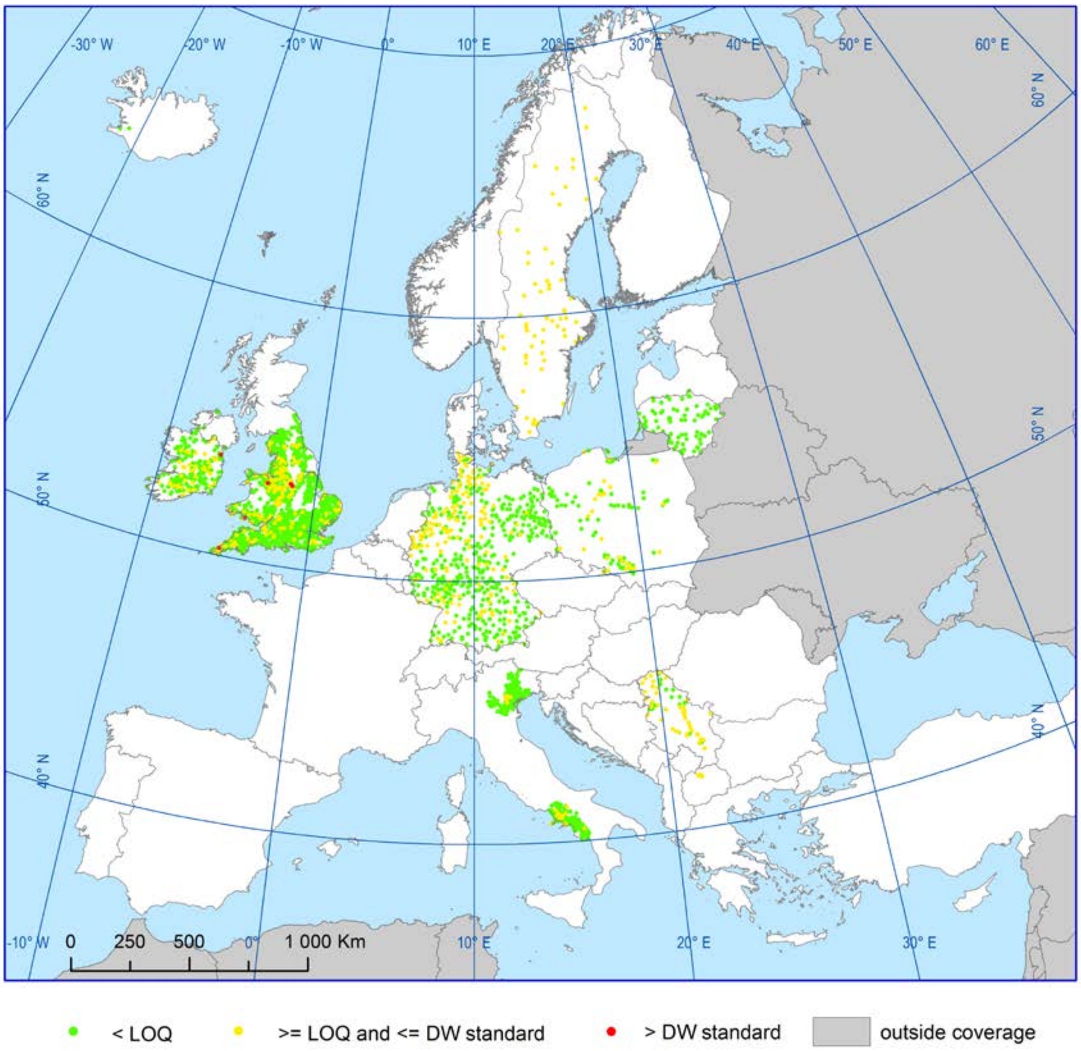


**Figure 4.1.2.18a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for chlorfenvinphos in groundwater**

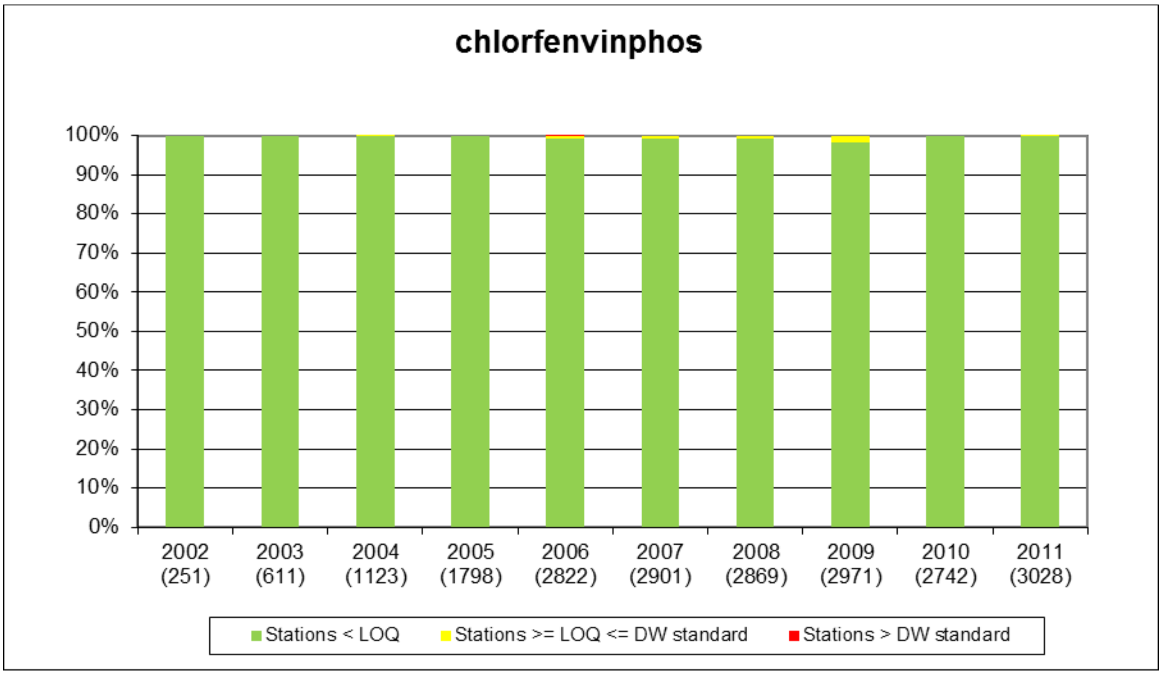



**Figure 4.1.2.18b Indicator for chlorfenvinphos groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

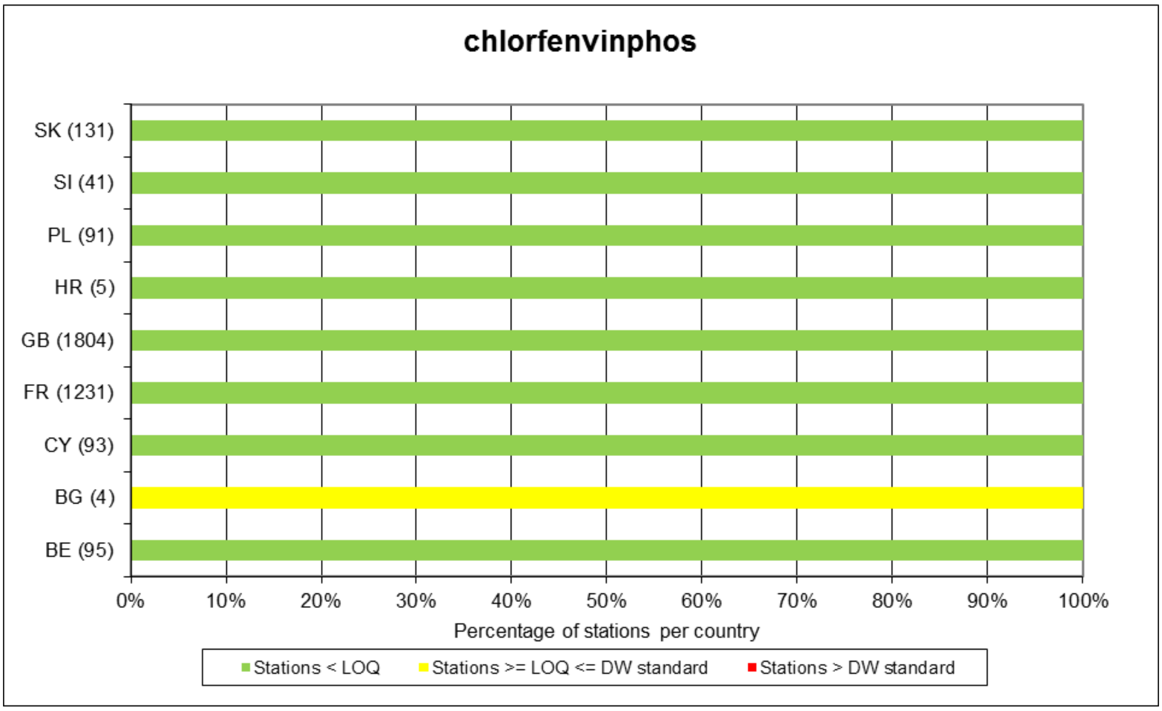


**Figure 4.1.2.18c Map of the indicator for chlorfenvinphos in groundwater in 2010–2011**

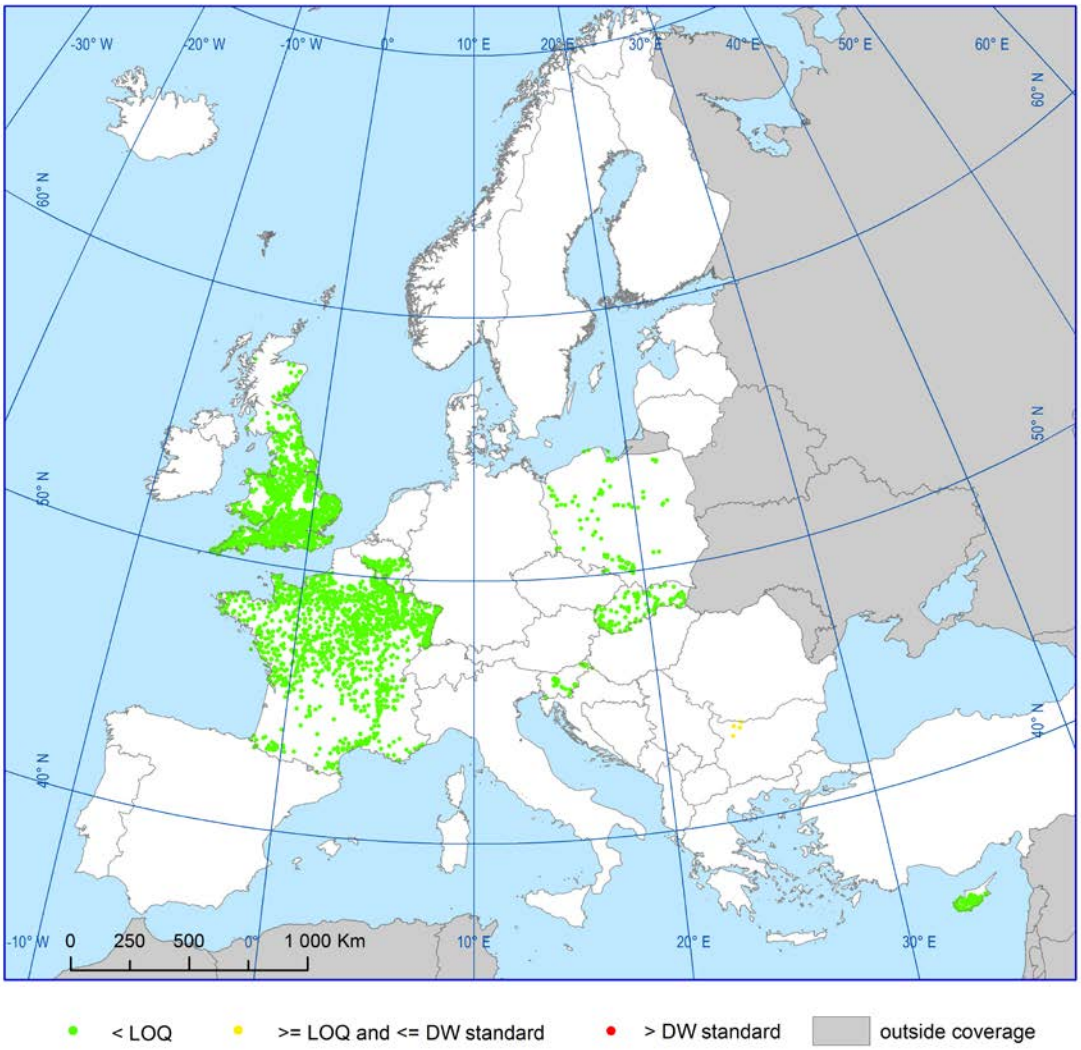


**Figure 4.1.2.19a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for chlorpyrifos in groundwater**

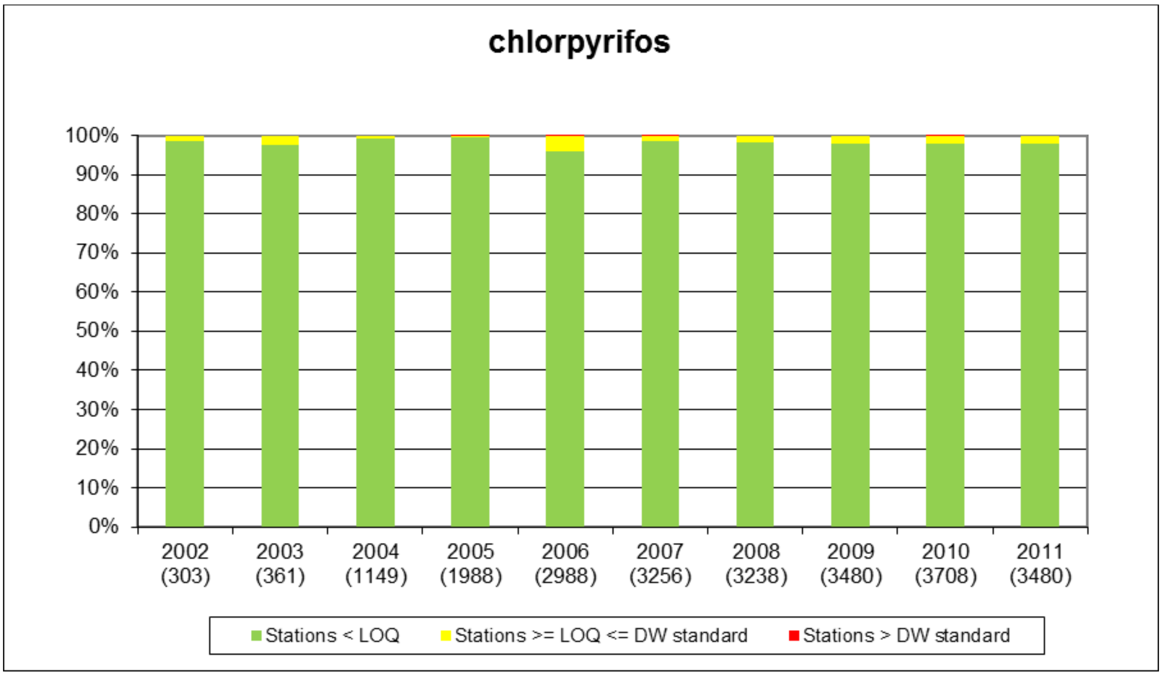



**Figure 4.1.2.19b Indicator for chlorpyrifos groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

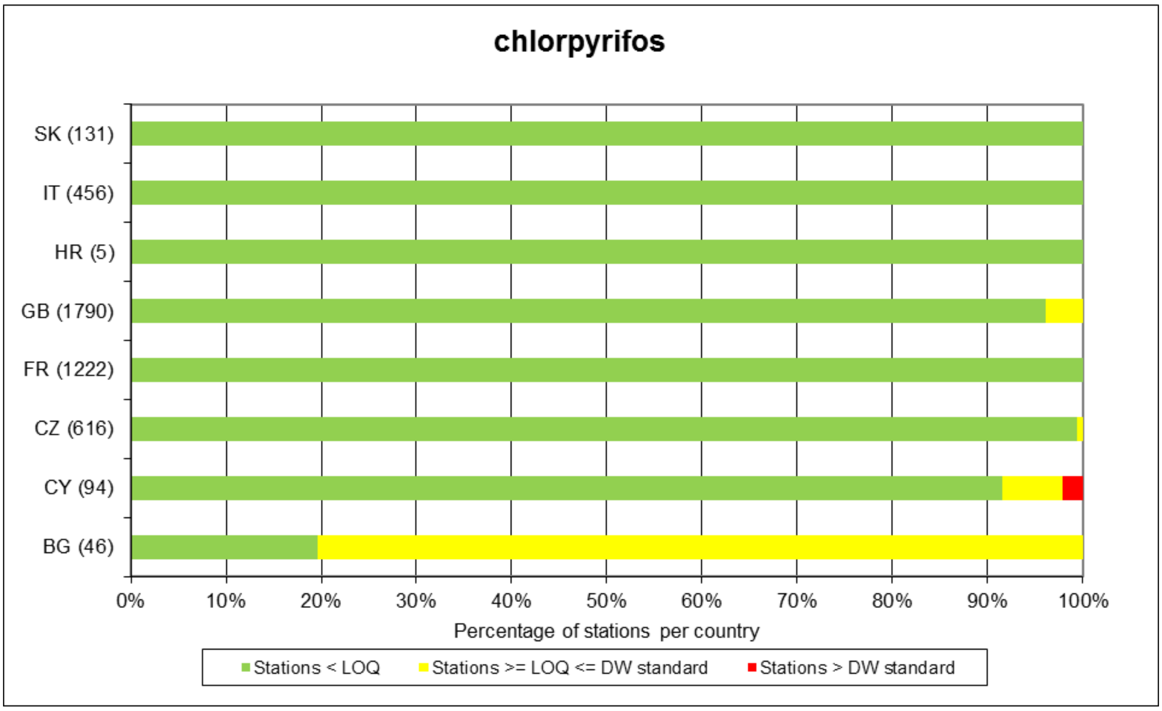


**Figure 4.1.2.19c Map of the indicator for chlorpyrifos in groundwater in 2010–2011**

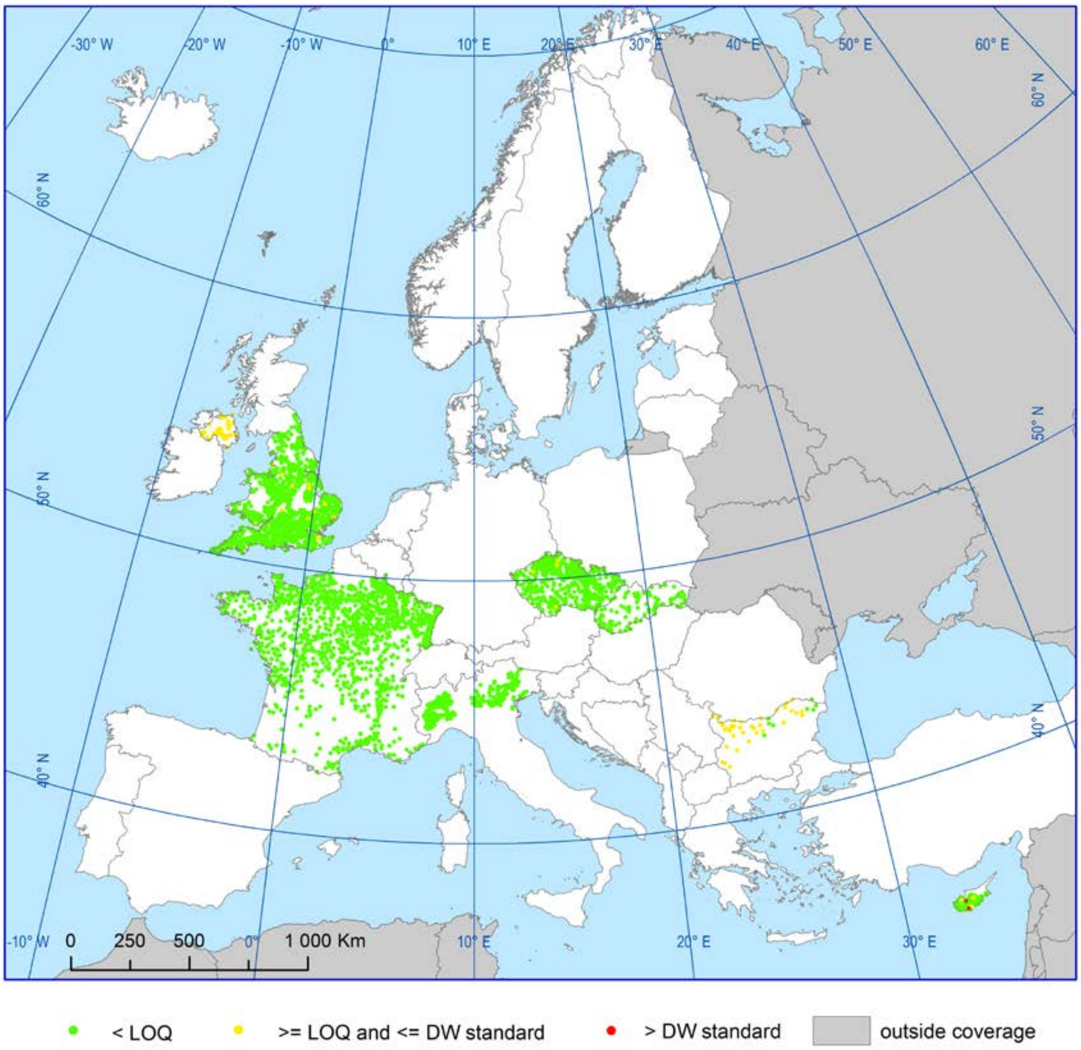


**Figure 4.1.2.20a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for chromium in groundwater**

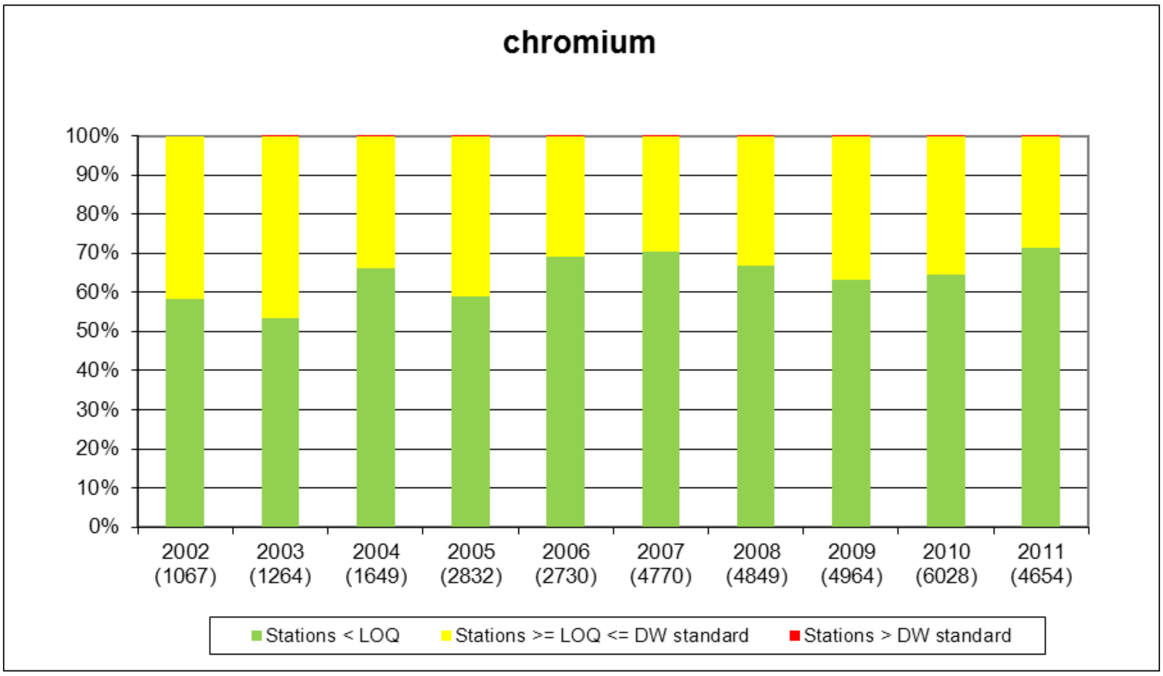



**Figure 4.1.2.20b Indicator for chromium groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

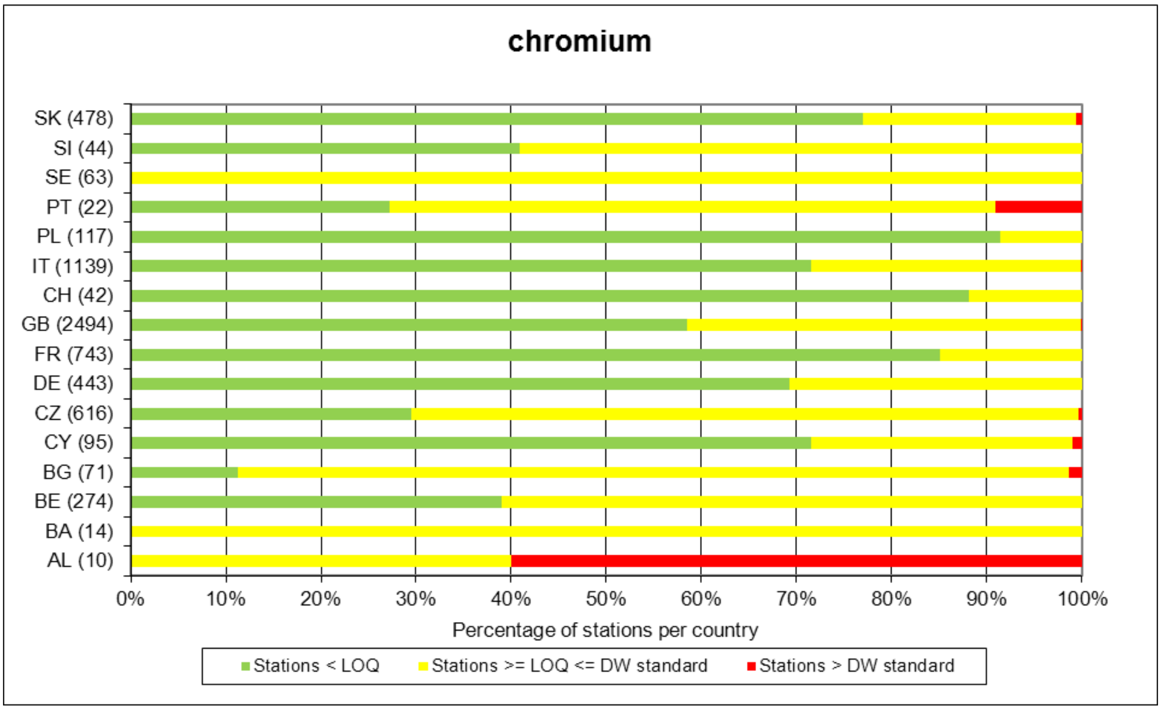


**Figure 4.1.2.20c Map of the indicator for chromium in groundwater in 2010–2011**

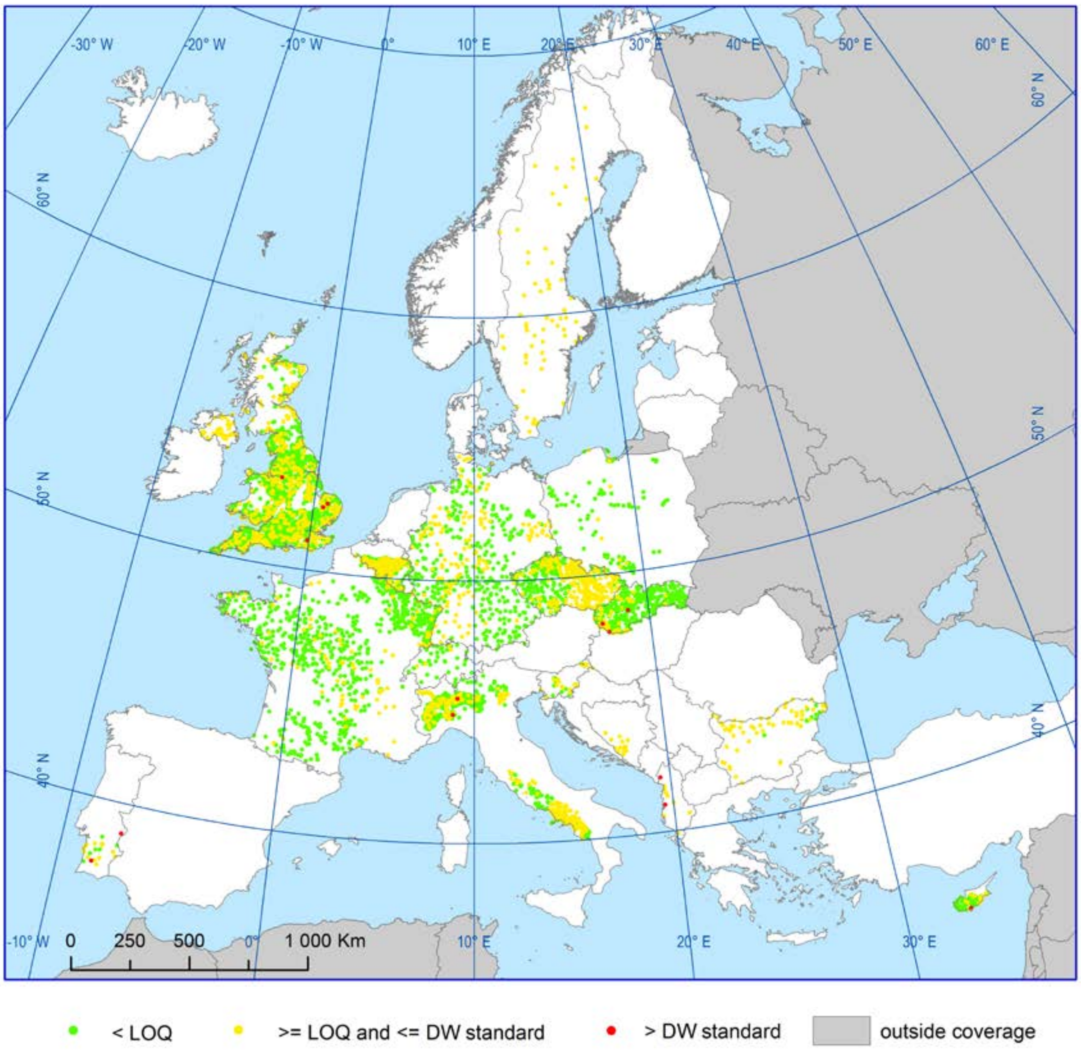


**Figure 4.1.2.21a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for dissolved chromium in groundwater**

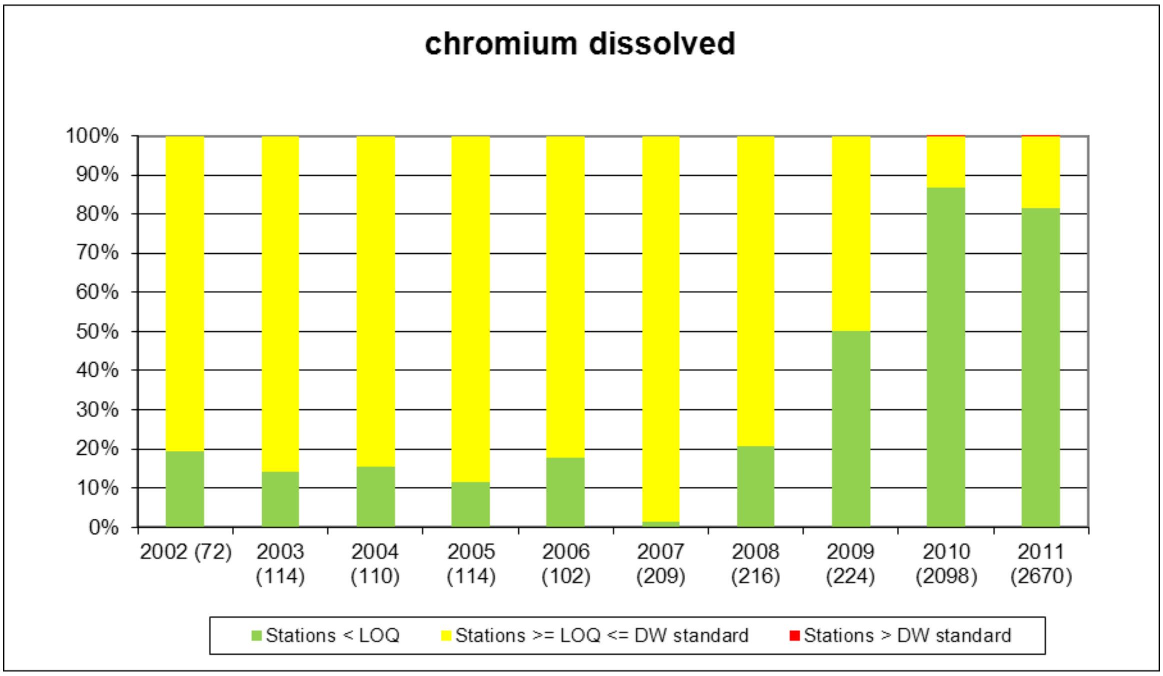



**Figure 4.1.2.21b Indicator for dissolved chromium groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

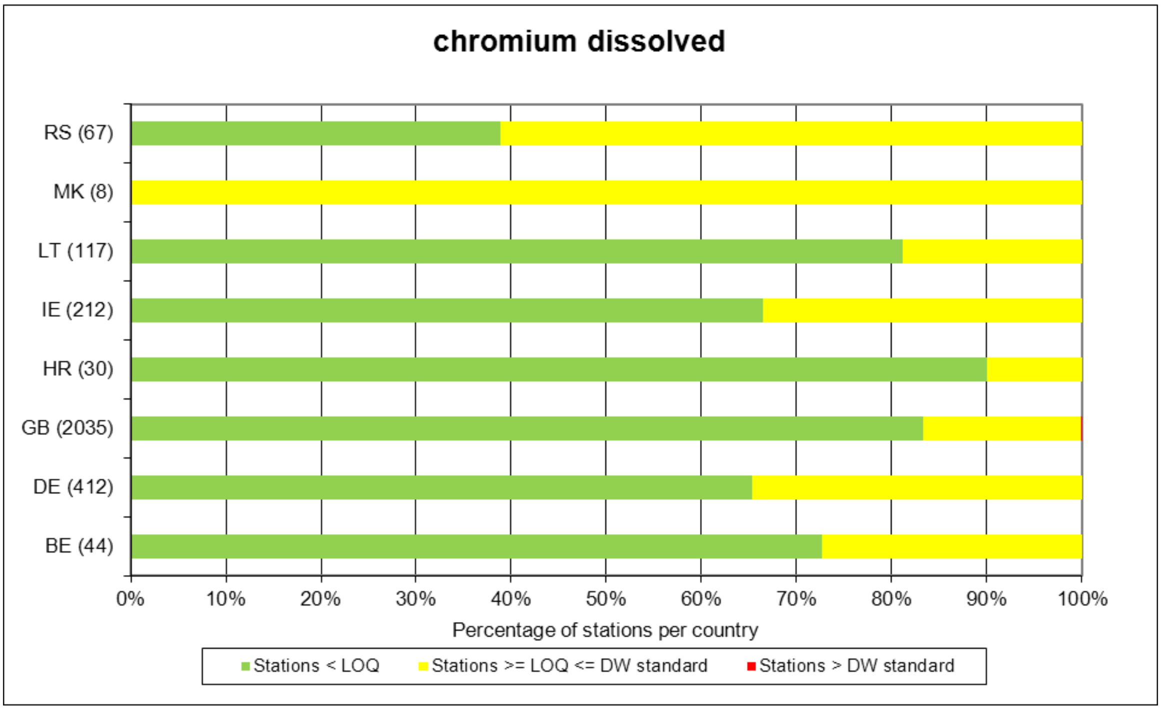


**Figure 4.1.2.21c Map of the indicator for dissolved chromium in groundwater in 2010–2011**

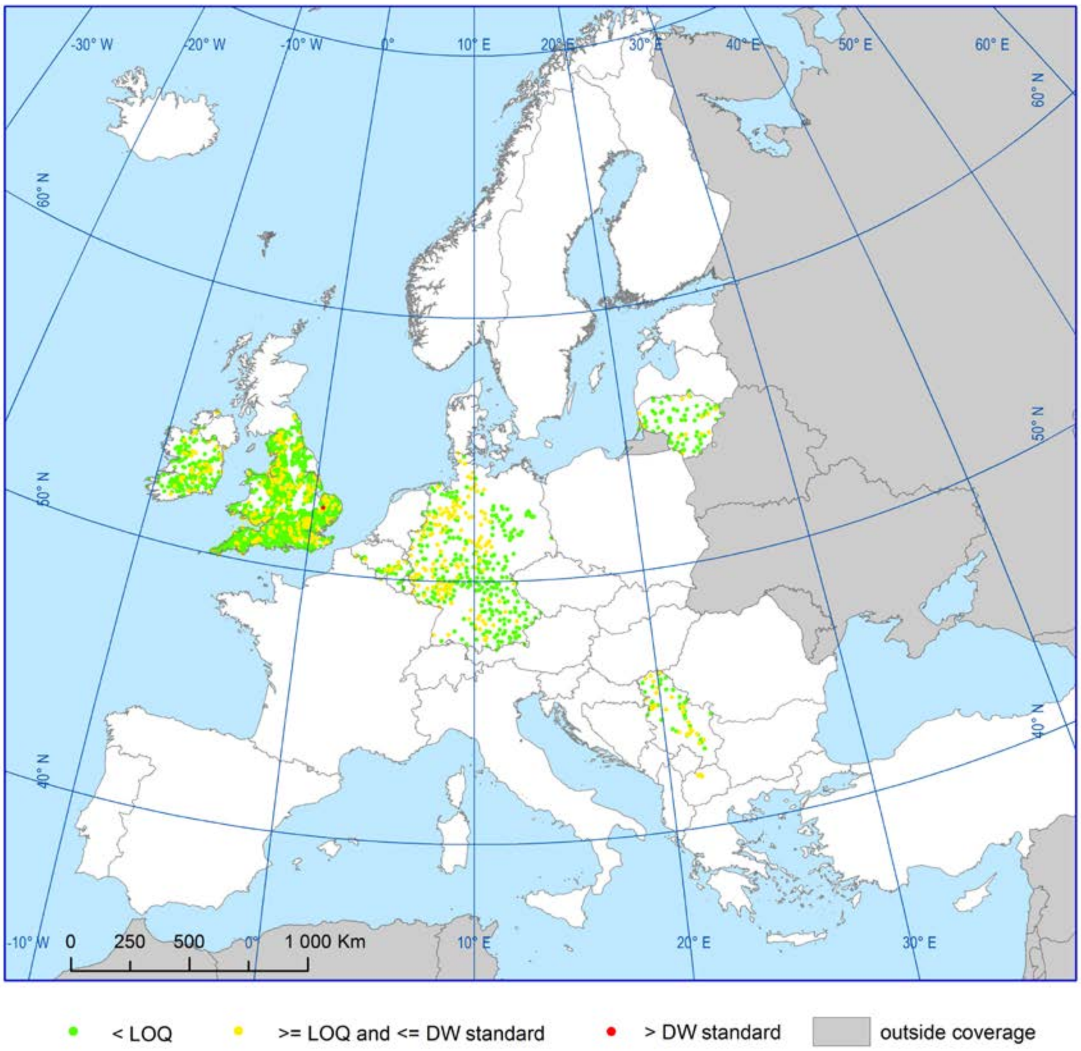


**Figure 4.1.2.22a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for copper in groundwater**

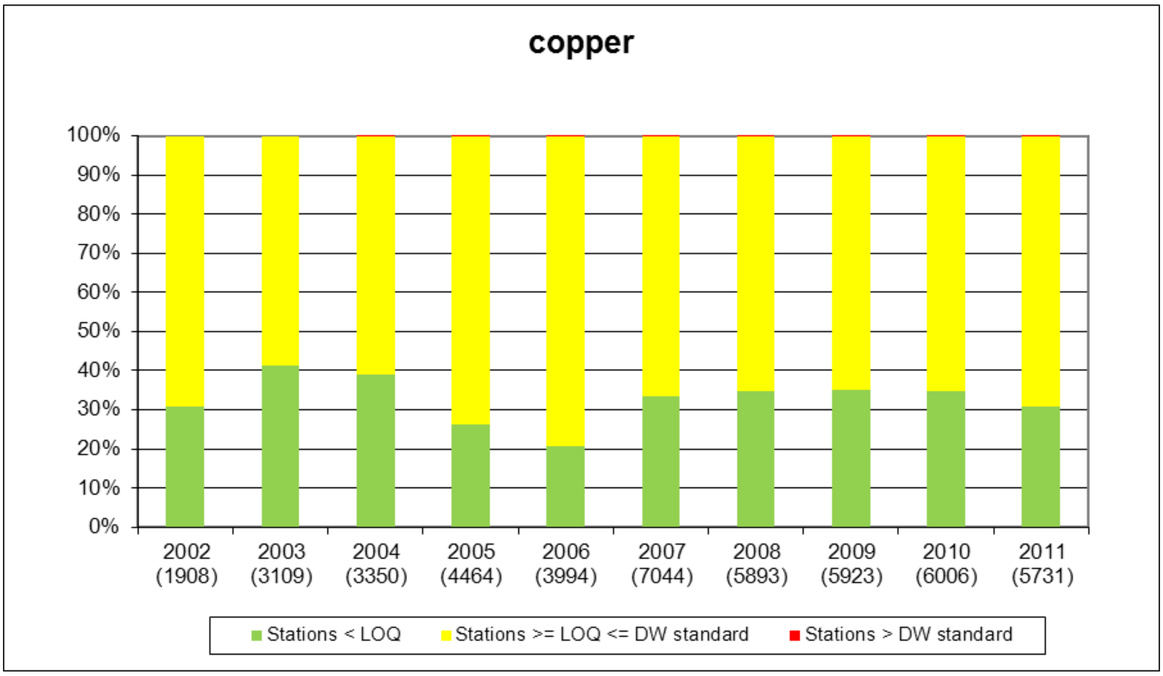



**Figure 4.1.2.22b Indicator for copper groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

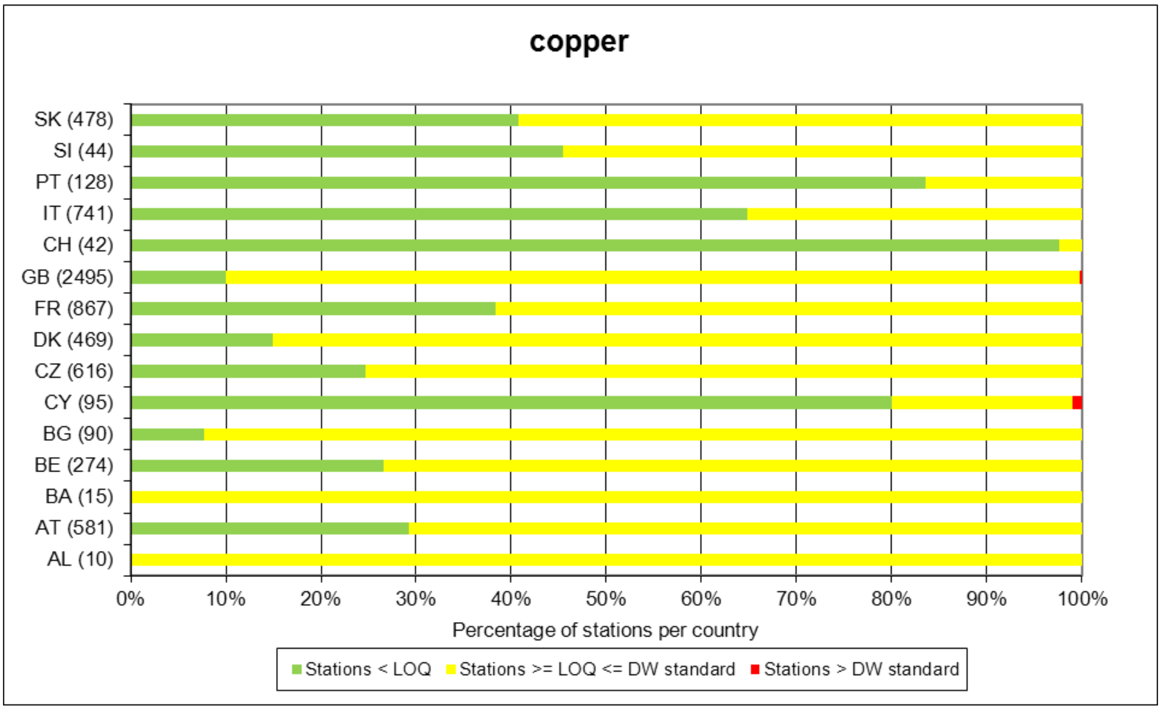


**Figure 4.1.2.22c Map of the indicator for copper in groundwater in 2010–2011**

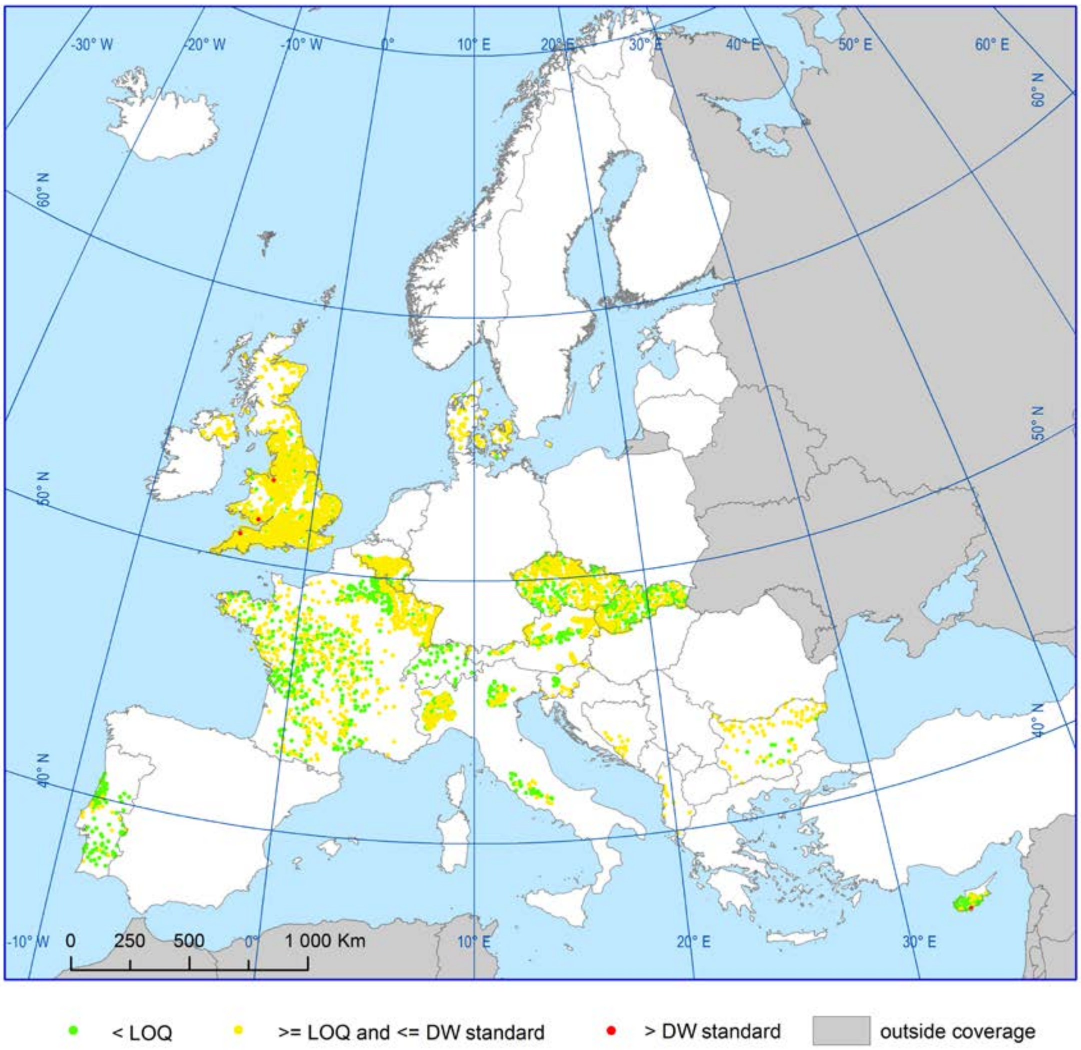


**Figure 4.1.2.23a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for dissolved copper in groundwater**

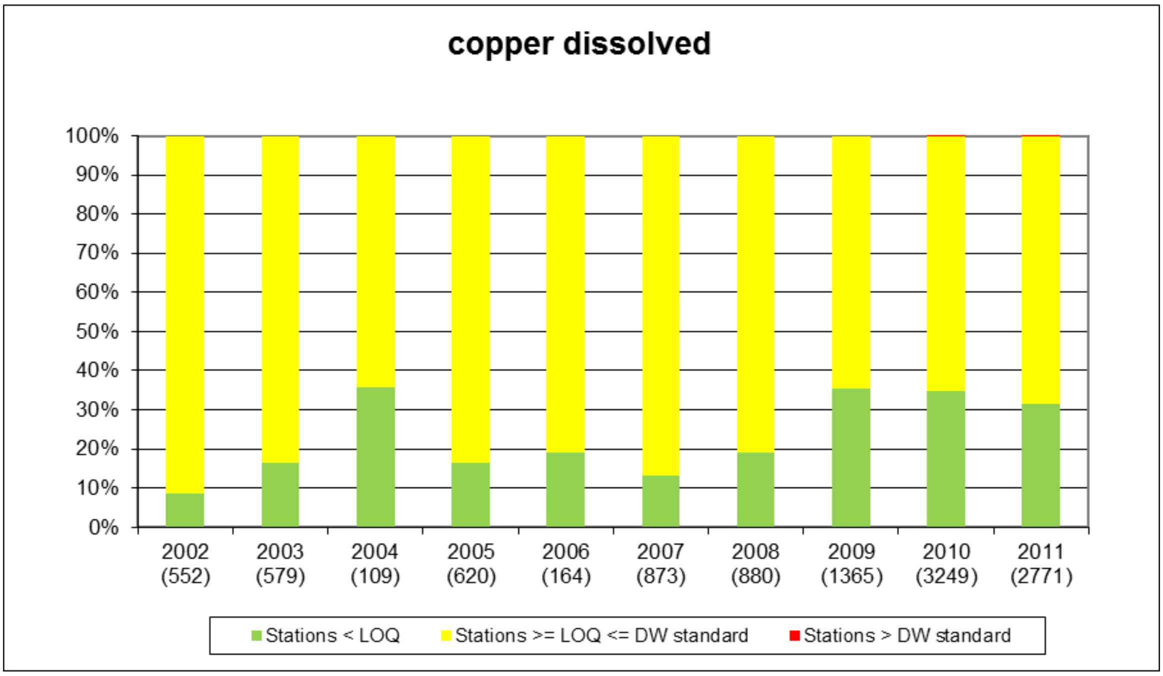



**Figure 4.1.2.23b Indicator for dissolved copper groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

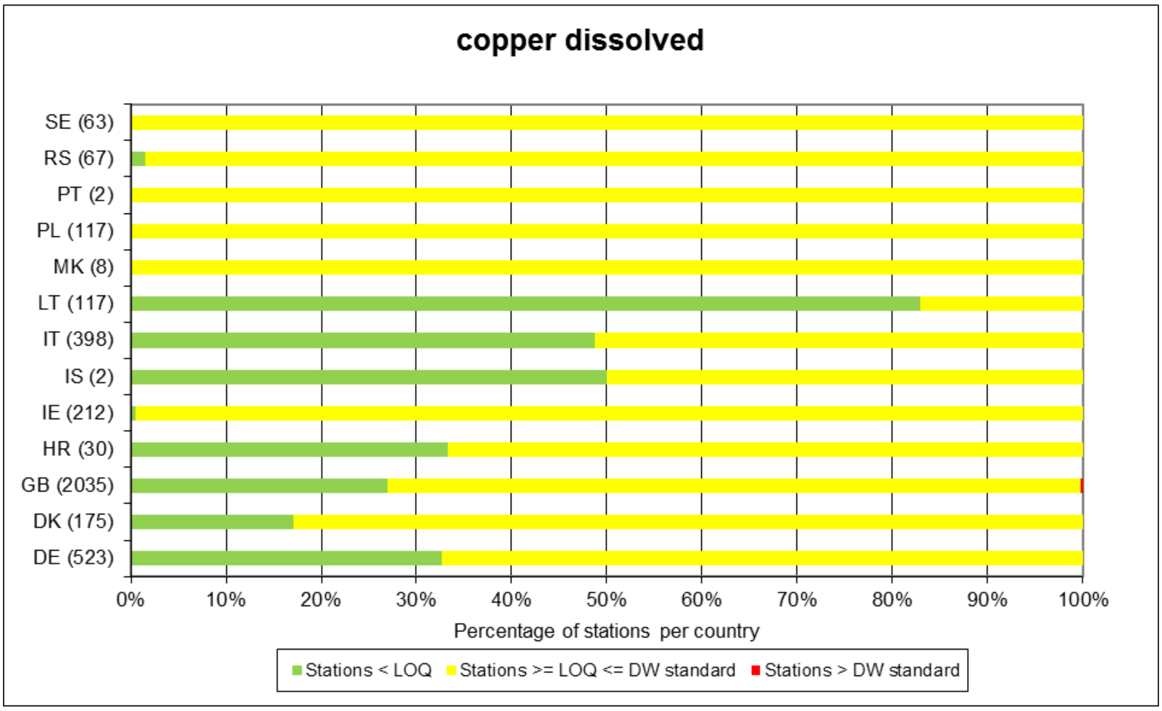


**Figure 4.1.2.23c Map of the indicator for dissolved copper in groundwater in 2010–2011**

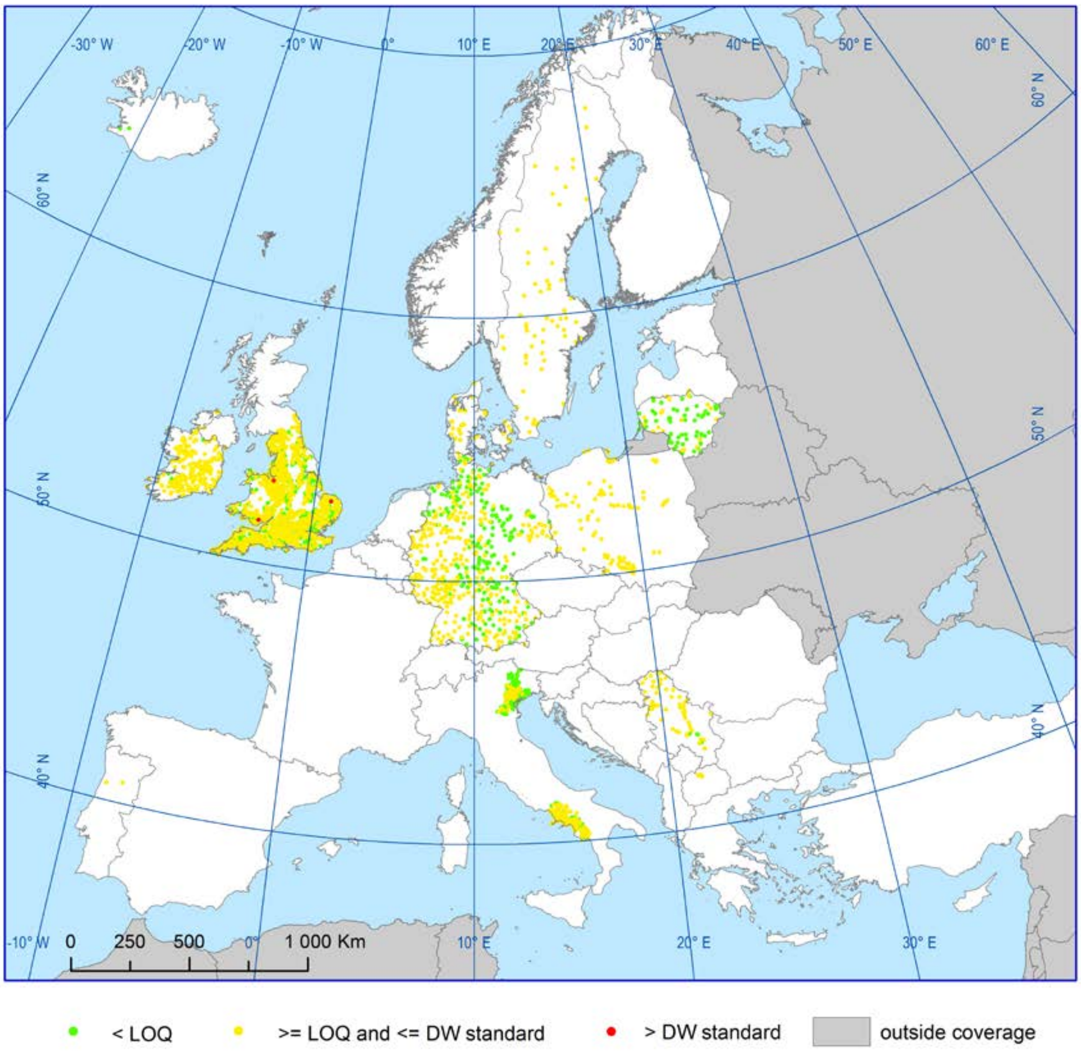


**Figure 4.1.2.24a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for DDD p,p´ in groundwater**

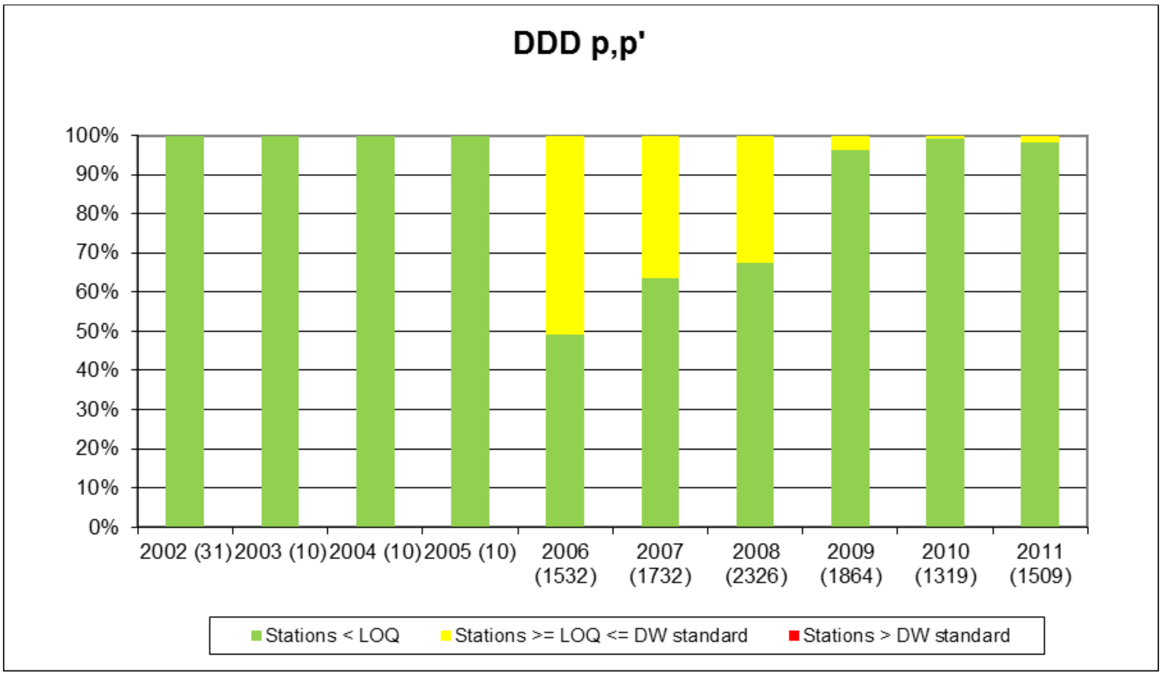



**Figure 4.1.2.24b Indicator for DDD p,p´ in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

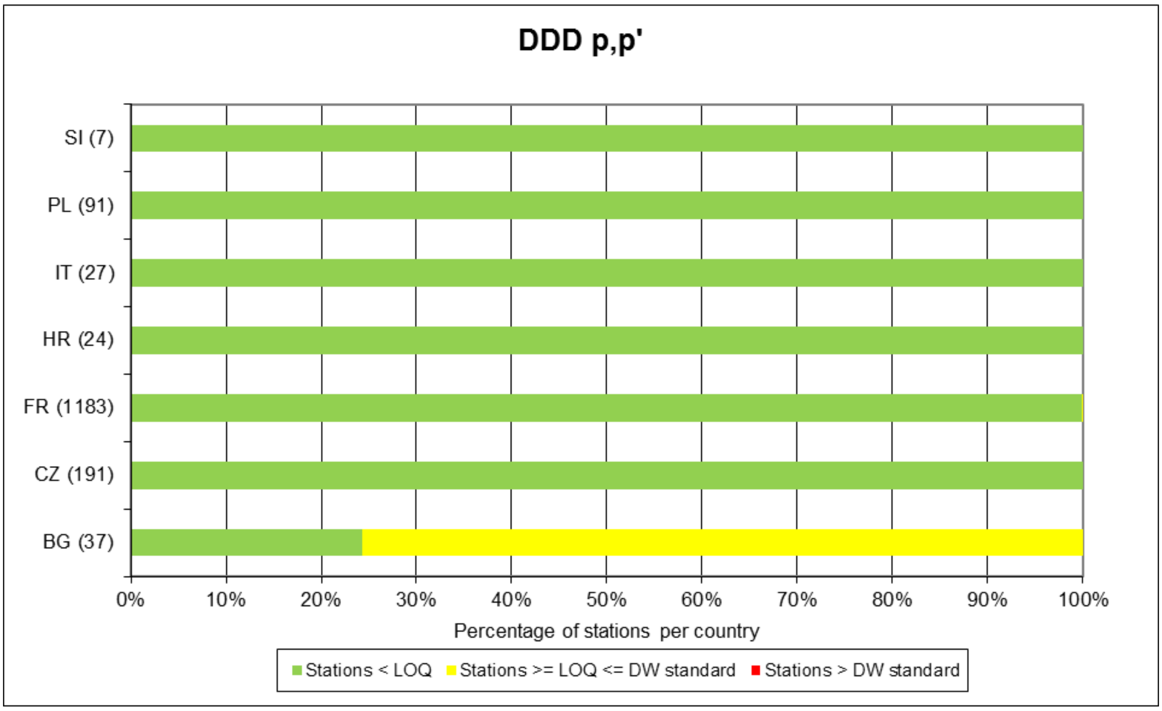


**Figure 4.1.2.24c Map of the indicator for DDD p,p´ in groundwater in 2010–2011**

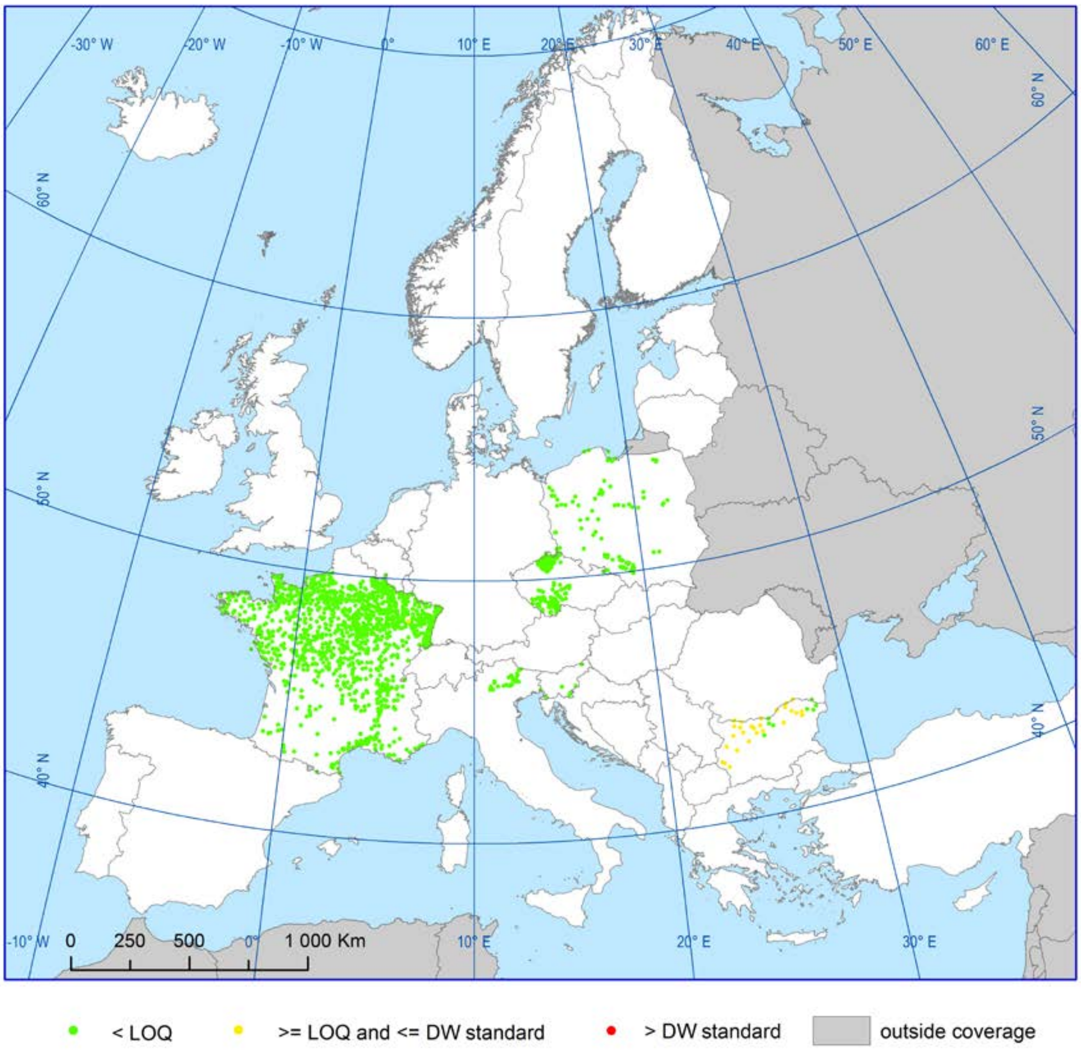


**Figure 4.1.2.25a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for DDE p,p´ in groundwater**

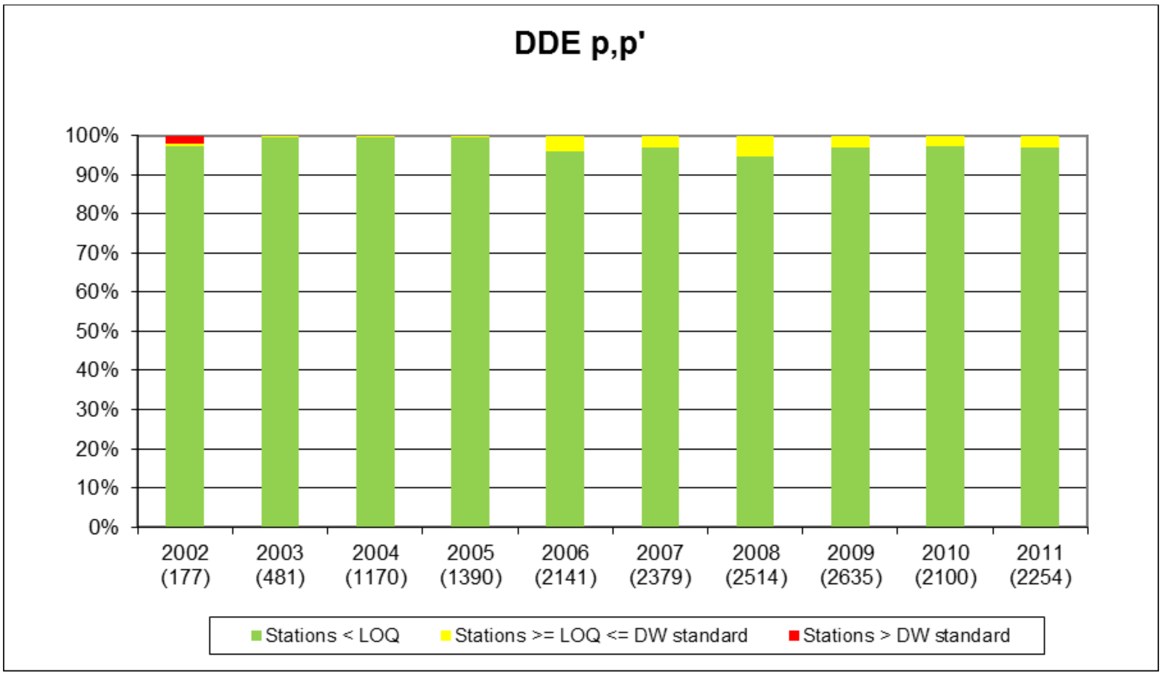



**Figure 4.1.2.25b Indicator for DDE p,p´ in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

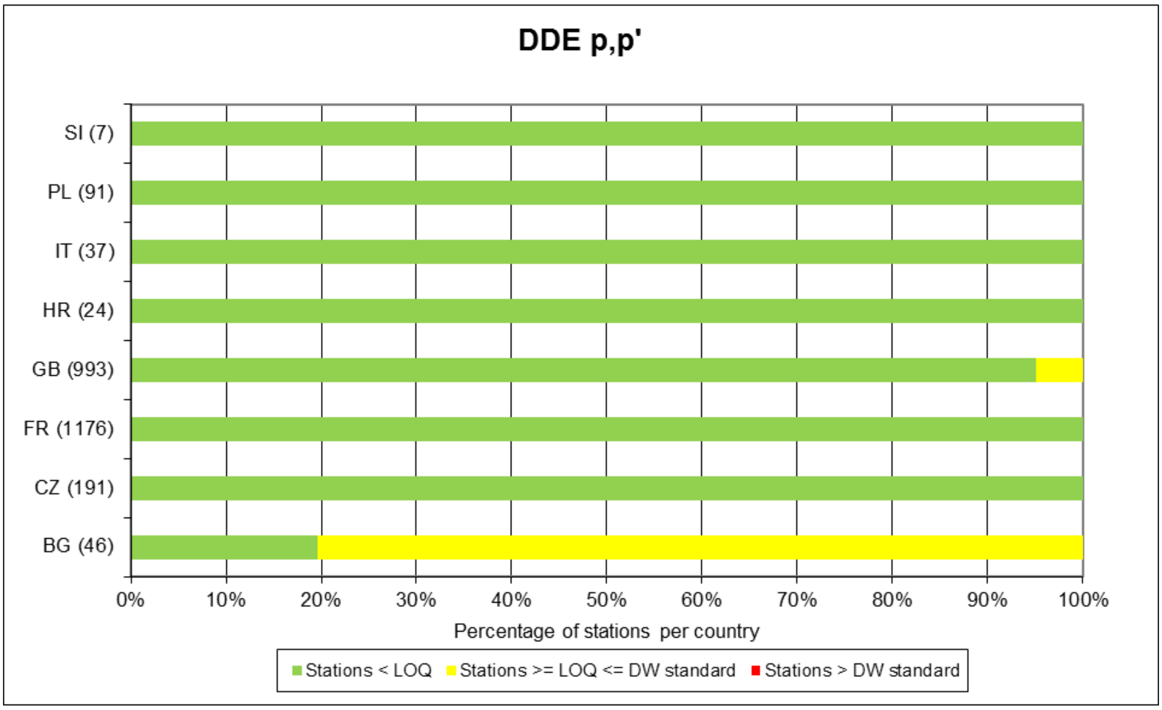


**Figure 4.1.2.25c Map of the indicator for DDE p,p´ in groundwater in 2010–2011**

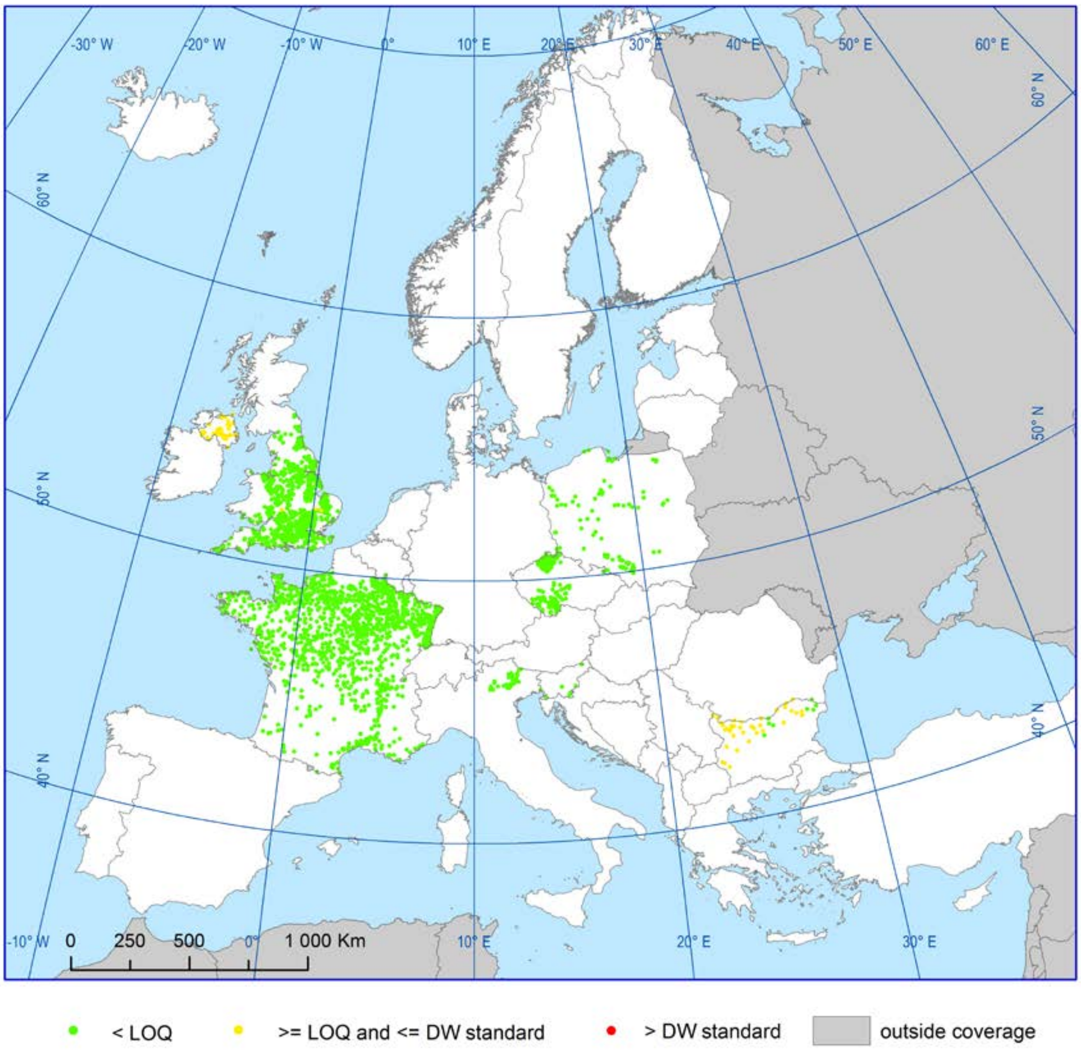


**Figure 4.1.2.26a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for DDT o,p´ in groundwater**

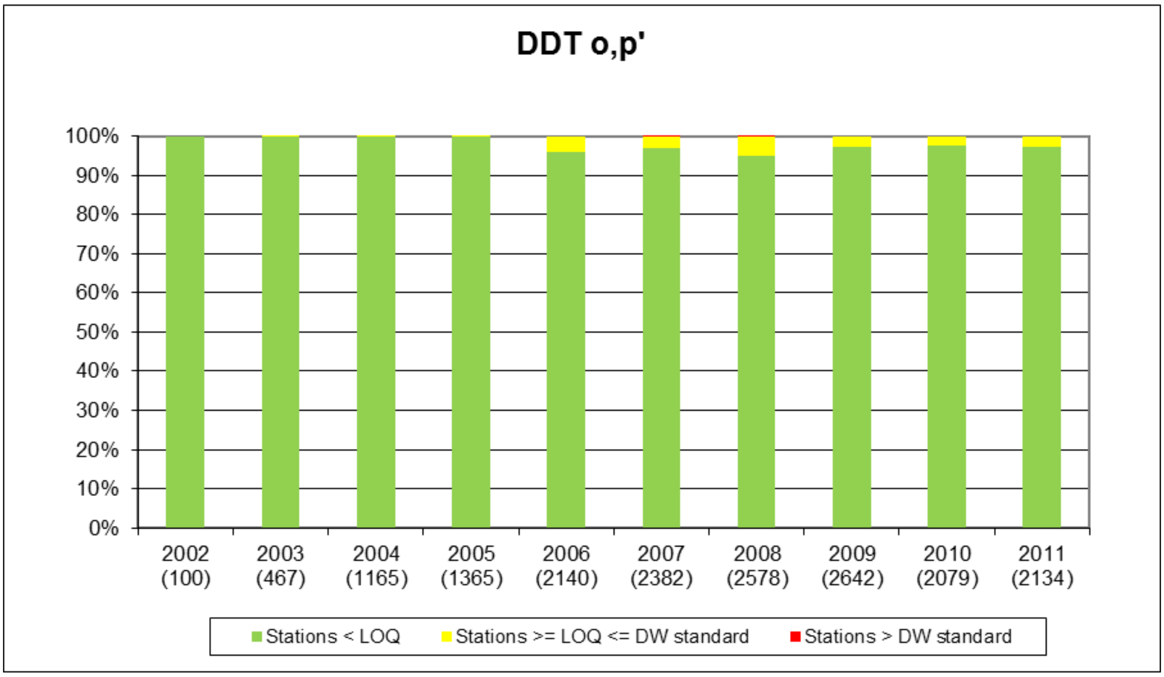



**Figure 4.1.2.26b Indicator for DDT o,p´ in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

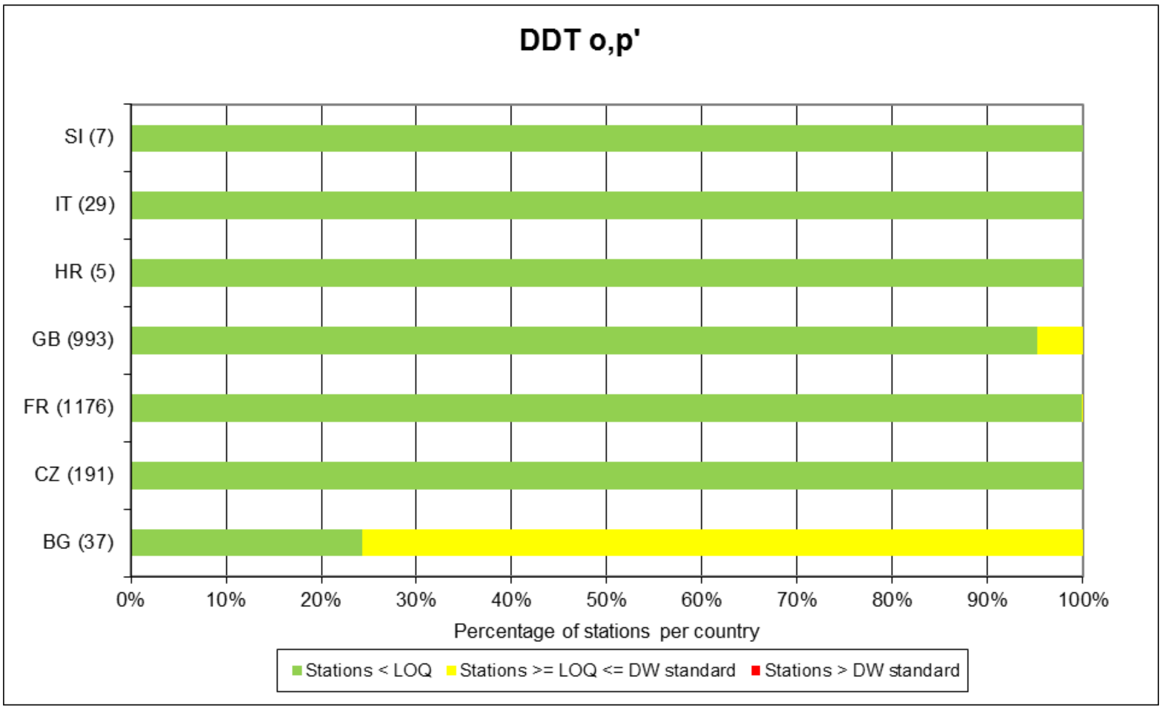


**Figure 4.1.2.26c Map of the indicator for DDT o,p´ in groundwater in 2010–2011**

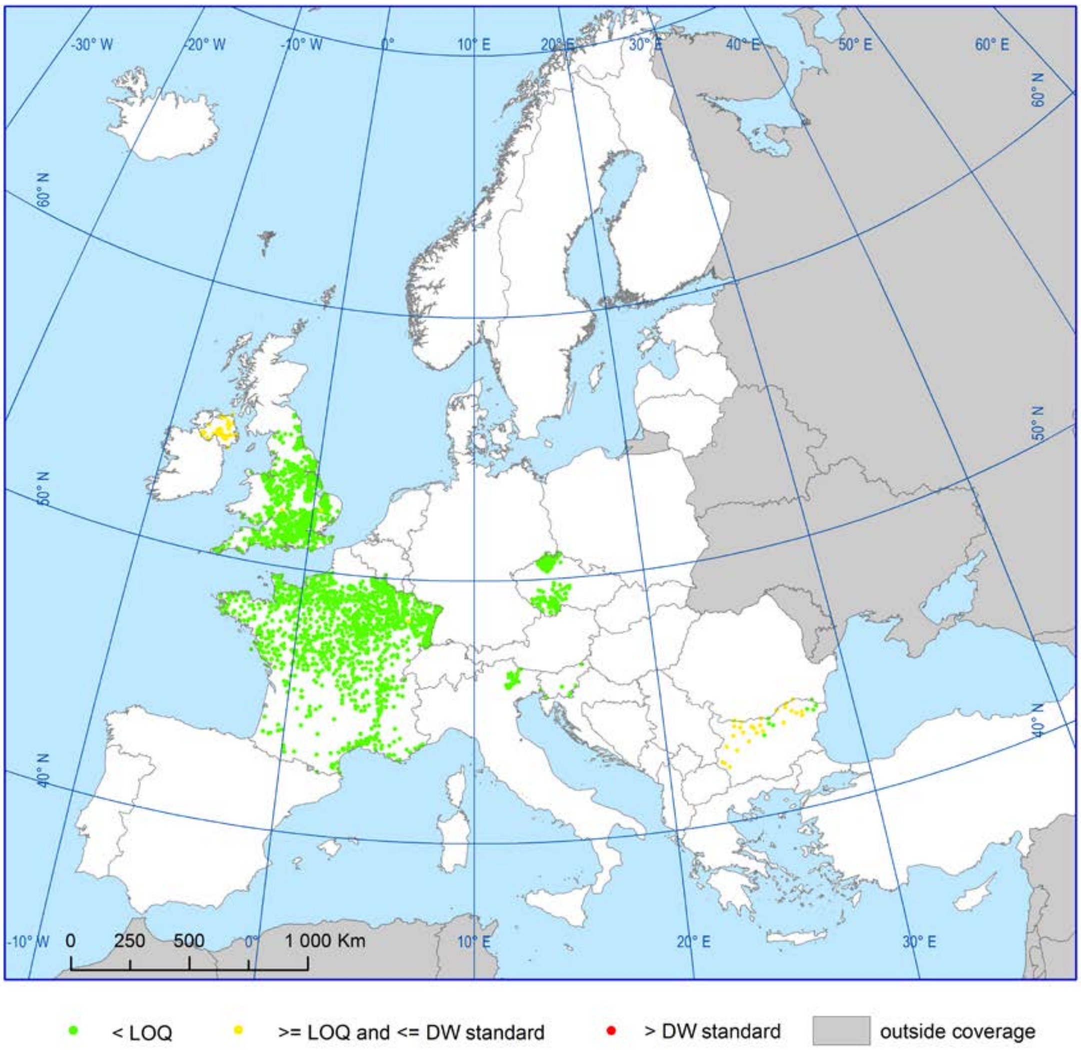


**Figure 4.1.2.27a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for DDT p,p´ in groundwater**

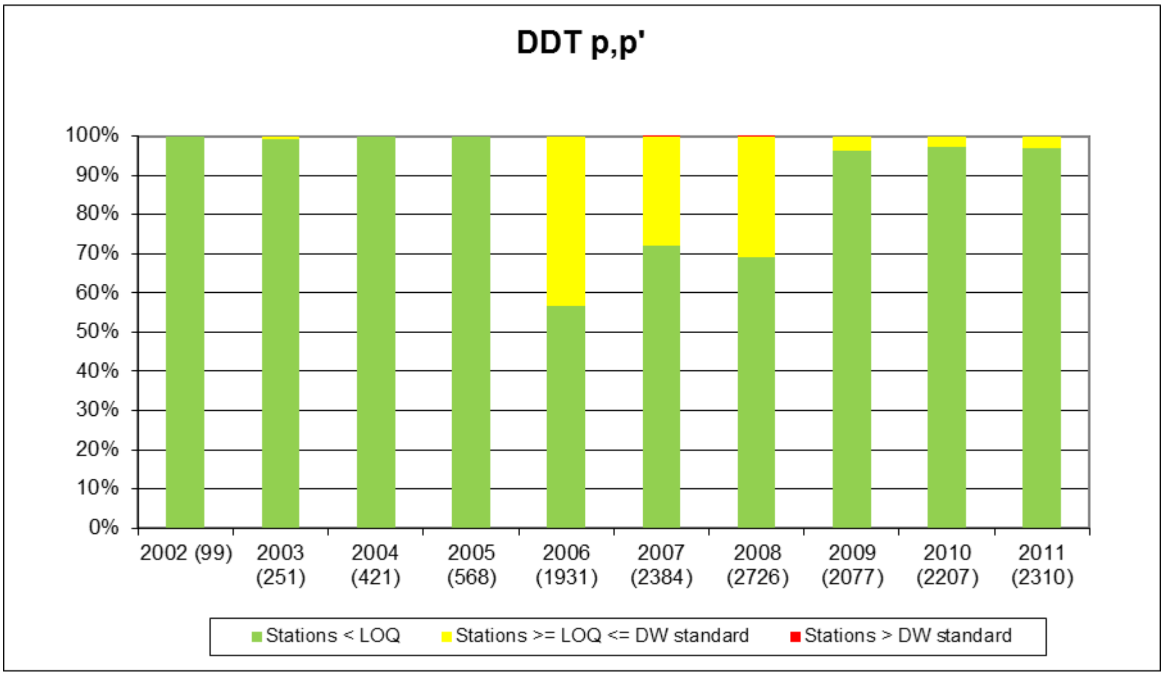



**Figure 4.1.2.27b Indicator for DDT p,p´ in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

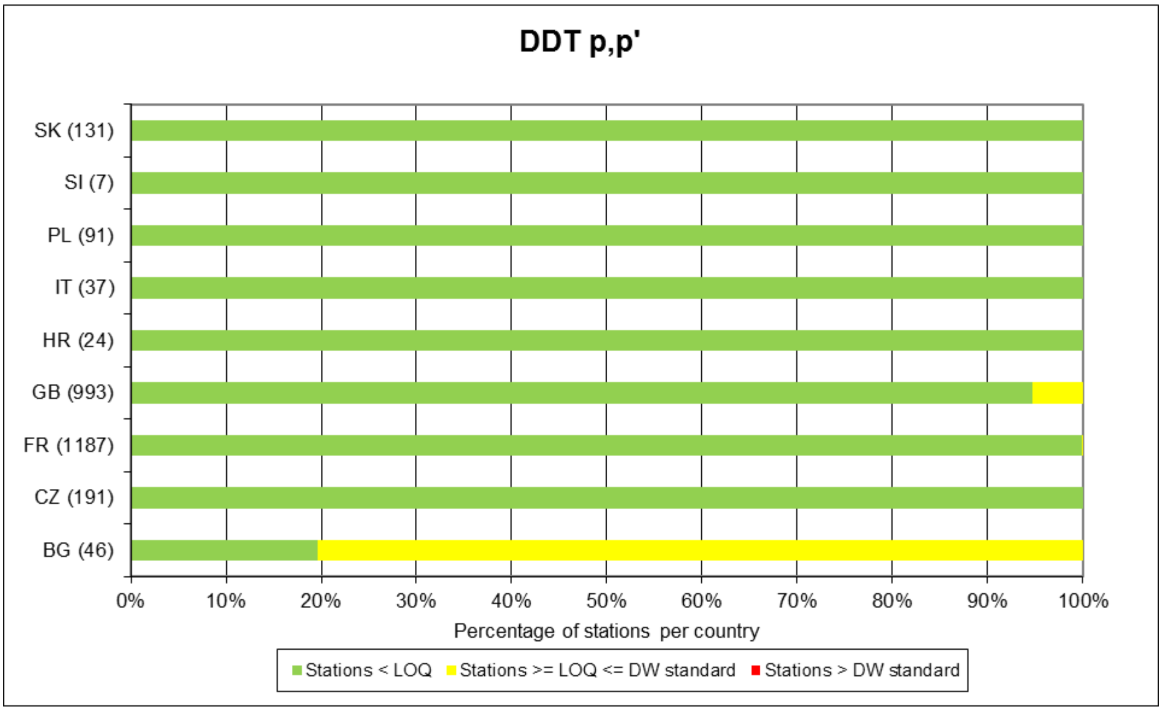


**Figure 4.1.2.27c Map of the indicator for DDT p,p´ in groundwater in 2010–2011**

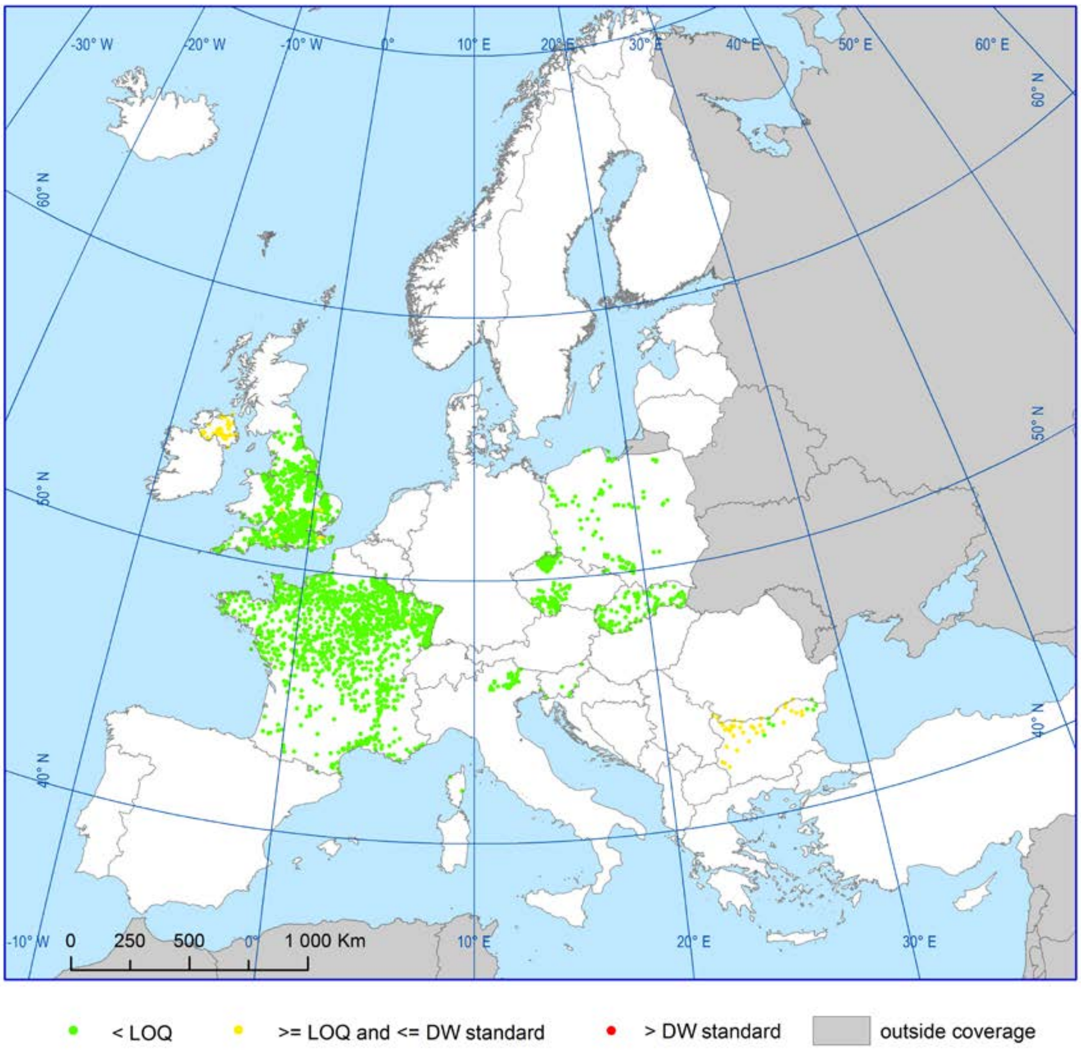


**Figure 4.1.2.28a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for desethylatrazine in groundwater**

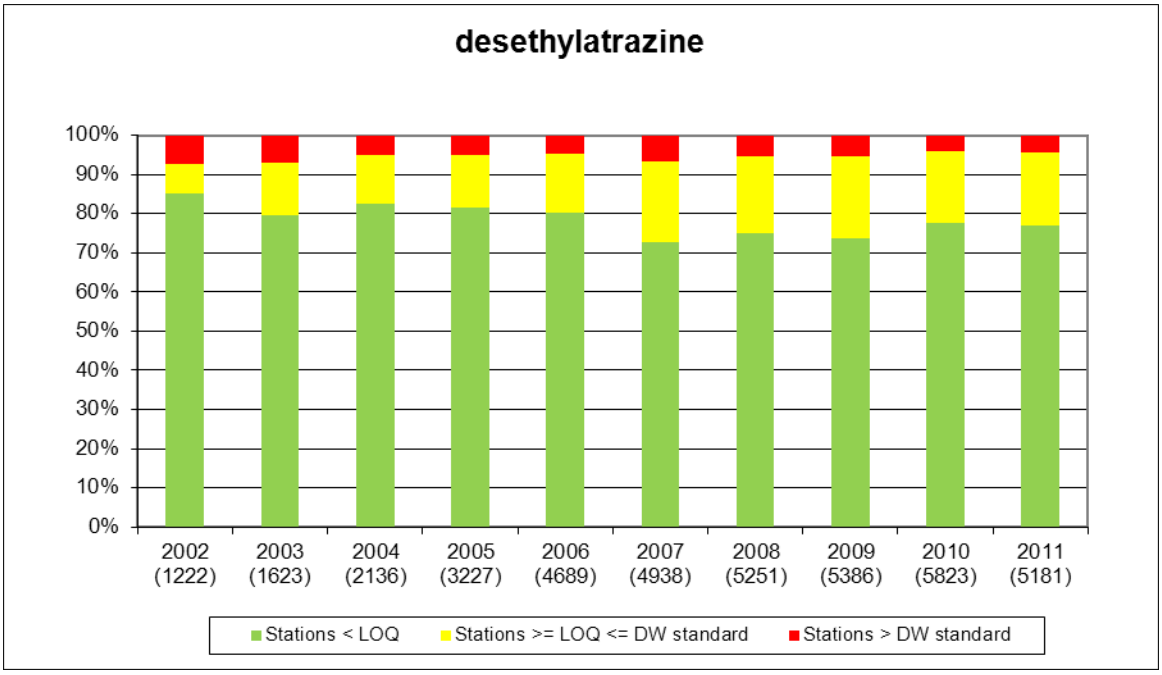



**Figure 4.1.2.28b Indicator for desethylatrazine in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

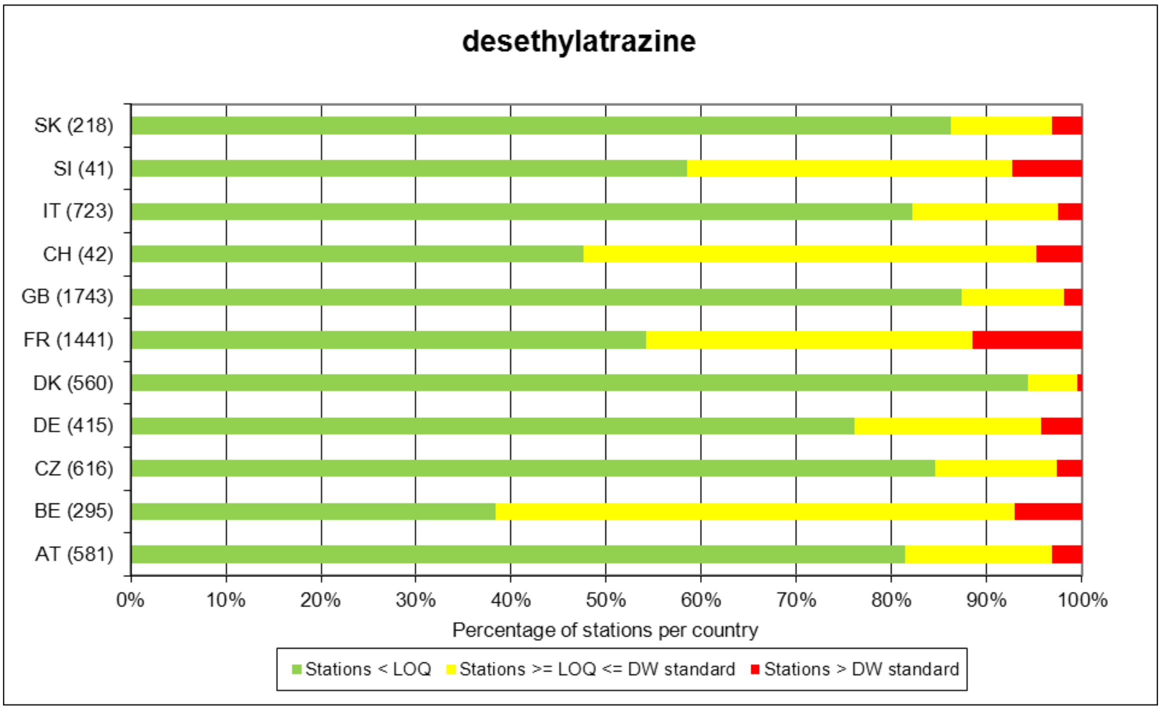


**Figure 4.1.2.28c Map of the indicator for desethylatrazine in groundwater in 2010–2011**

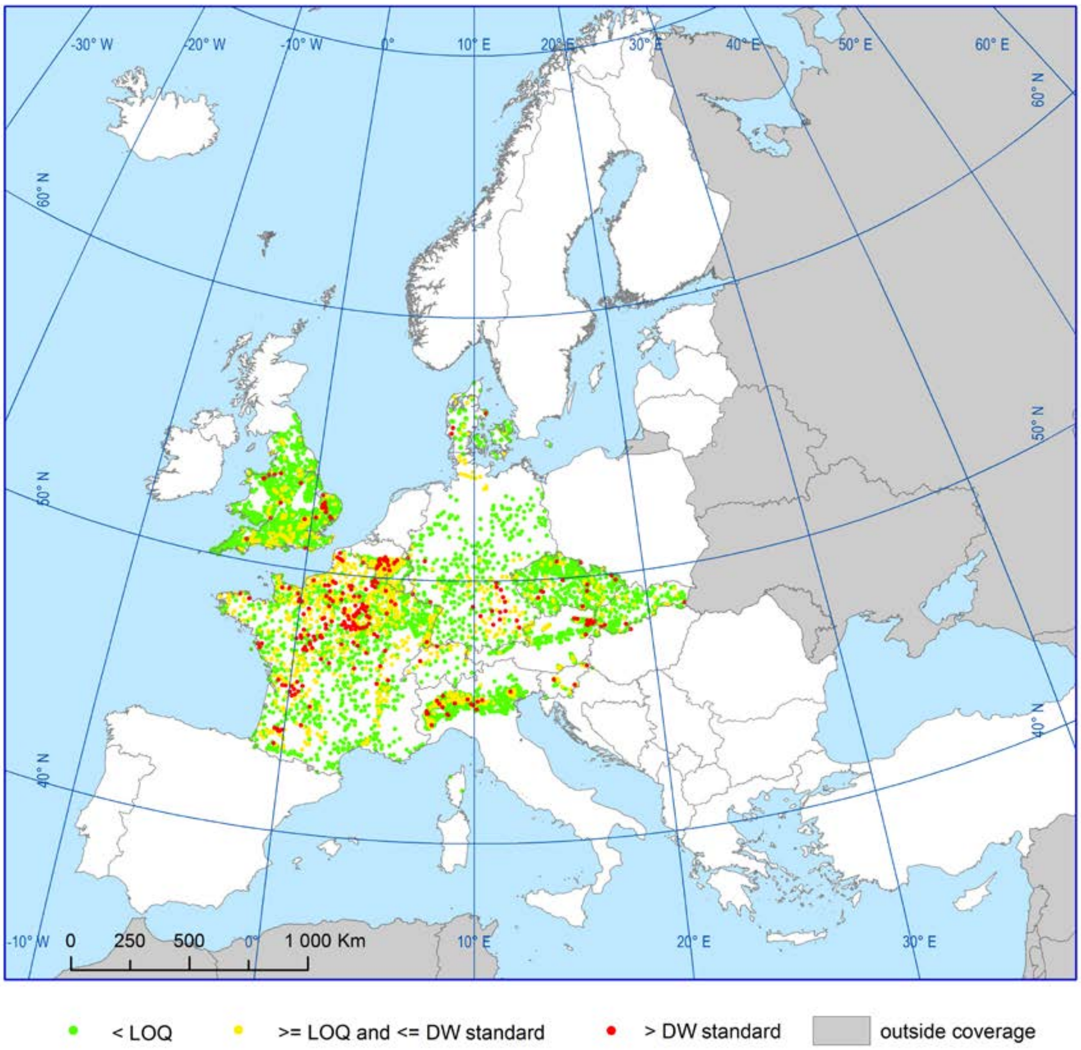


**Figure 4.1.2.29a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for desisopropylatrazine in groundwater**

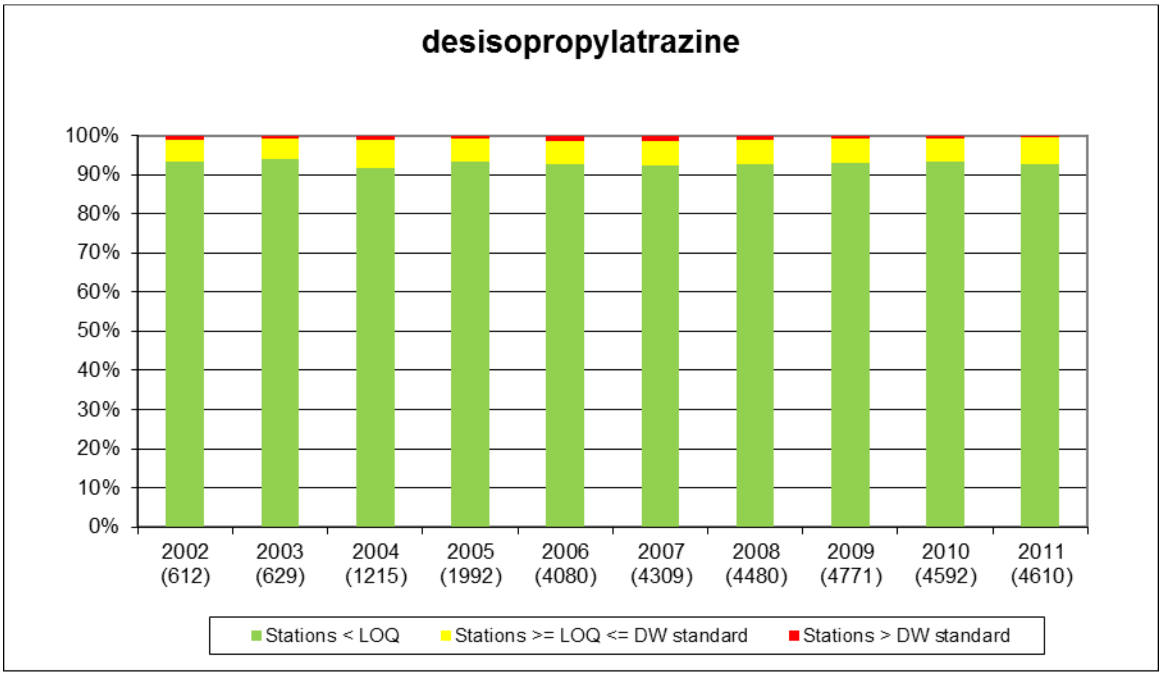



**Figure 4.1.2.29b Indicator for desisopropylatrazine in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

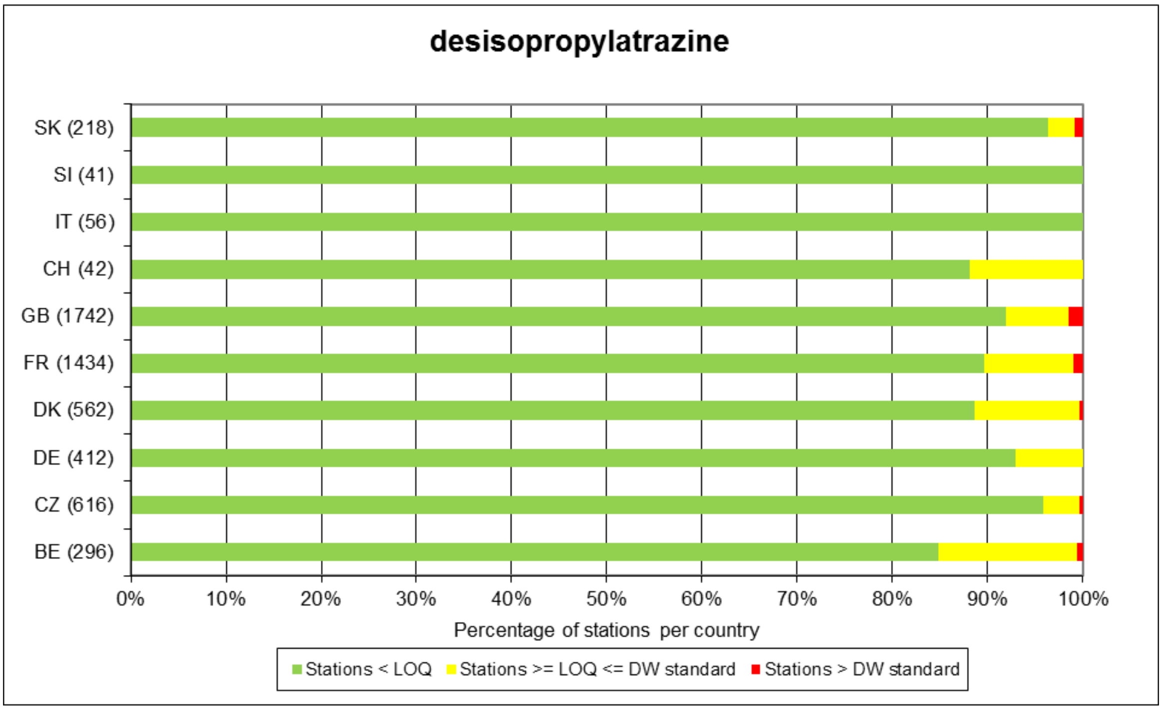


**Figure 4.1.2.29c Map of the indicator for desisopropylatrazine in groundwater in 2010–2011**

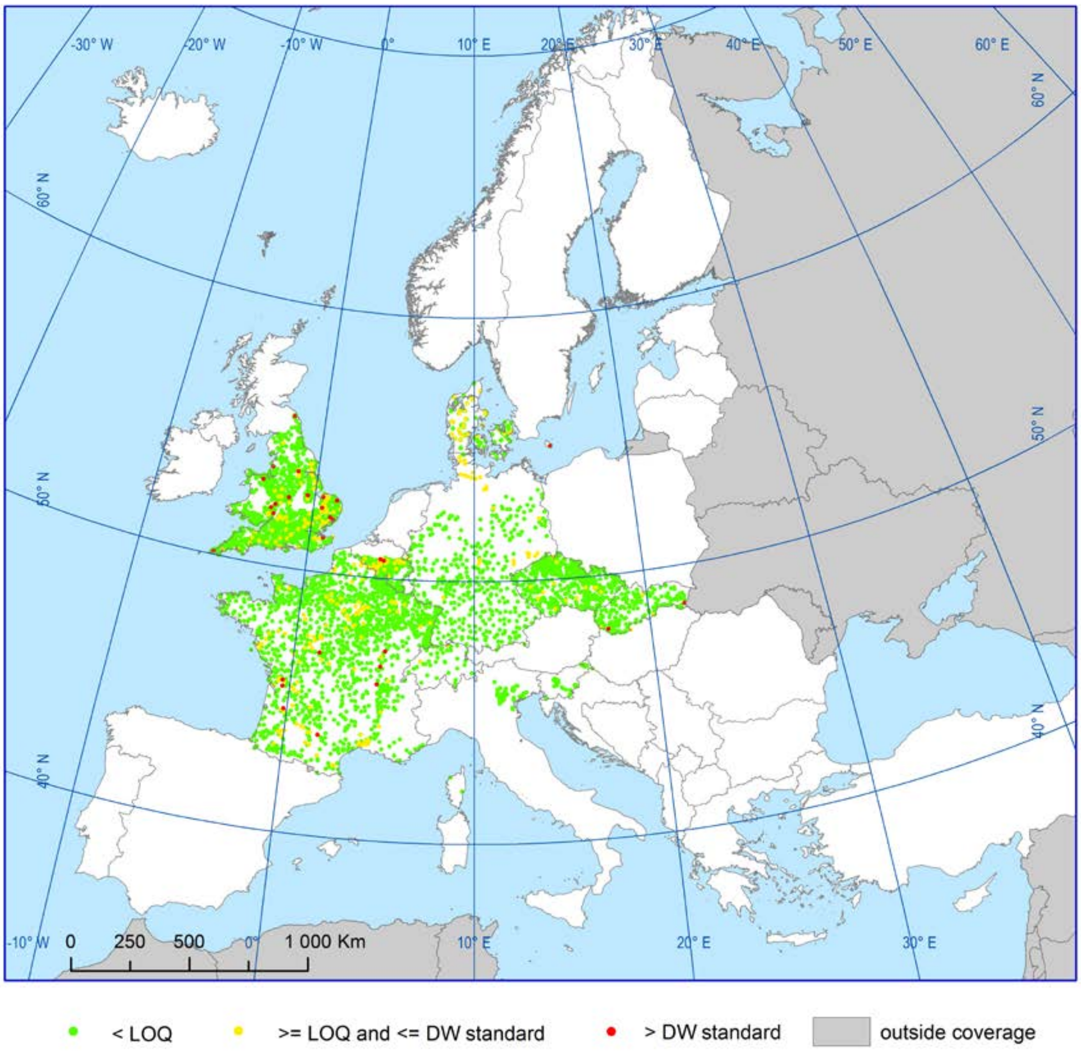


**Figure 4.1.2.30a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for dieldrin in groundwater**

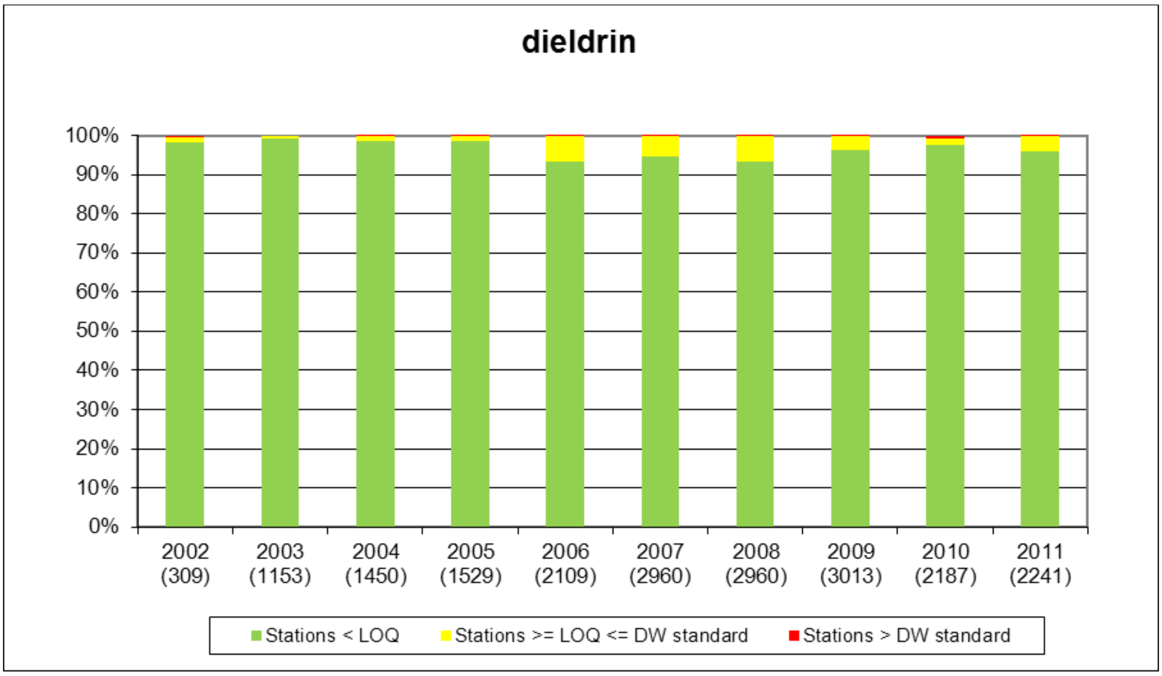



**Figure 4.1.2.30b Indicator for dieldrin in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

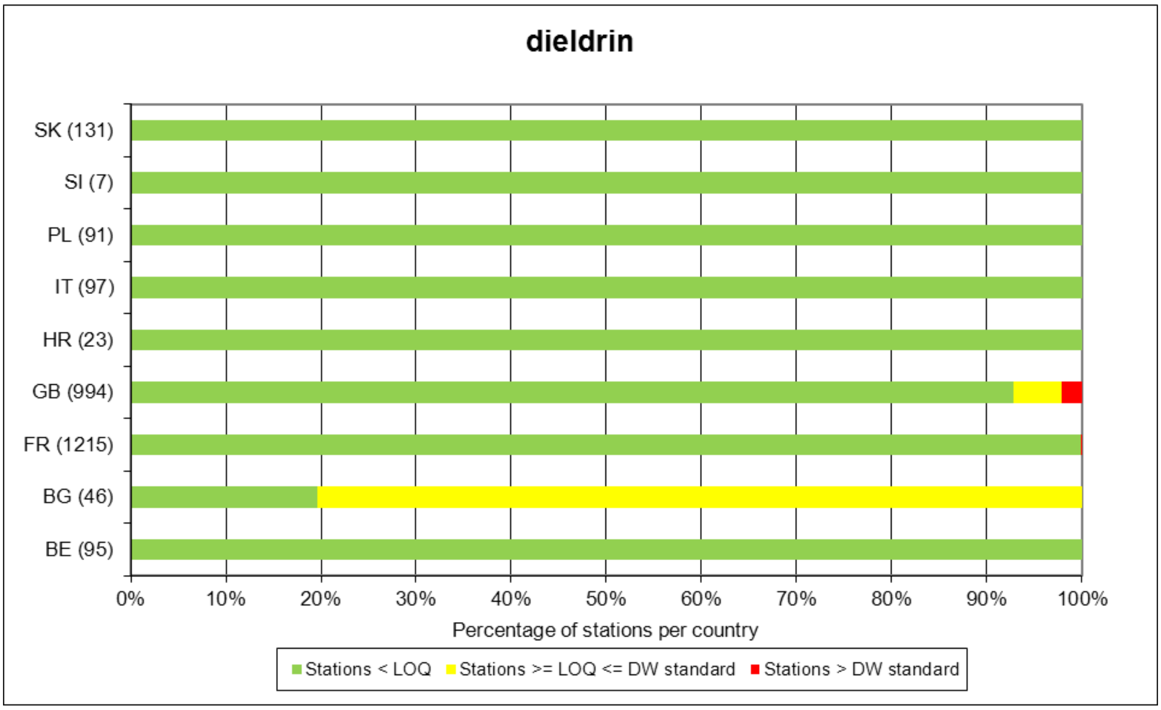


**Figure 4.1.2.30c Map of the indicator for dieldrin in groundwater in 2010–2011**

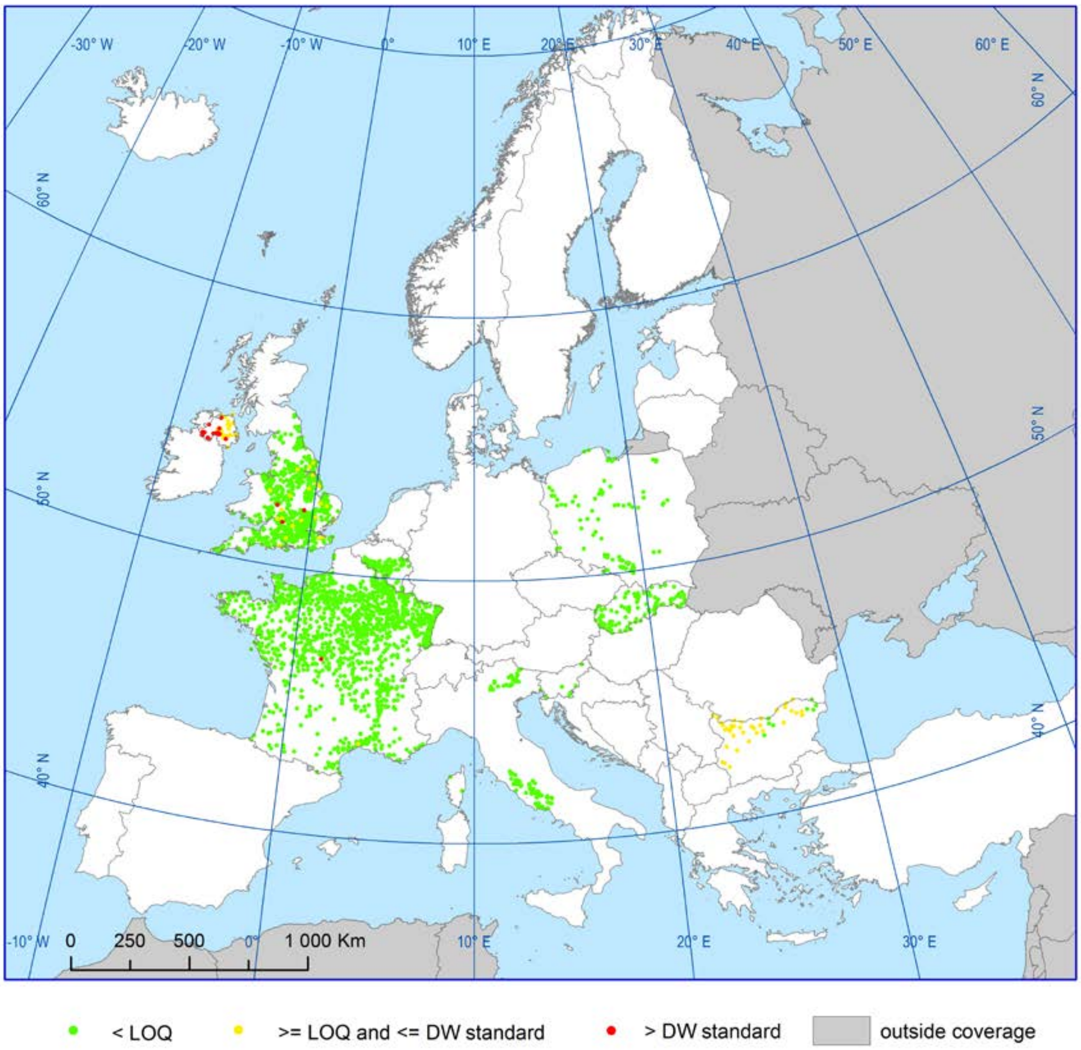


**Figure 4.1.2.31a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for diuron in groundwater**

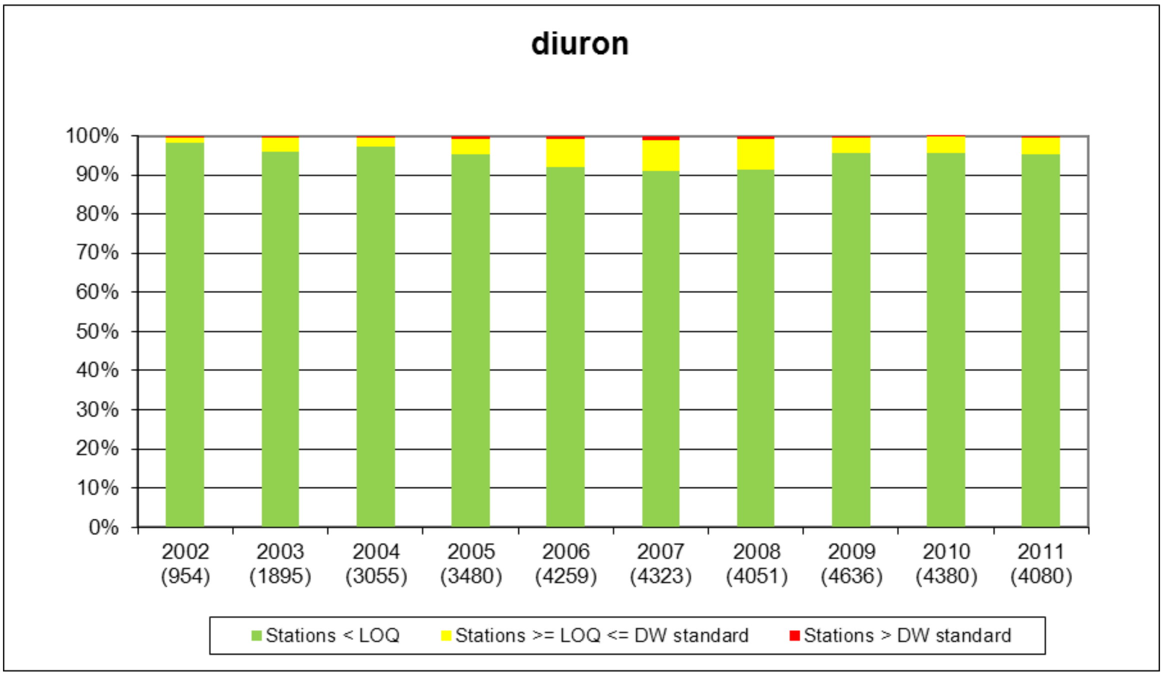



**Figure 4.1.2.31b Indicator for diuron in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

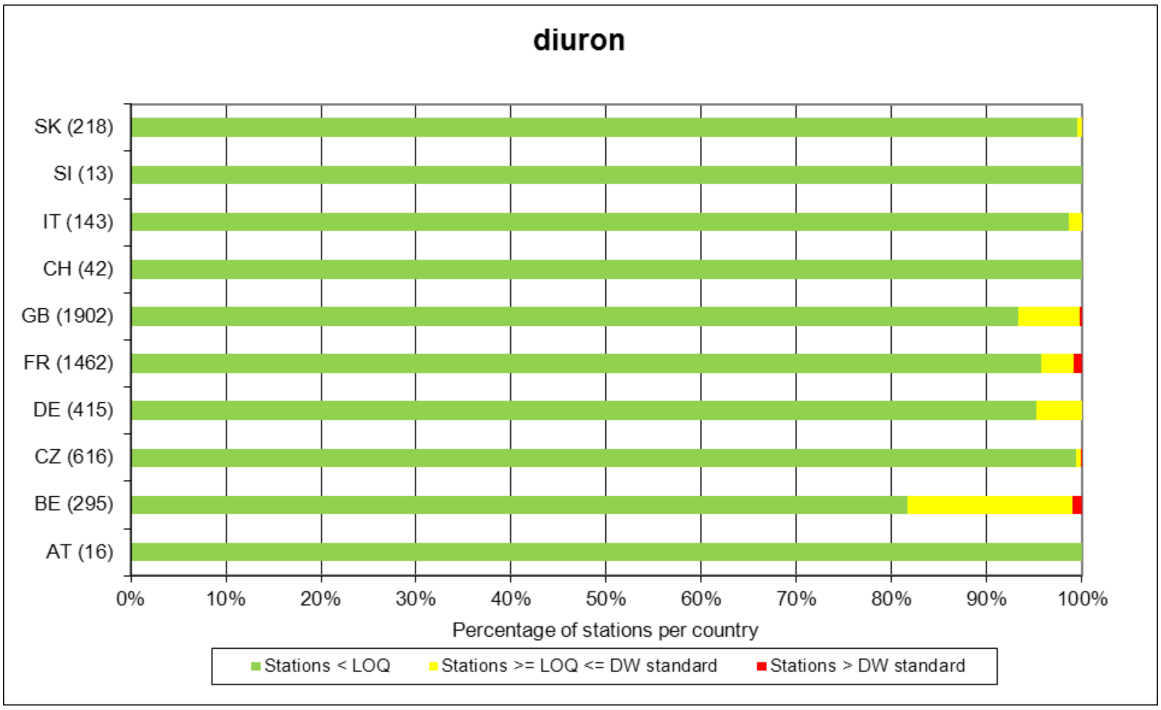


**Figure 4.1.2.31c Map of the indicator for diuron in groundwater in 2010–2011**

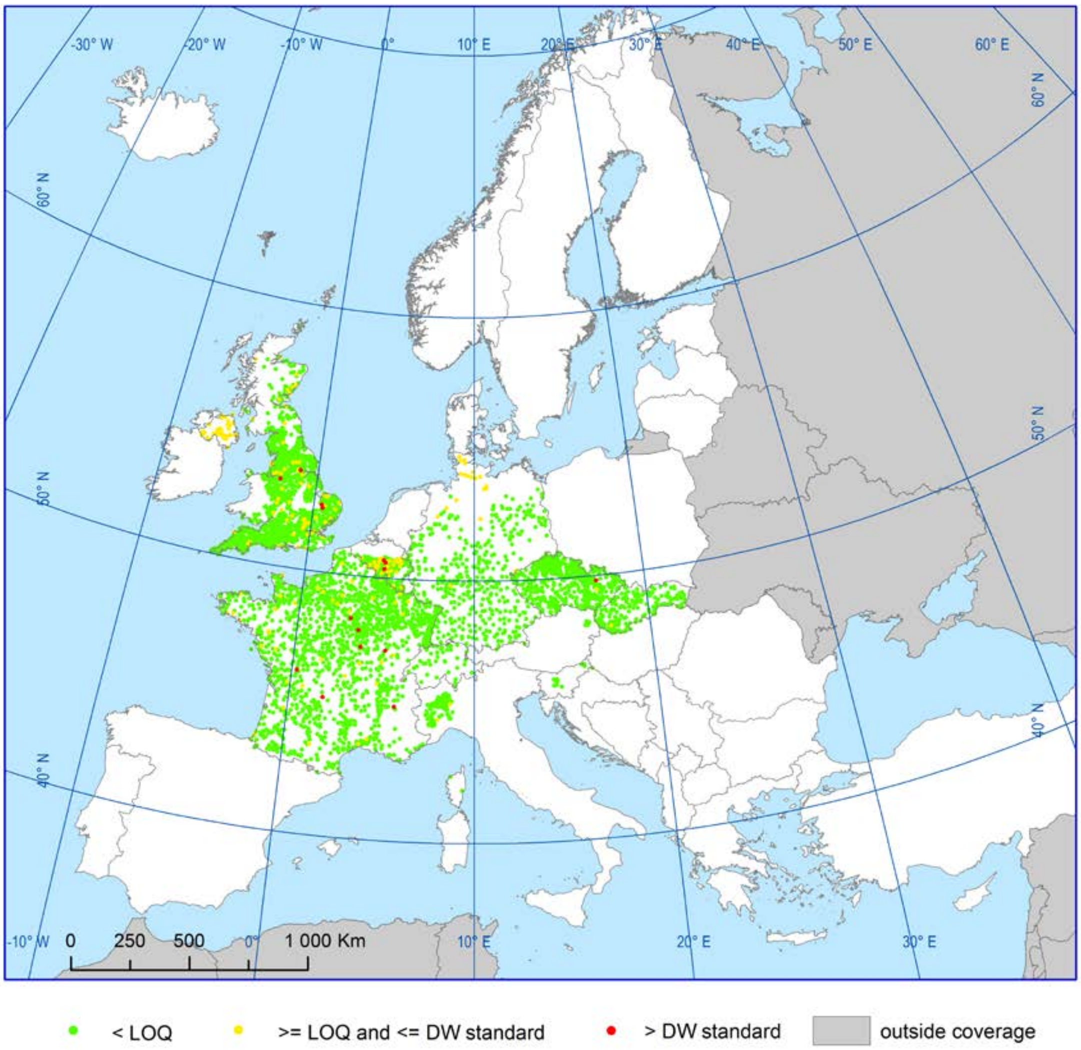


**Figure 4.1.2.32a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for endrin in groundwater**

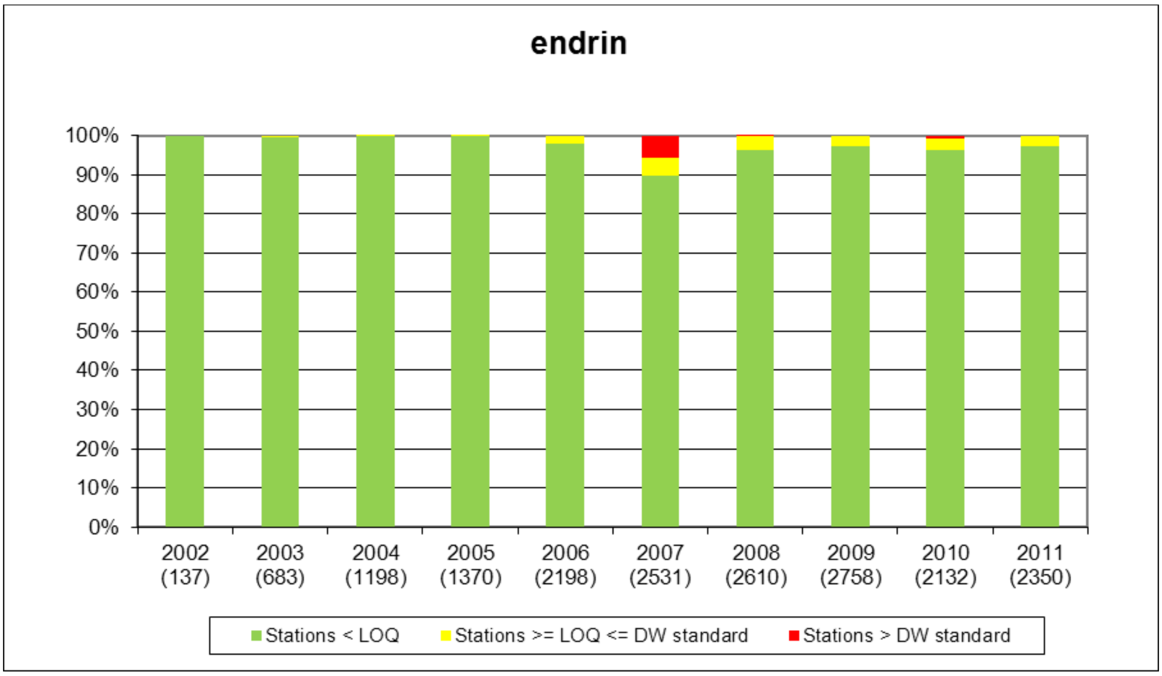



**Figure 4.1.2.32b Indicator for endrin in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

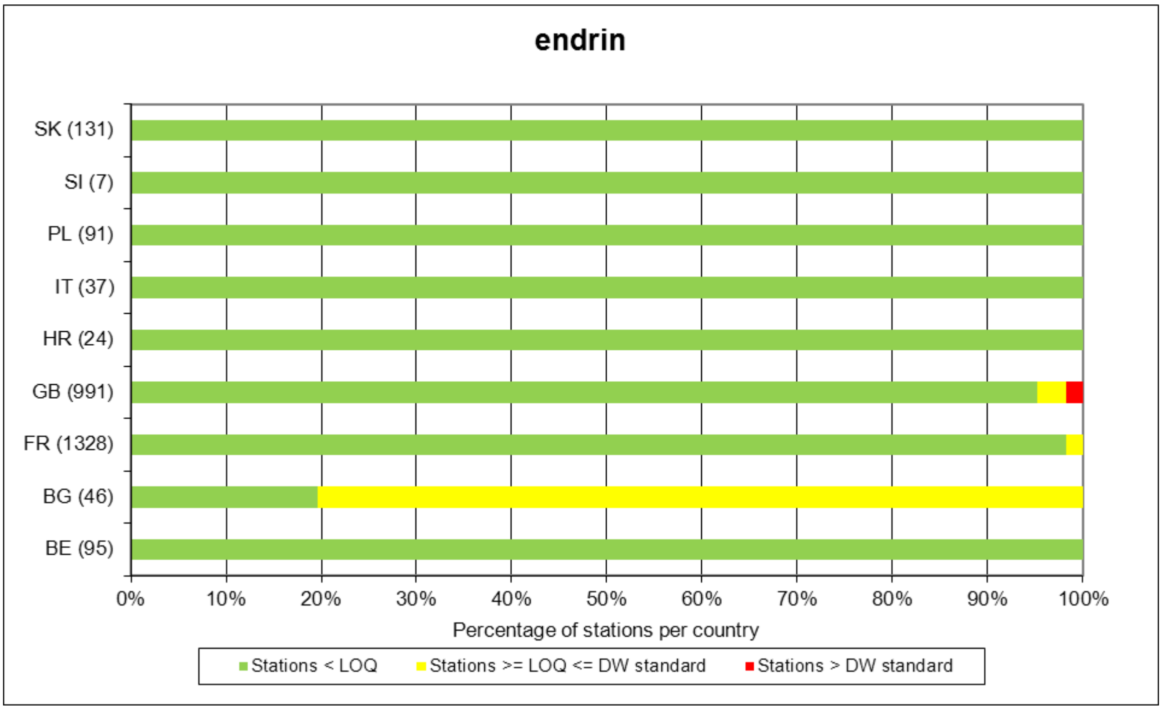


**Figure 4.1.2.32c Map of the indicator for endrin in groundwater in 2010–2011**

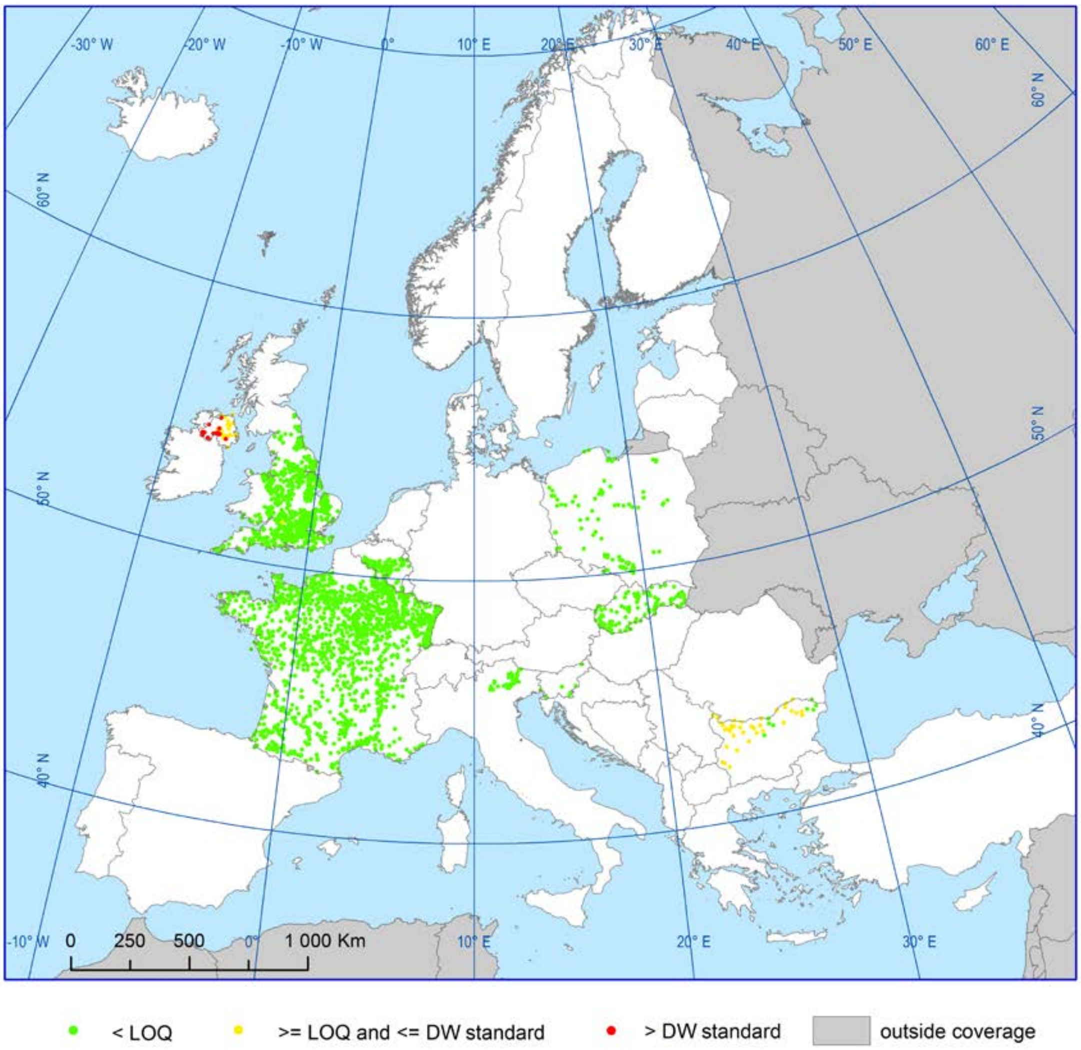


**Figure 4.1.2.33a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for gamma-HCH in groundwater**

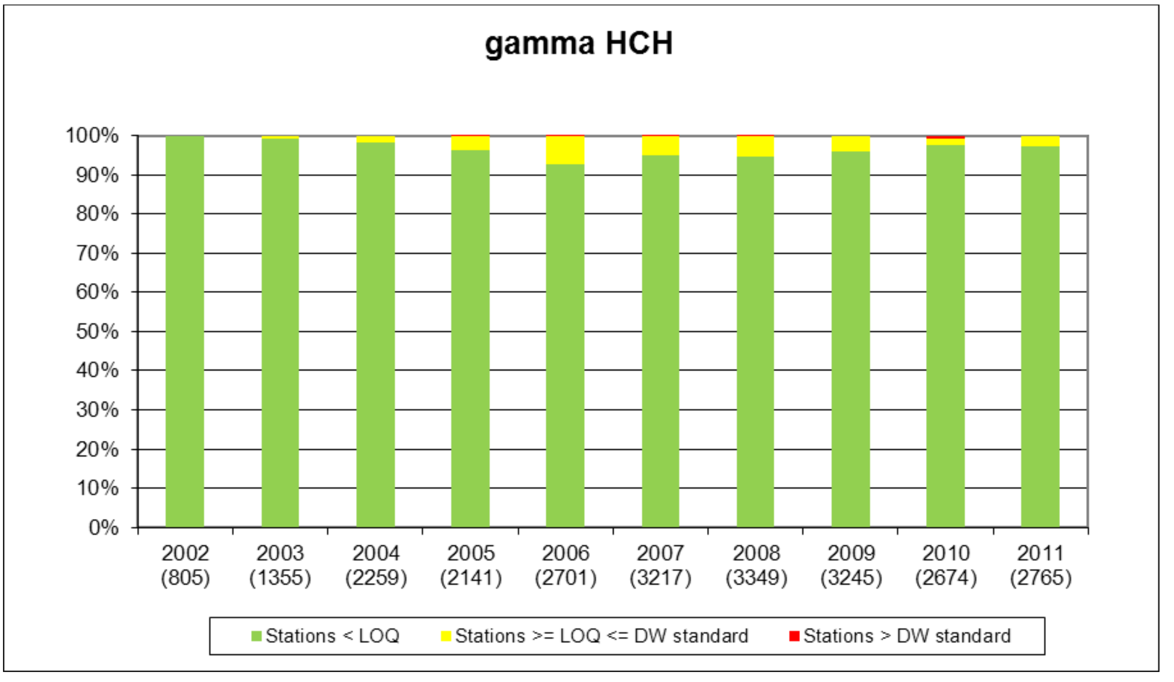



**Figure 4.1.2.33b Indicator for gamma-HCH in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

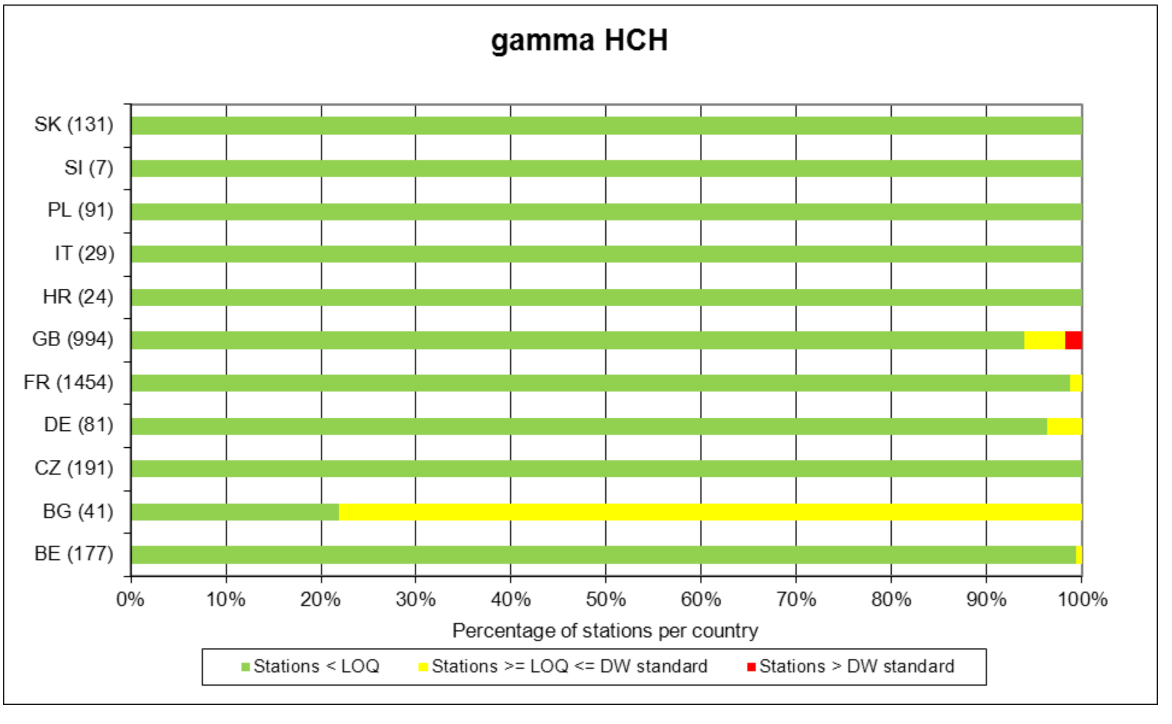


**Figure 4.1.2.33c Map of the indicator for gamma-HCH in groundwater in 2010–2011**

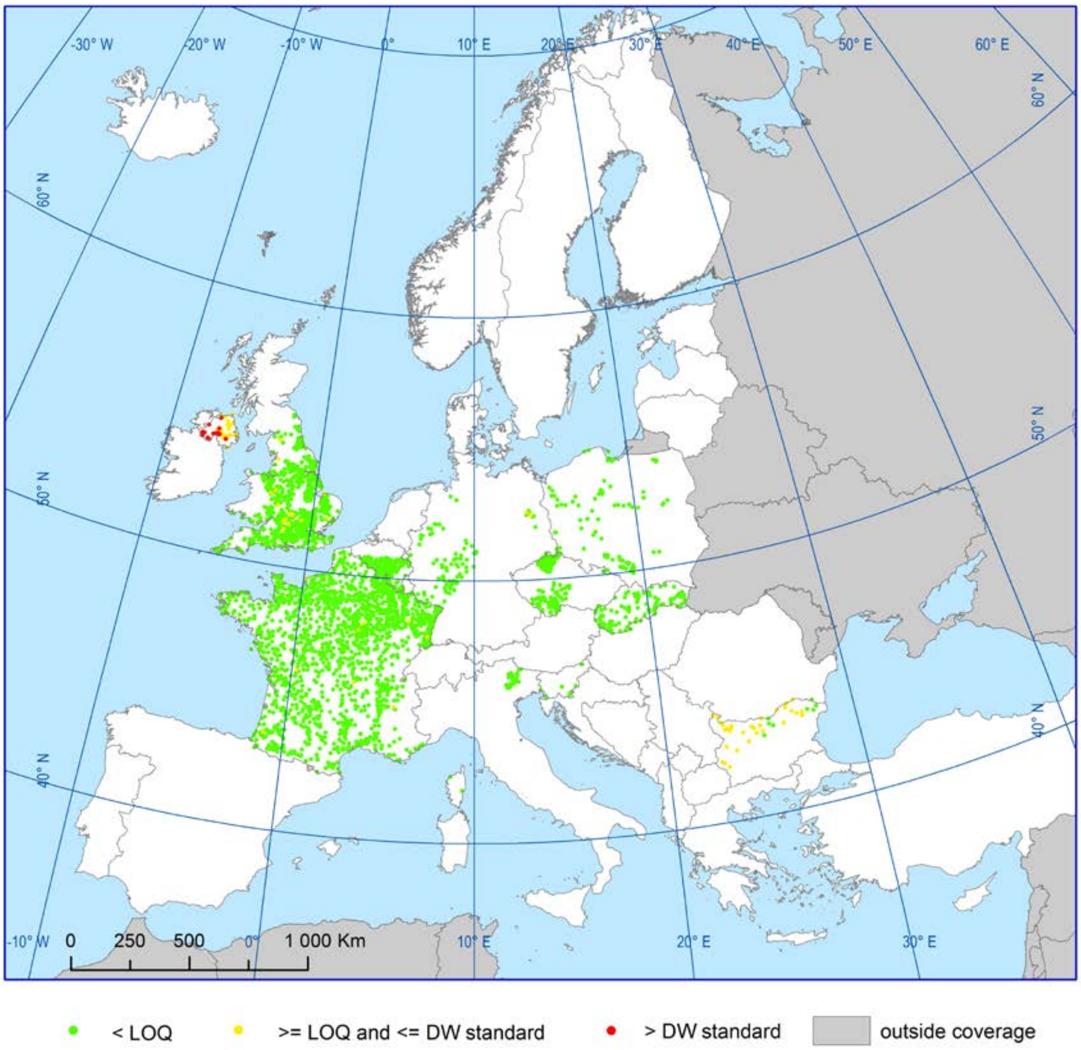


**Figure 4.1.2.34a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for hexachlorobenzene in groundwater**

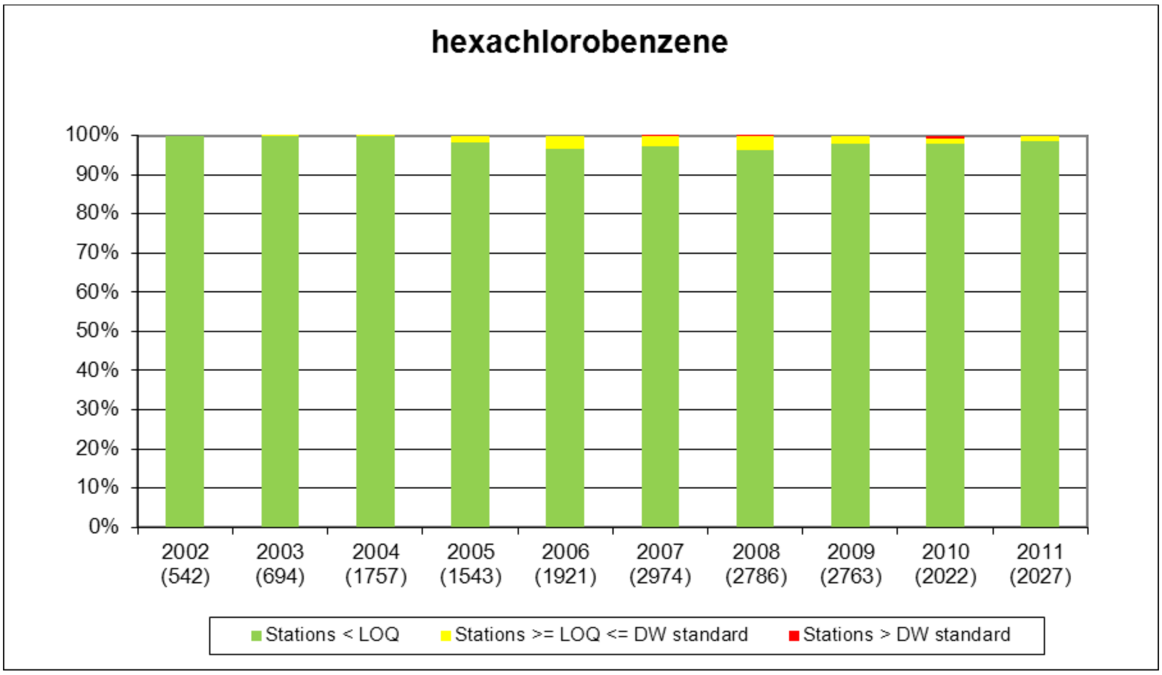



**Figure 4.1.2.34b Indicator for hexachlorobenzene in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

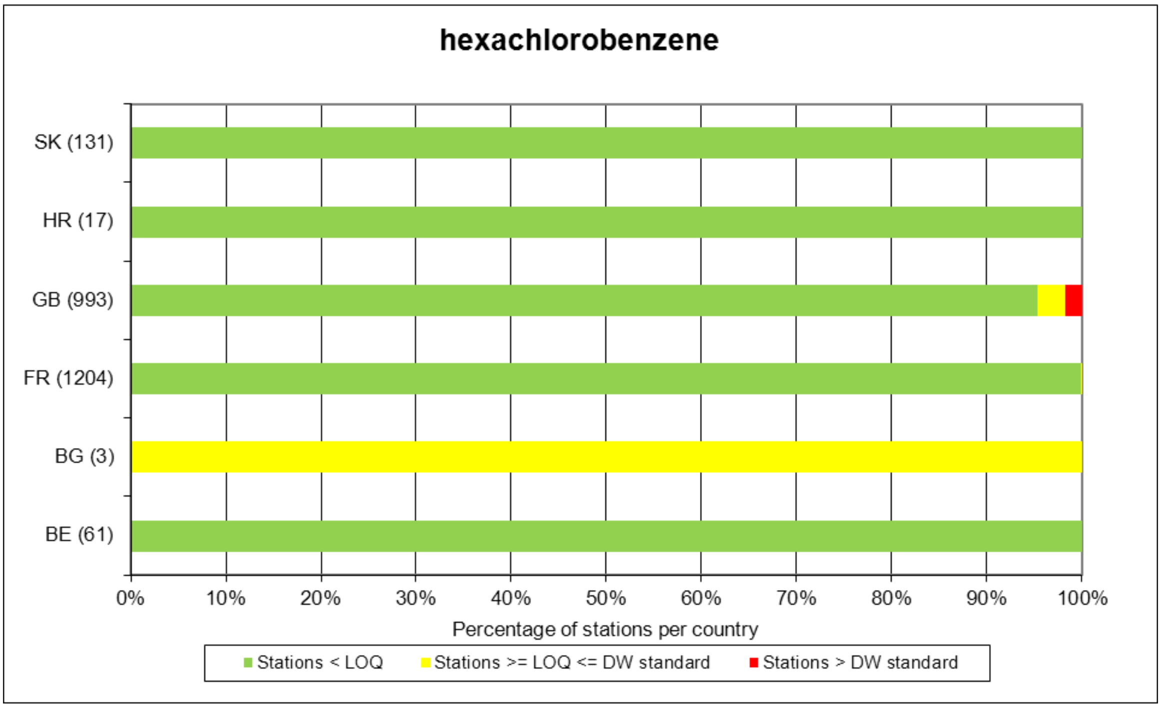


**Figure 4.1.2.34c Map of the indicator for hexachlorobenzene in groundwater in 2010–2011**

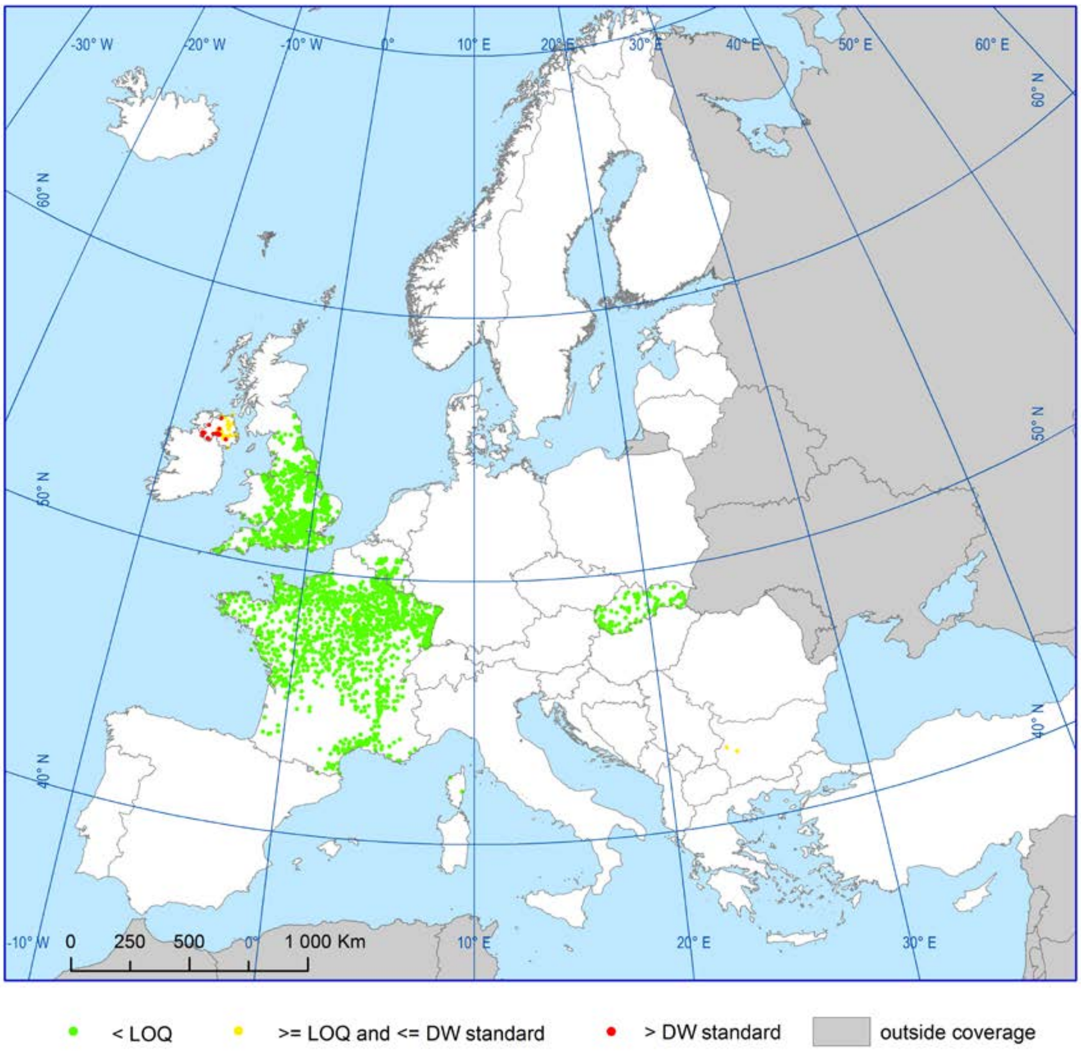


**Figure 4.1.2.35a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for isodrin in groundwater**

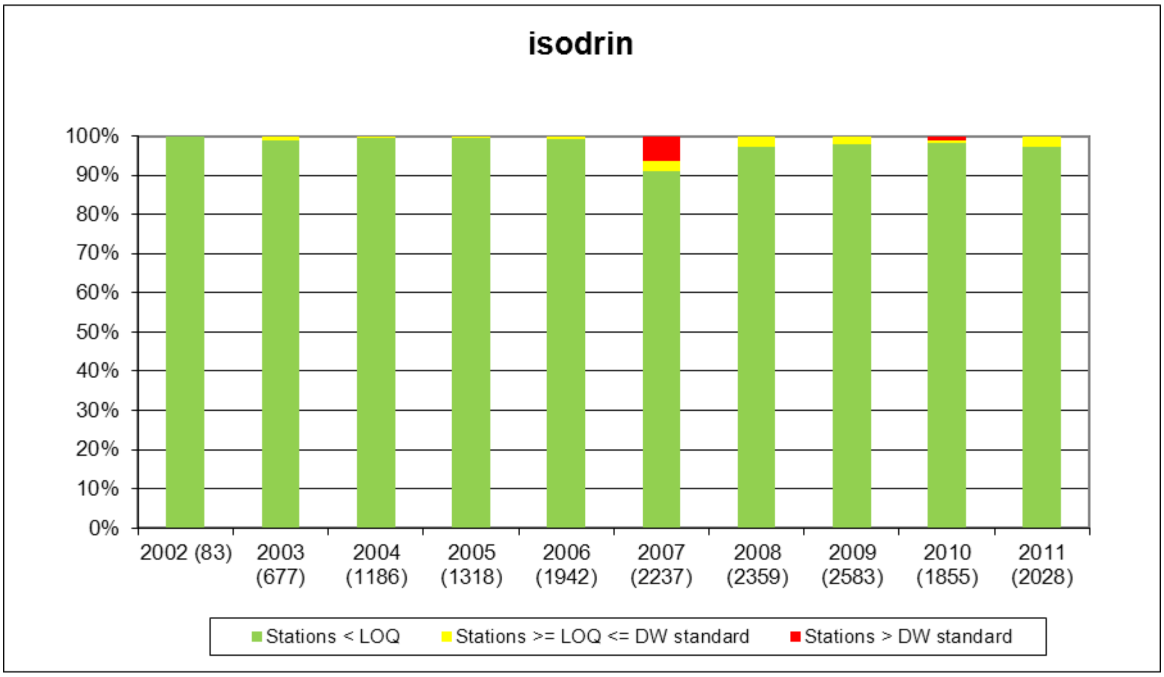



**Figure 4.1.2.35b Indicator for isodrin in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

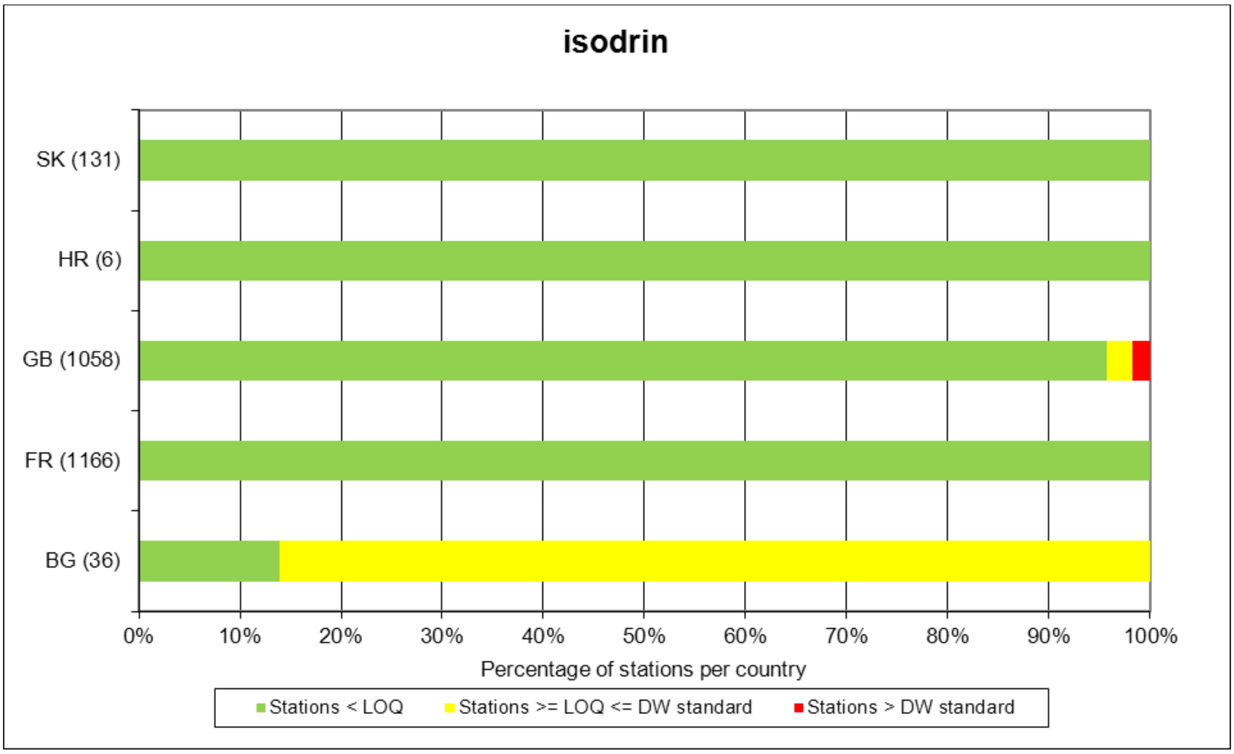


**Figure 4.1.2.35c Map of the indicator for isodrin in groundwater in 2010–2011**

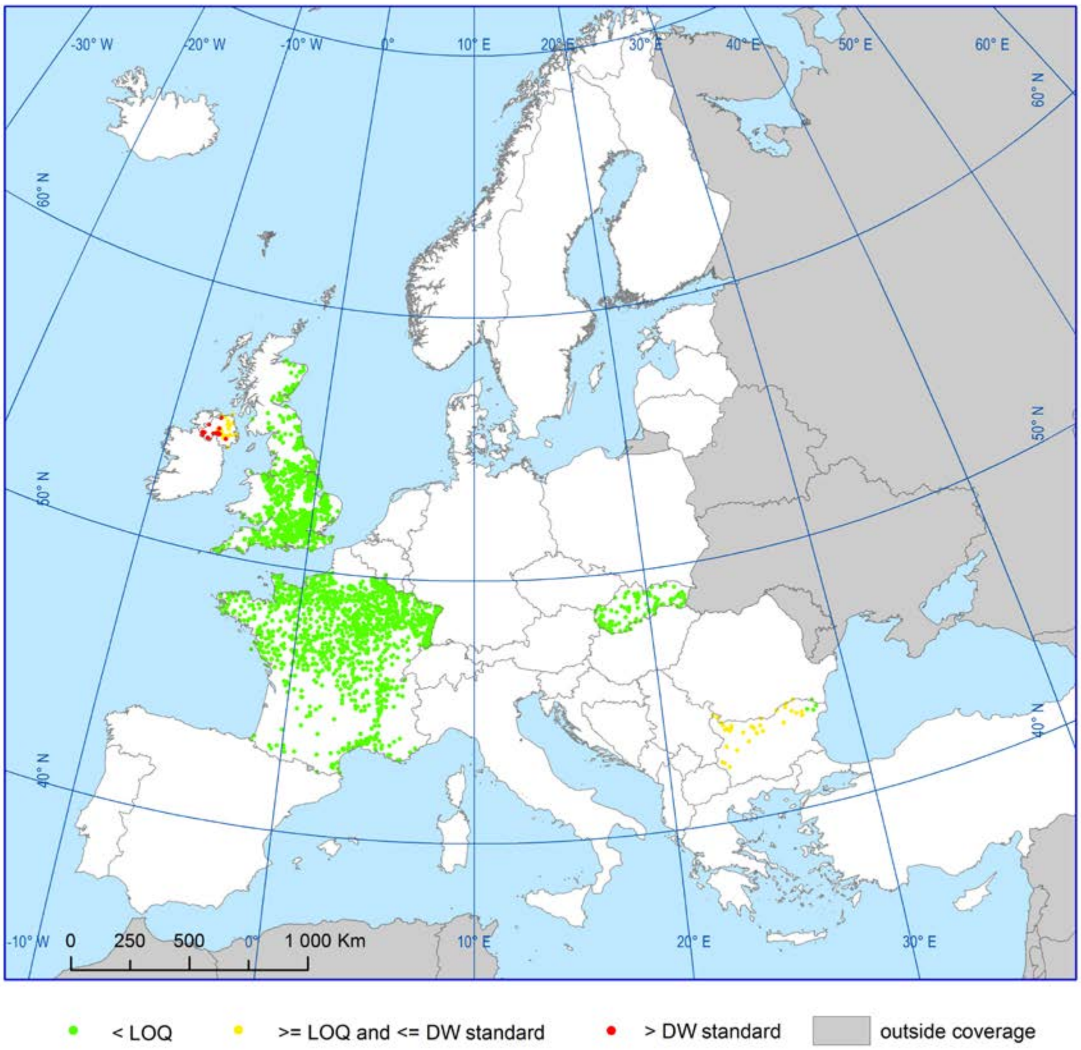


**Figure 4.1.2.36a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for isoproturon in groundwater**

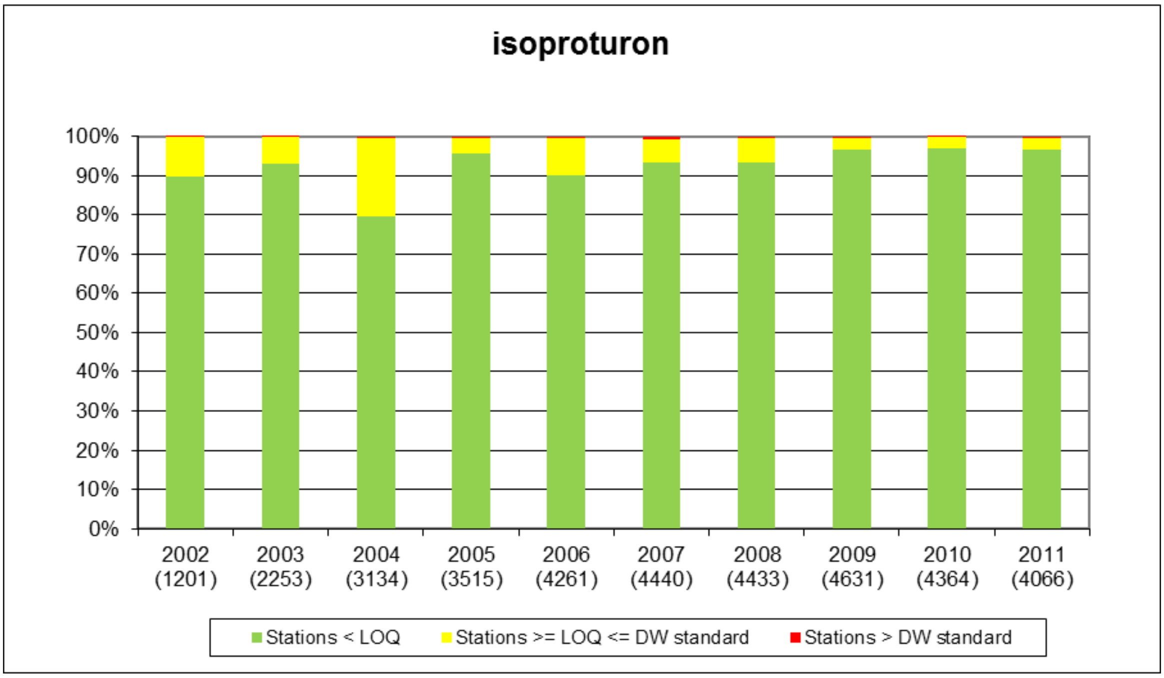



**Figure 4.1.2.36b Indicator for isoproturon in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

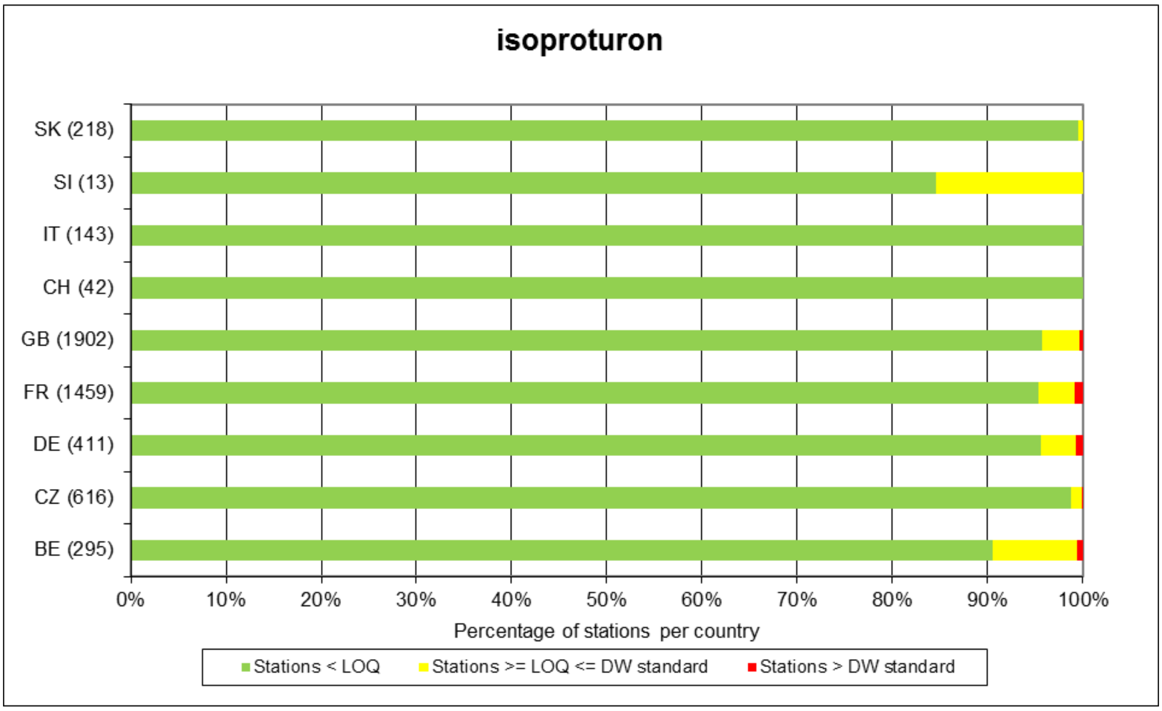


**Figure 4.1.2.36c Map of the indicator for isoproturon in groundwater in 2010–2011**

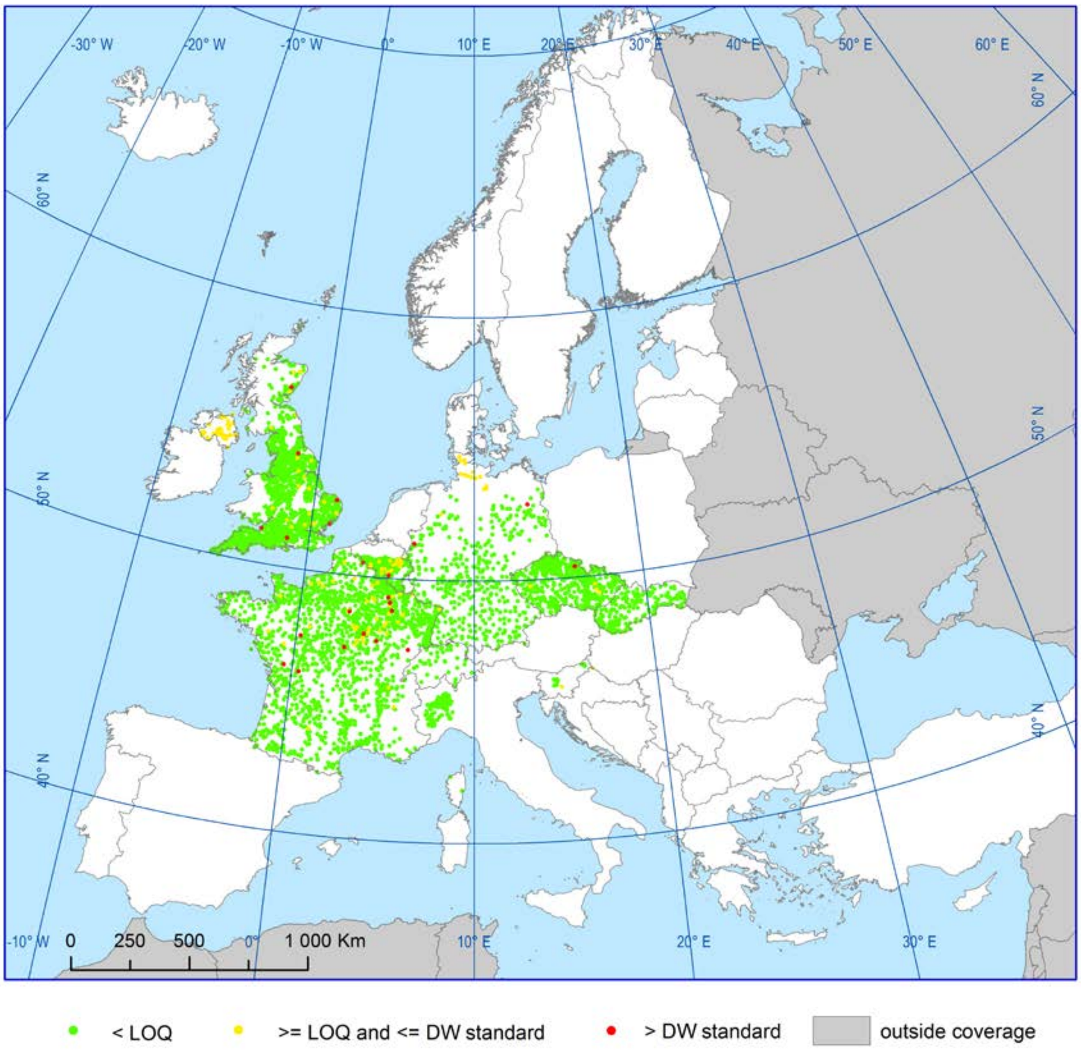


**Figure 4.1.2.37a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for lead in groundwater**

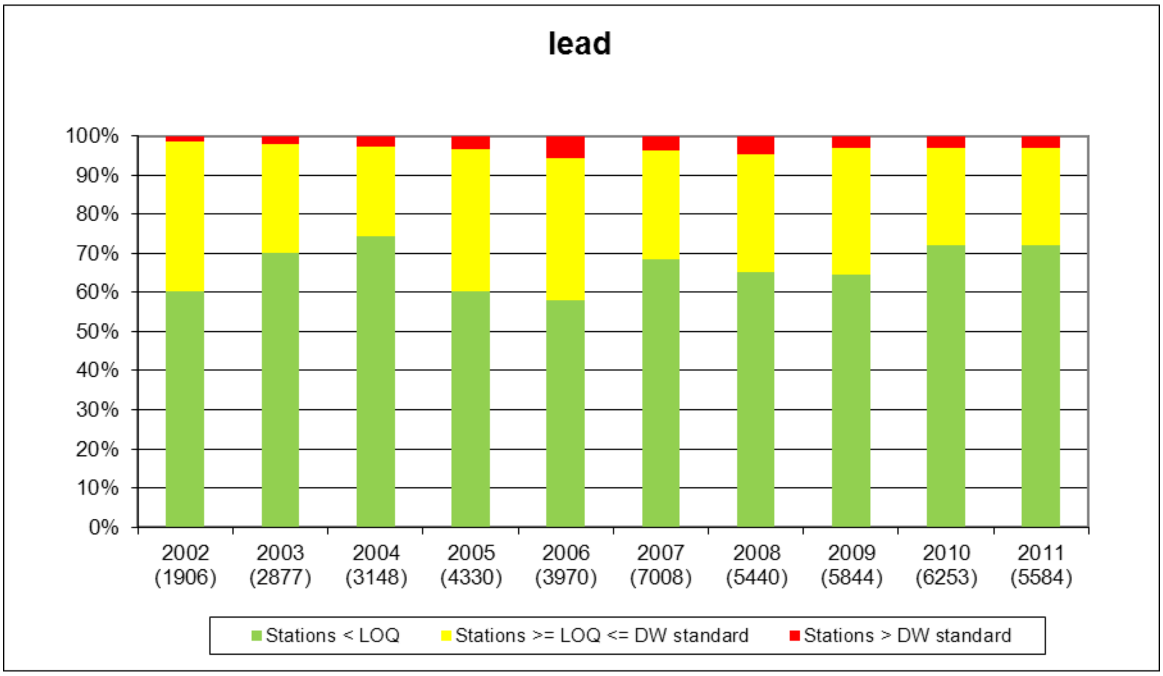



**Figure 4.1.2.37b Indicator for lead in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

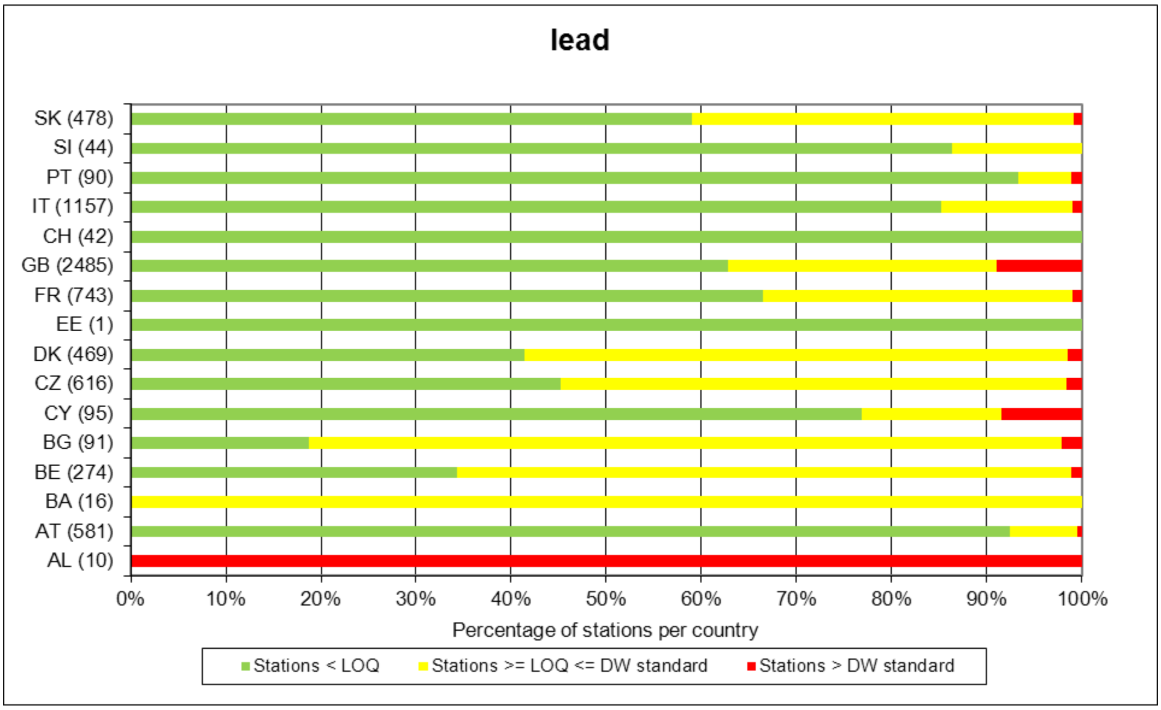


**Figure 4.1.2.37c Map of the indicator for lead in groundwater in 2010–2011**

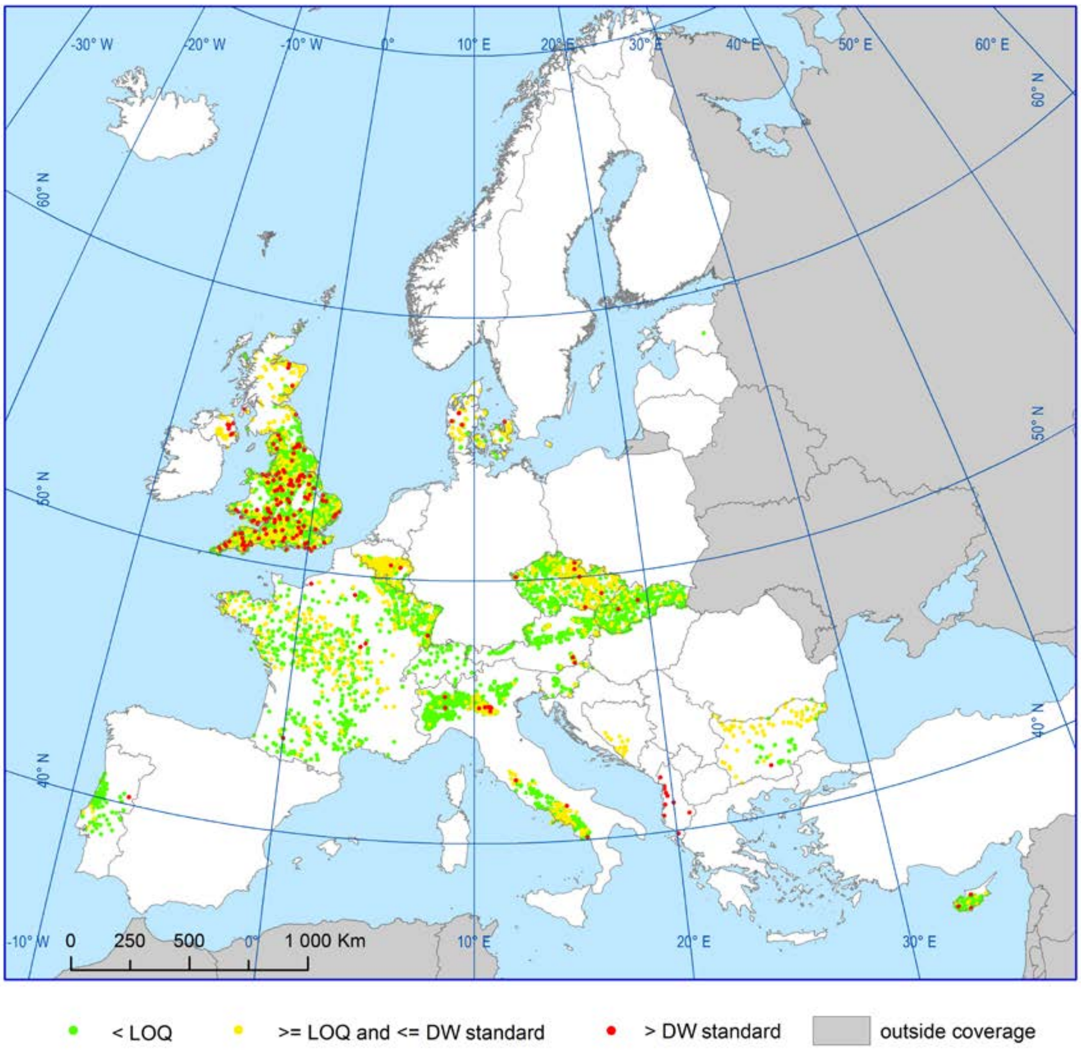


**Figure 4.1.2.38a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for dissolved lead in groundwater**

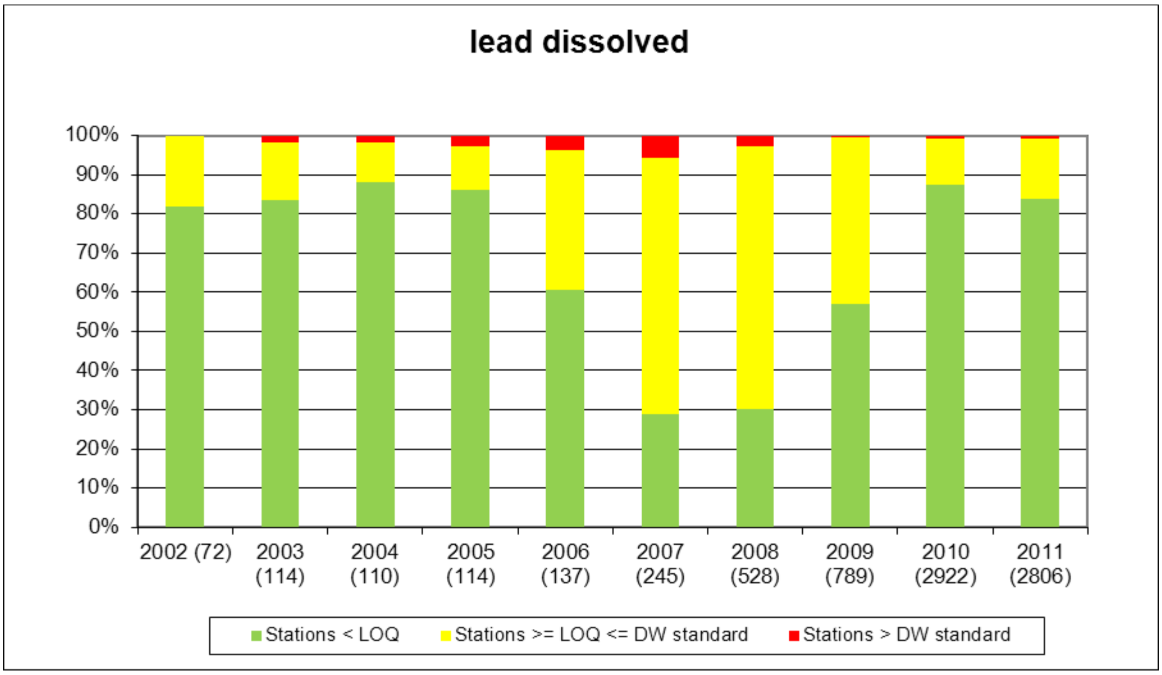



**Figure 4.1.2.38b Indicator for dissolved lead in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

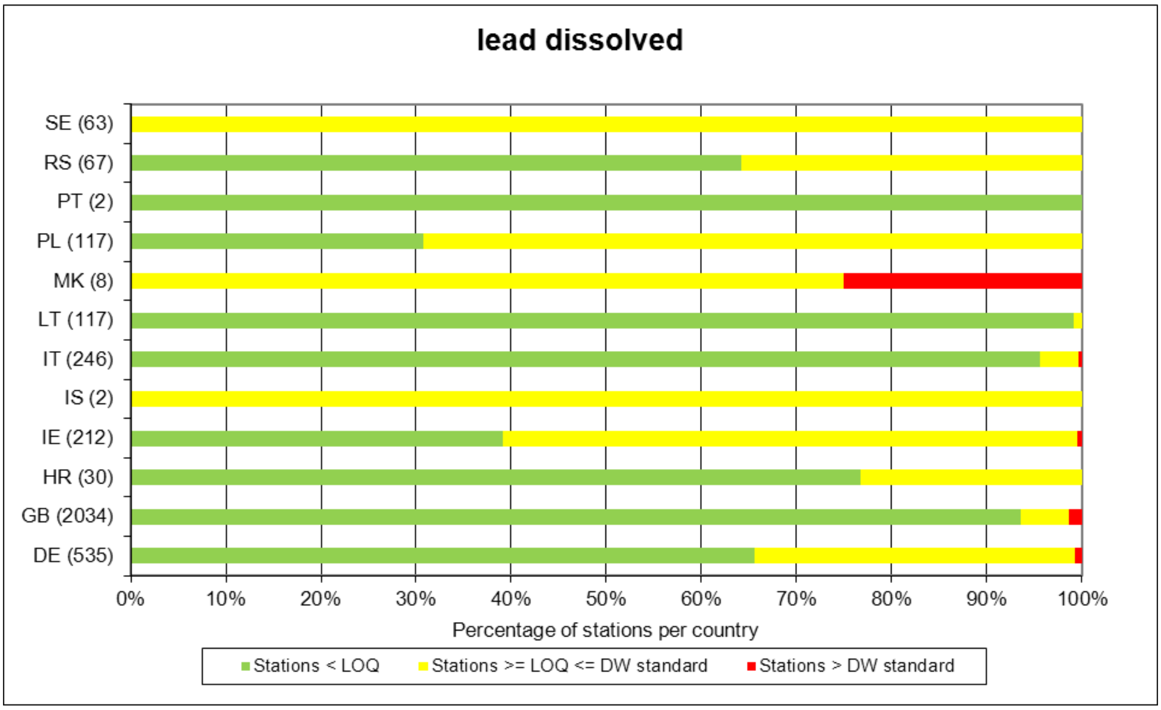


**Figure 4.1.2.38c Map of the indicator for dissolved lead in groundwater in 2010–2011**

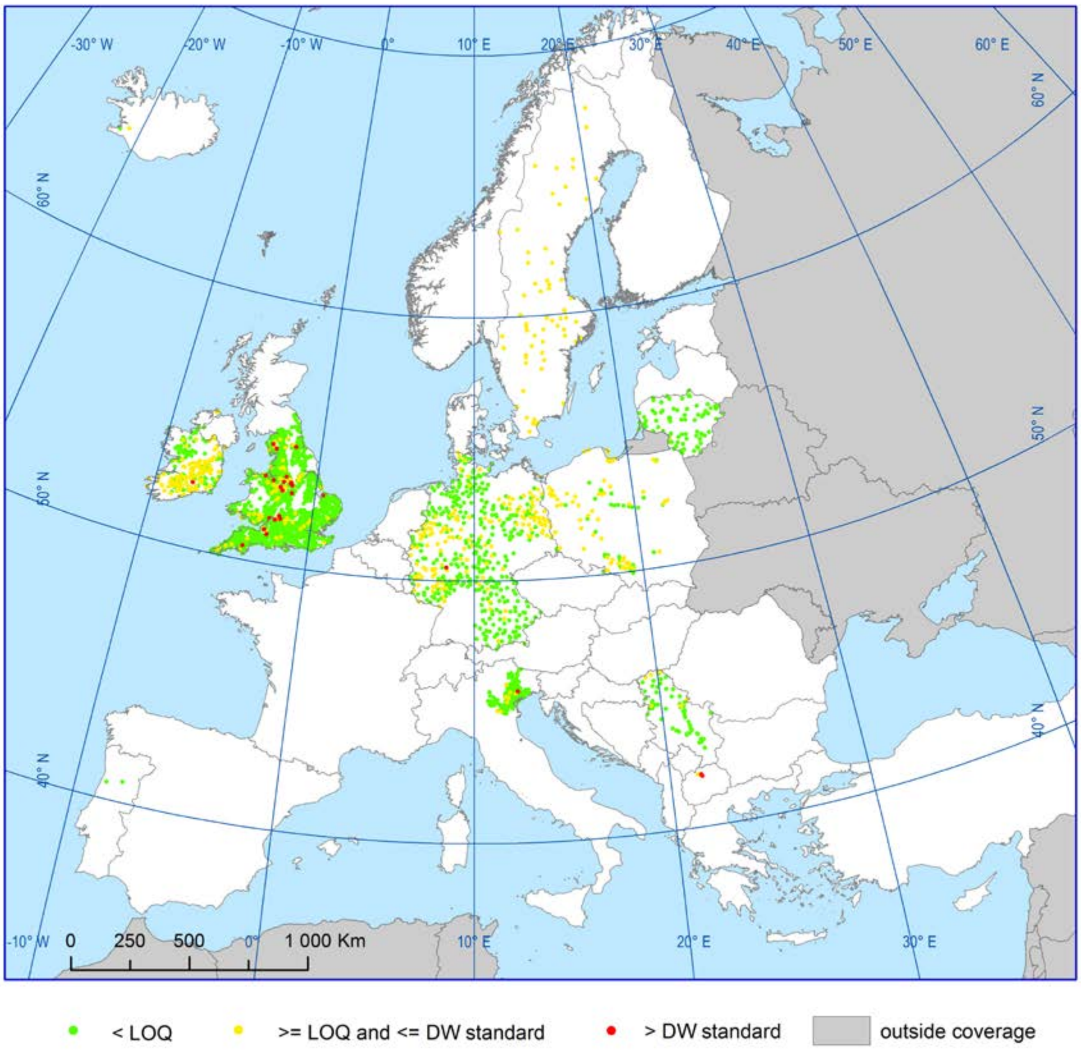


**Figure 4.1.2.39a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for linuron in groundwater**

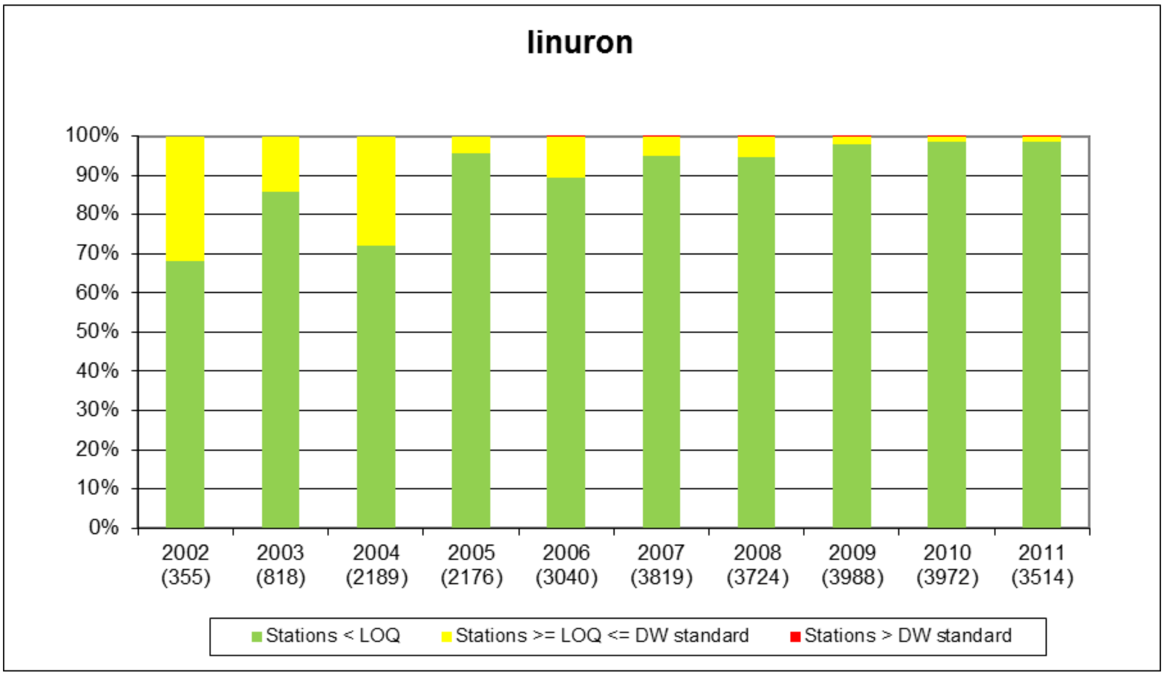



**Figure 4.1.2.39b Indicator for linuron in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

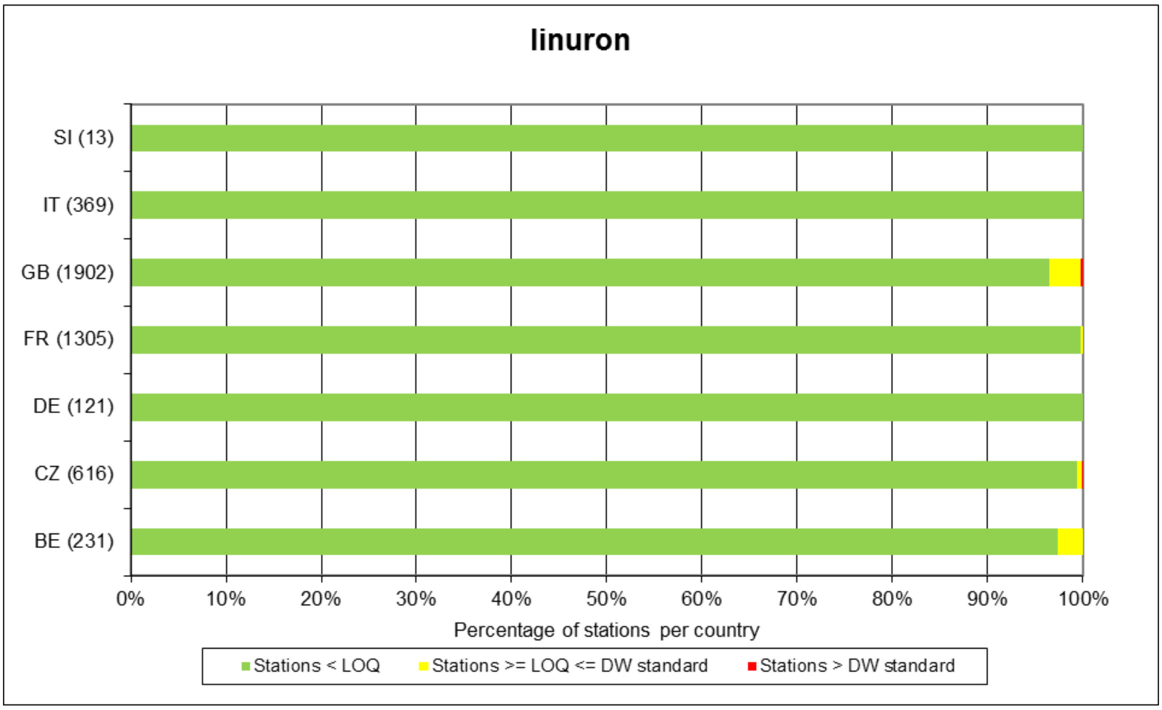


**Figure 4.1.2.39c Map of the indicator for linuron in groundwater in 2010–2011**

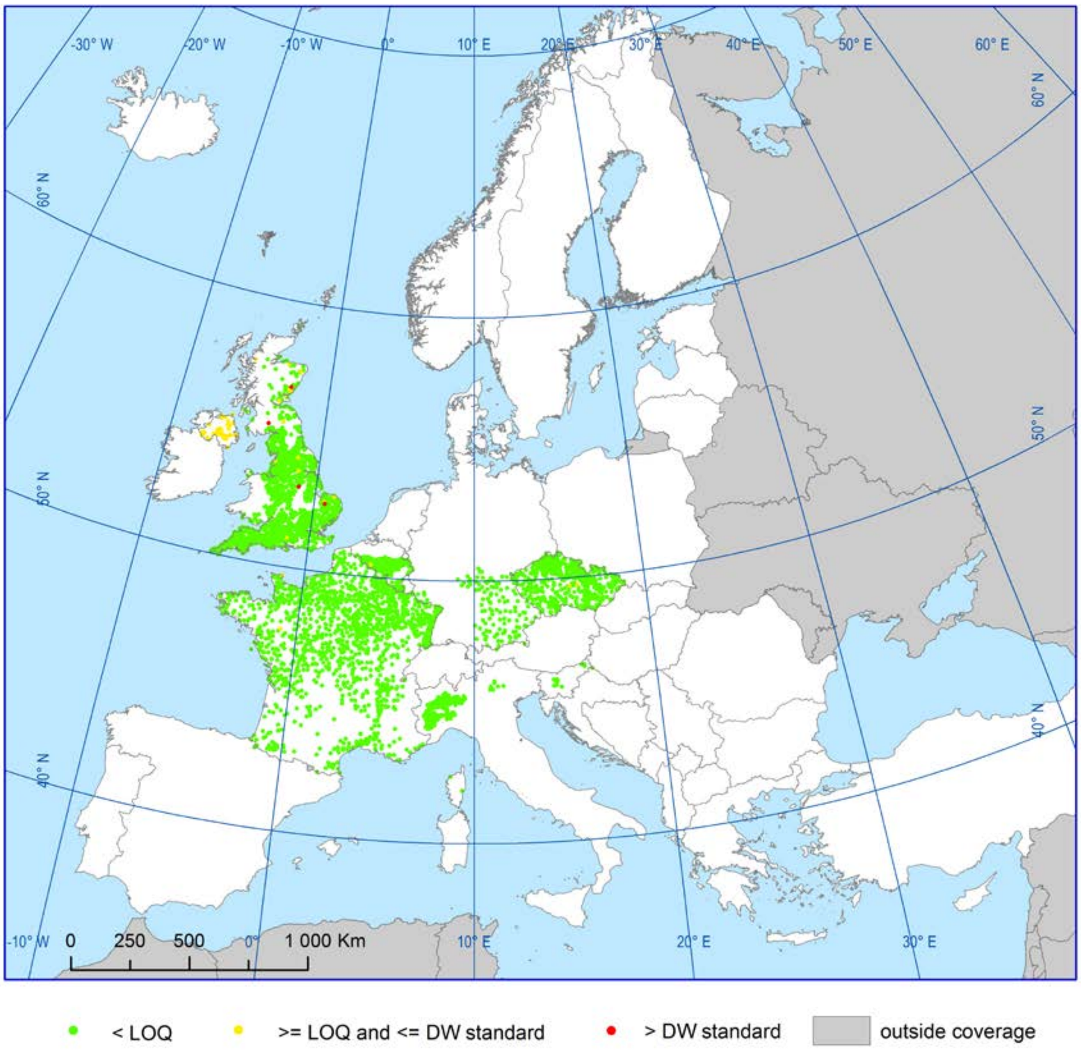


**Figure 4.1.2.40a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for MCPA in groundwater**

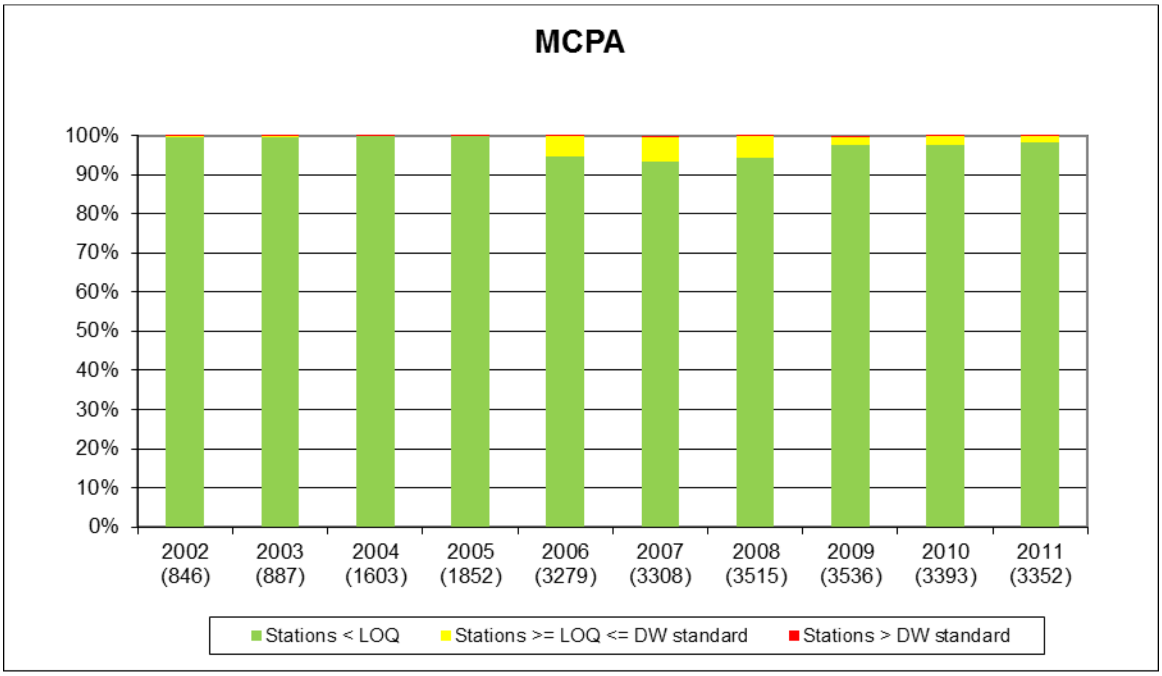



**Figure 4.1.2.40b Indicator for MCPA in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

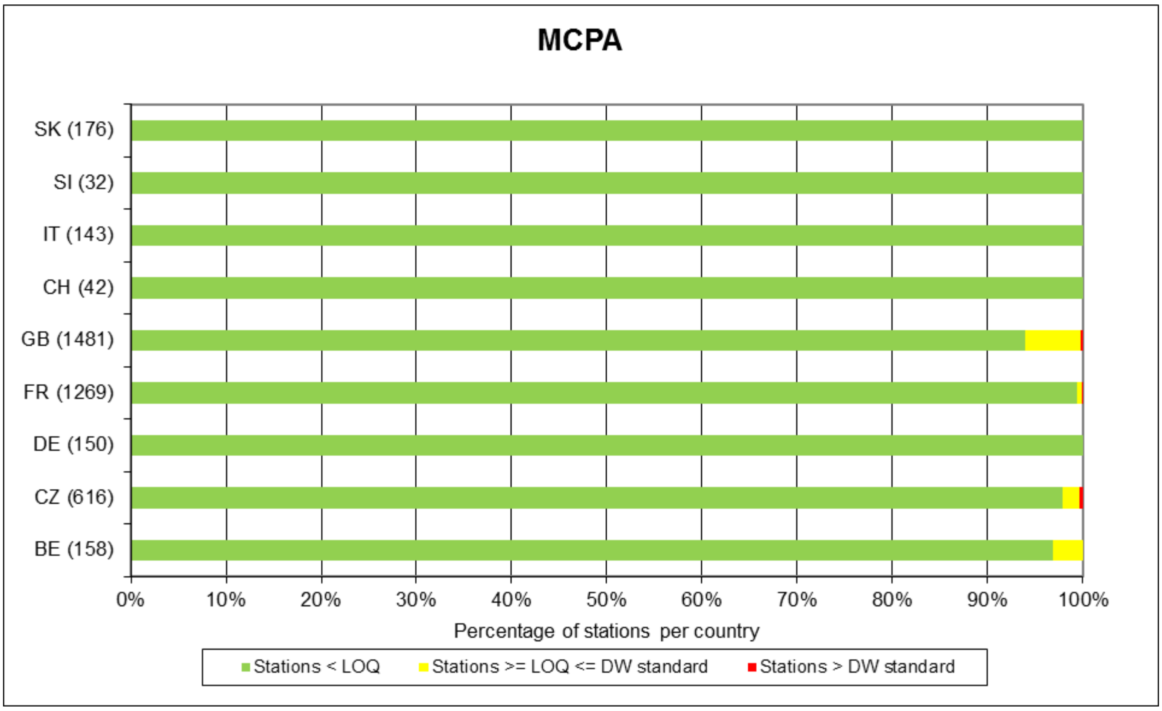


**Figure 4.1.2.40c Map of the indicator for MCPA in groundwater in 2010–2011**

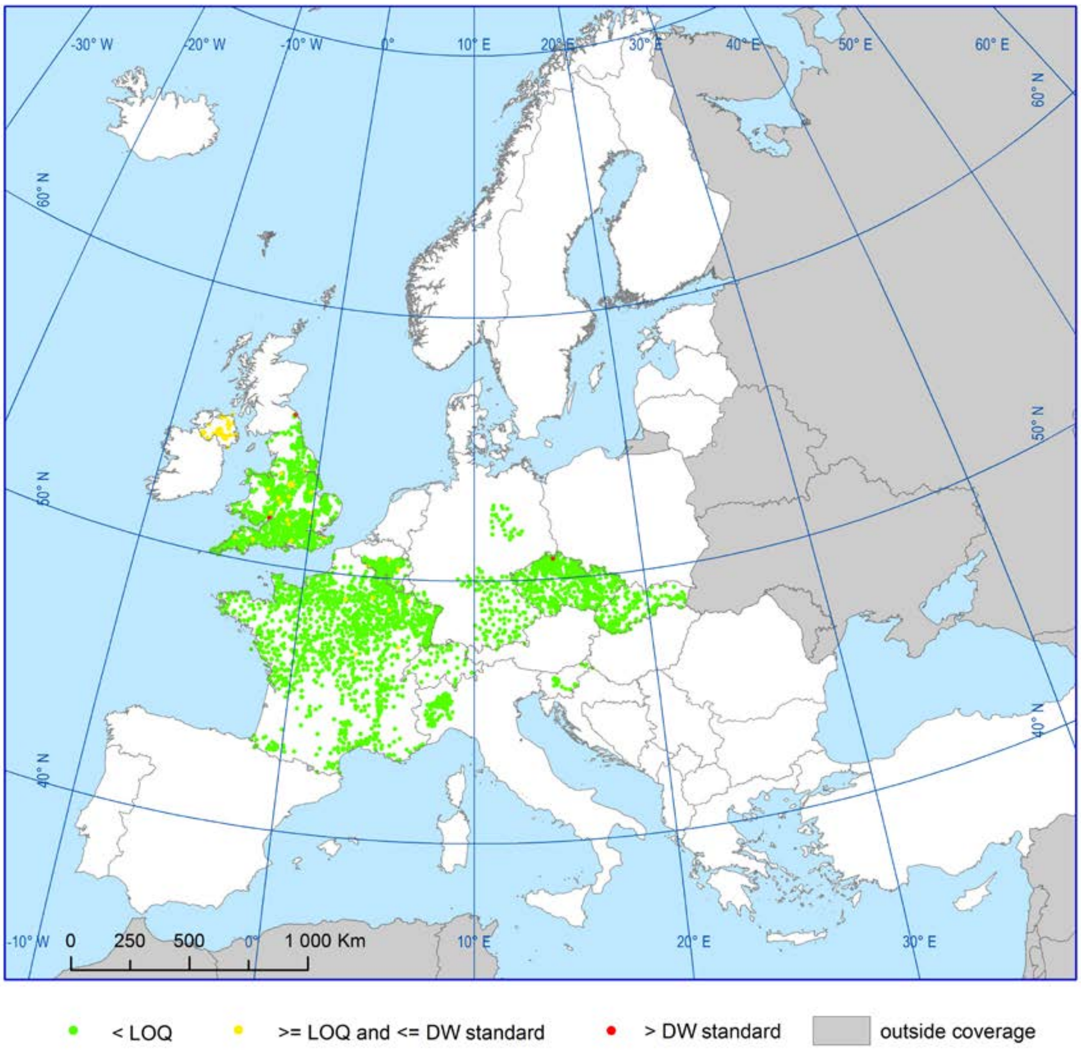


**Figure 4.1.2.41a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for mecoprop (MCPP) in groundwater**

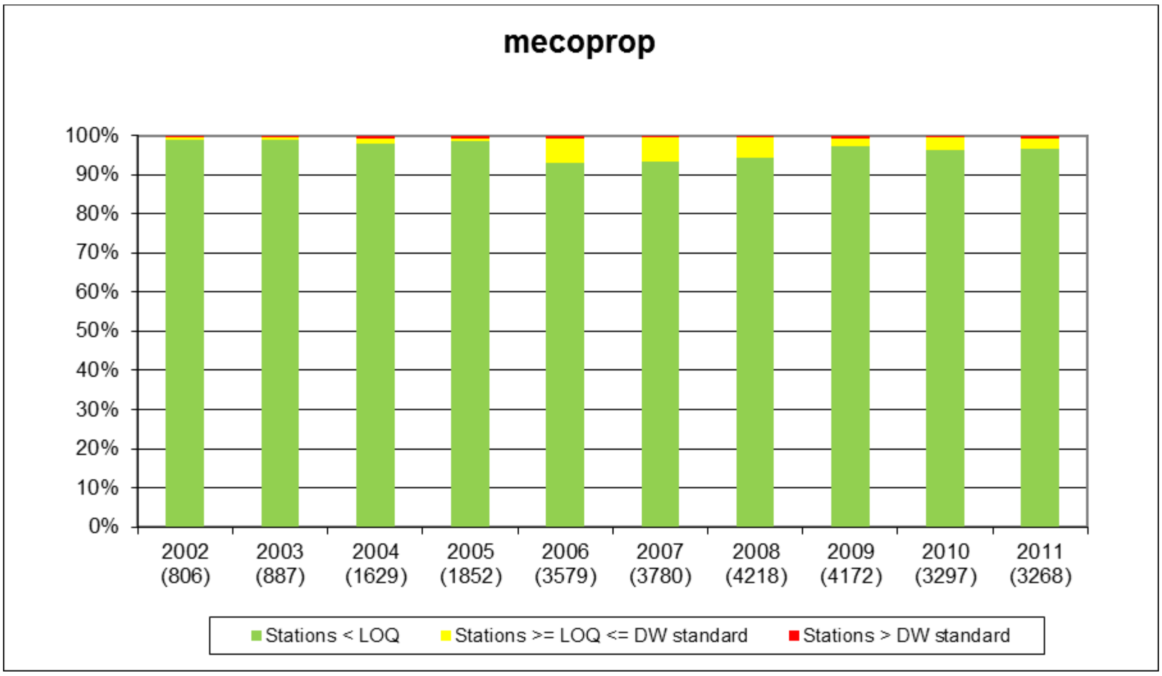



**Figure 4.1.2.41b Indicator for mecoprop (MCPP) in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

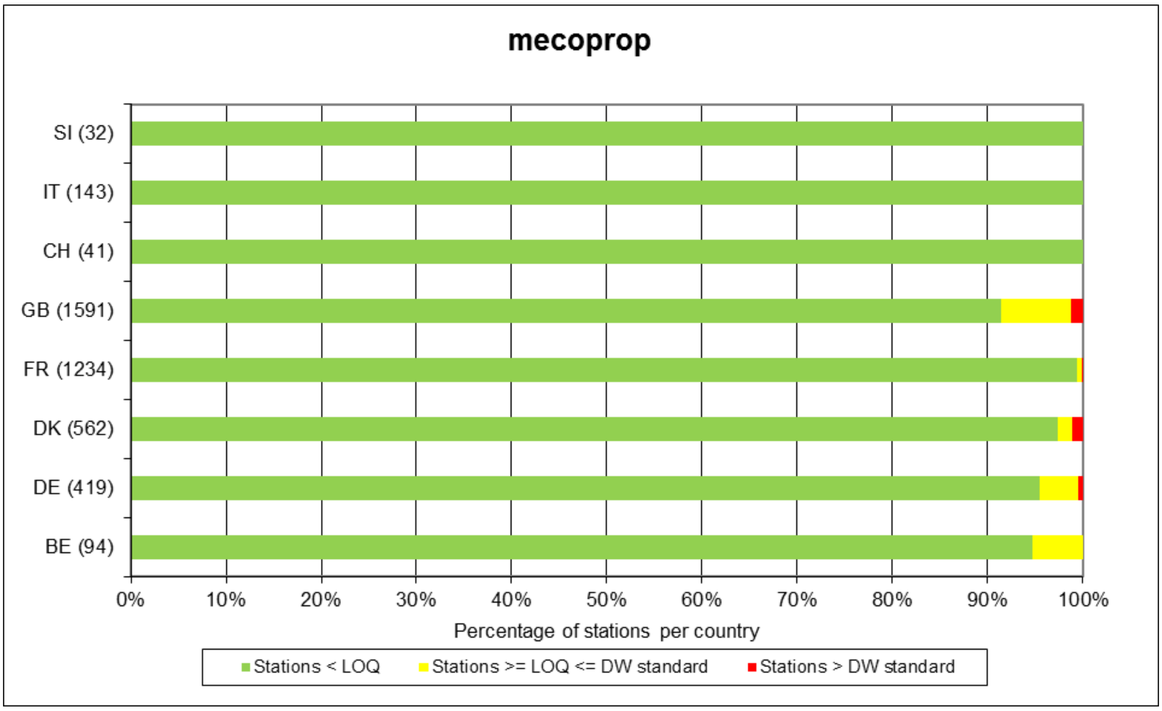


**Figure 4.1.2.41c Map of the indicator for mecoprop (MCPP) in groundwater in 2010–2011**

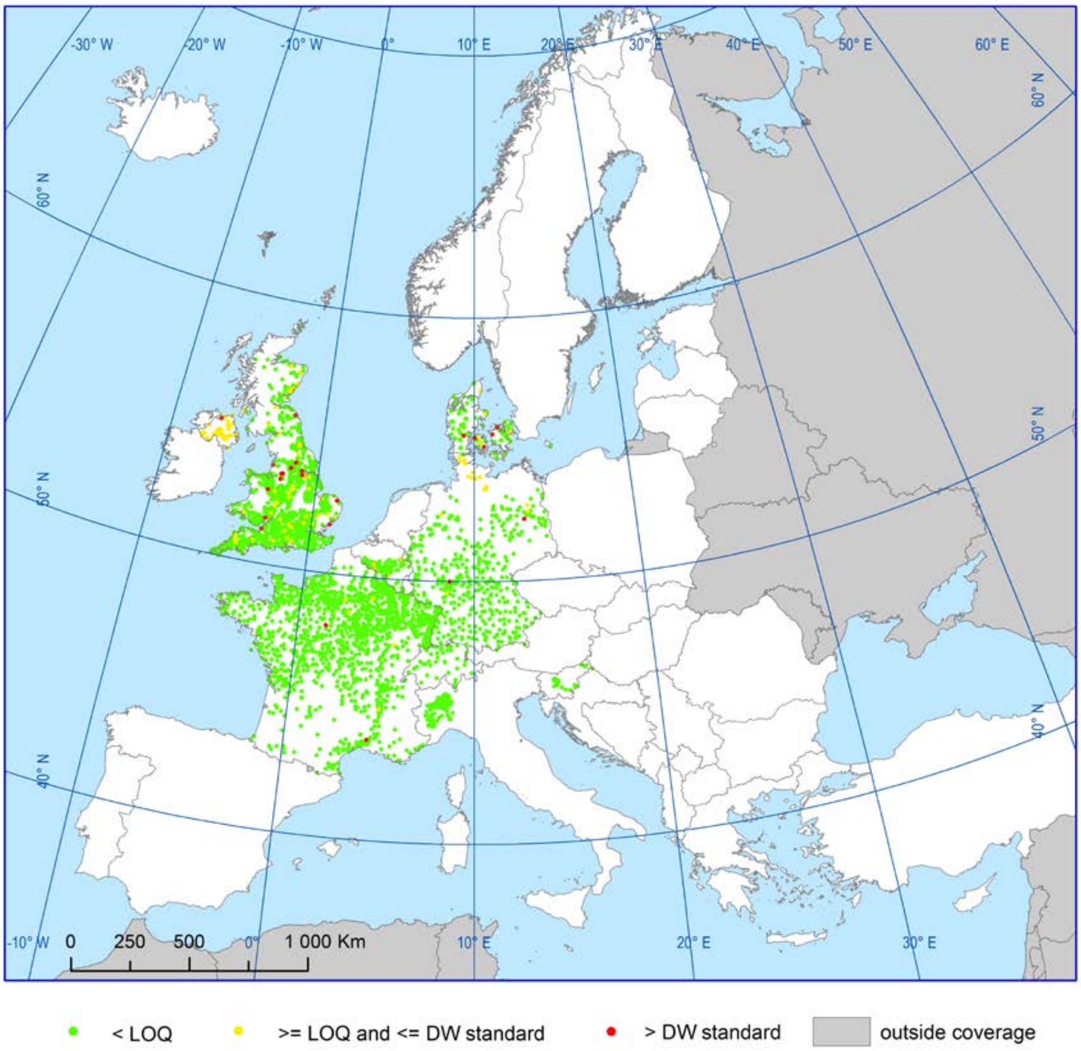


**Figure 4.1.2.42a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for mercury in groundwater**

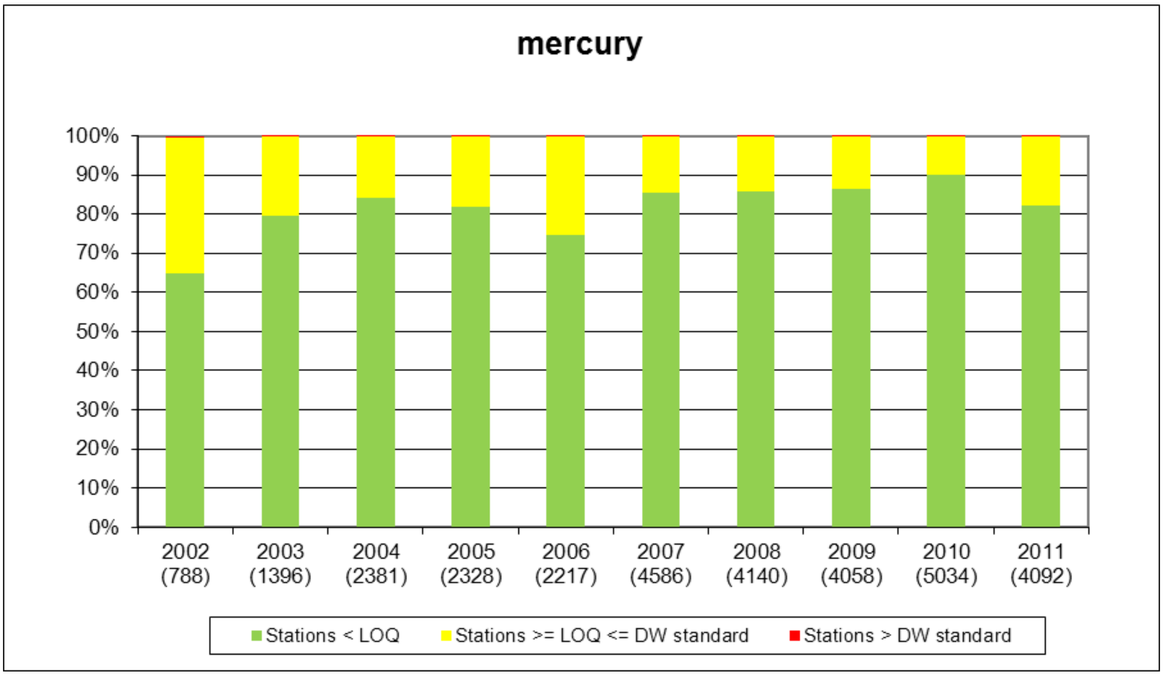



**Figure 4.1.2.42b Indicator for mercury in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

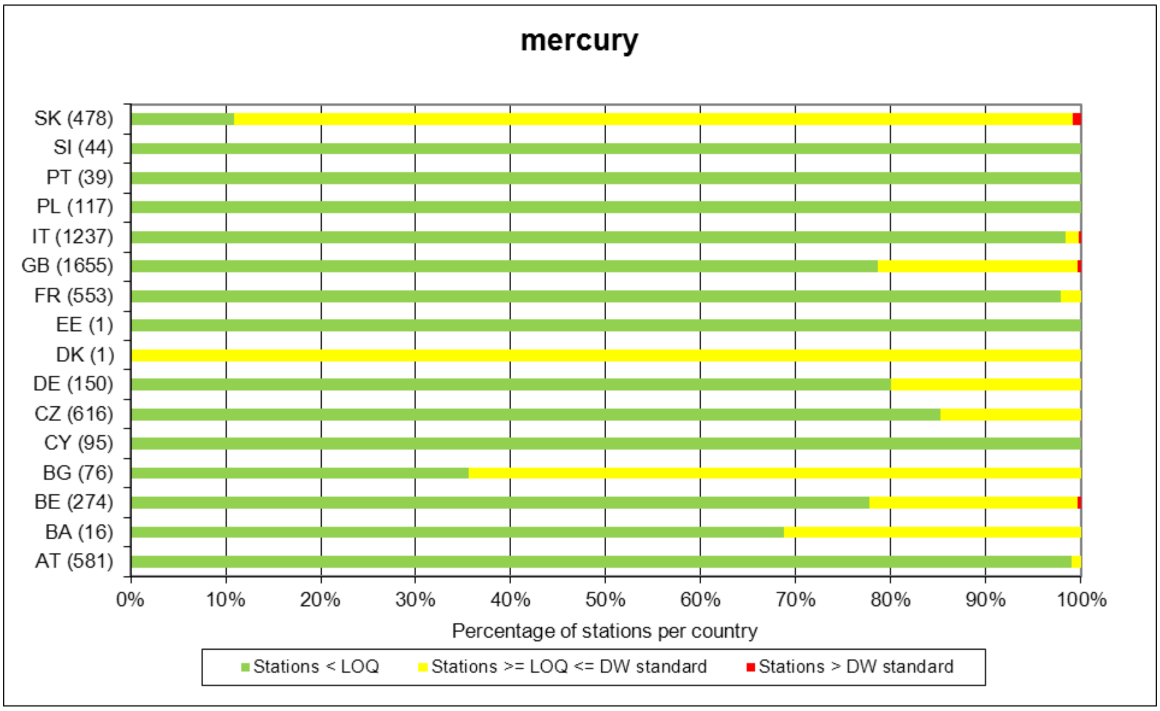


**Figure 4.1.2.42c Map of the indicator for mercury in groundwater in 2010–2011**

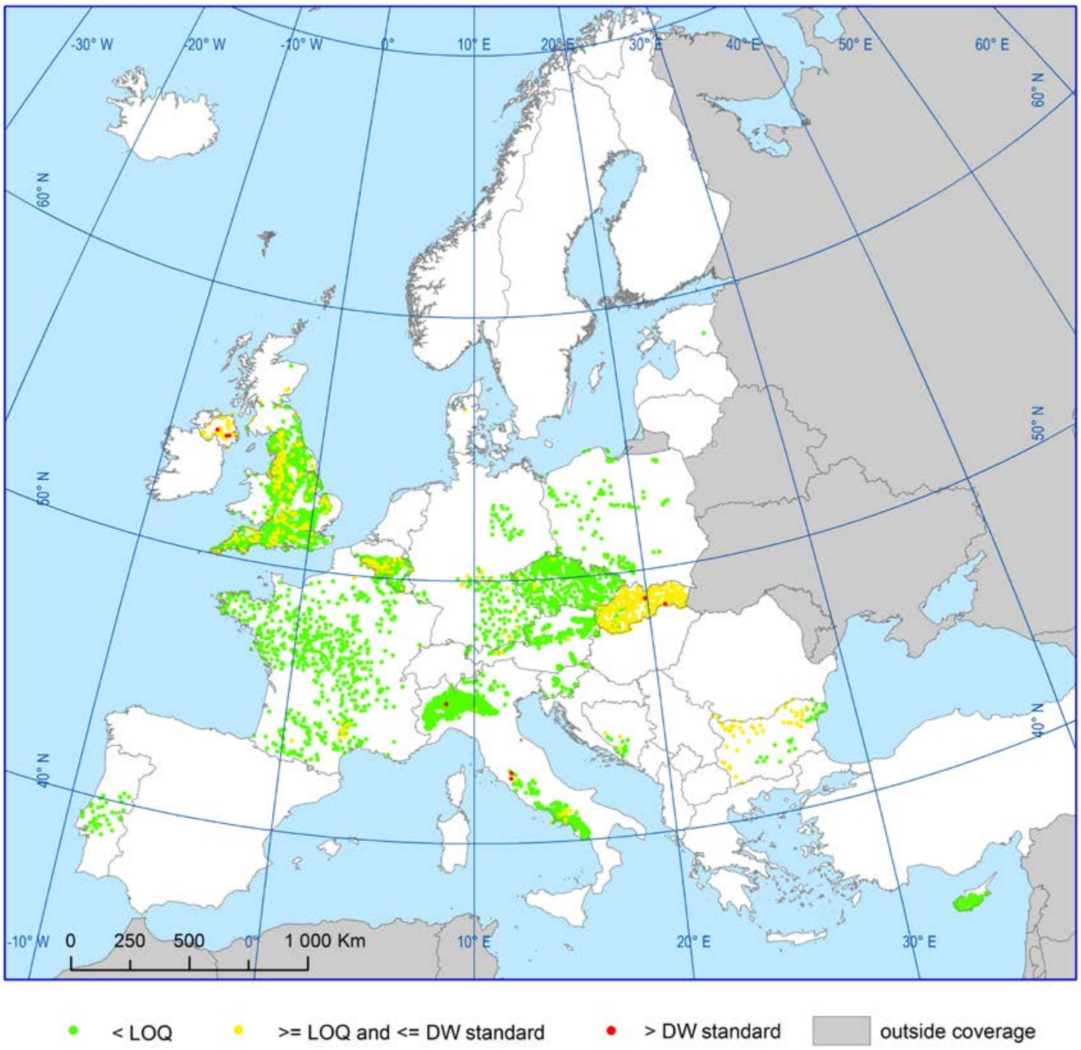


**Figure 4.1.2.43a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for dissolved mercury in groundwater**

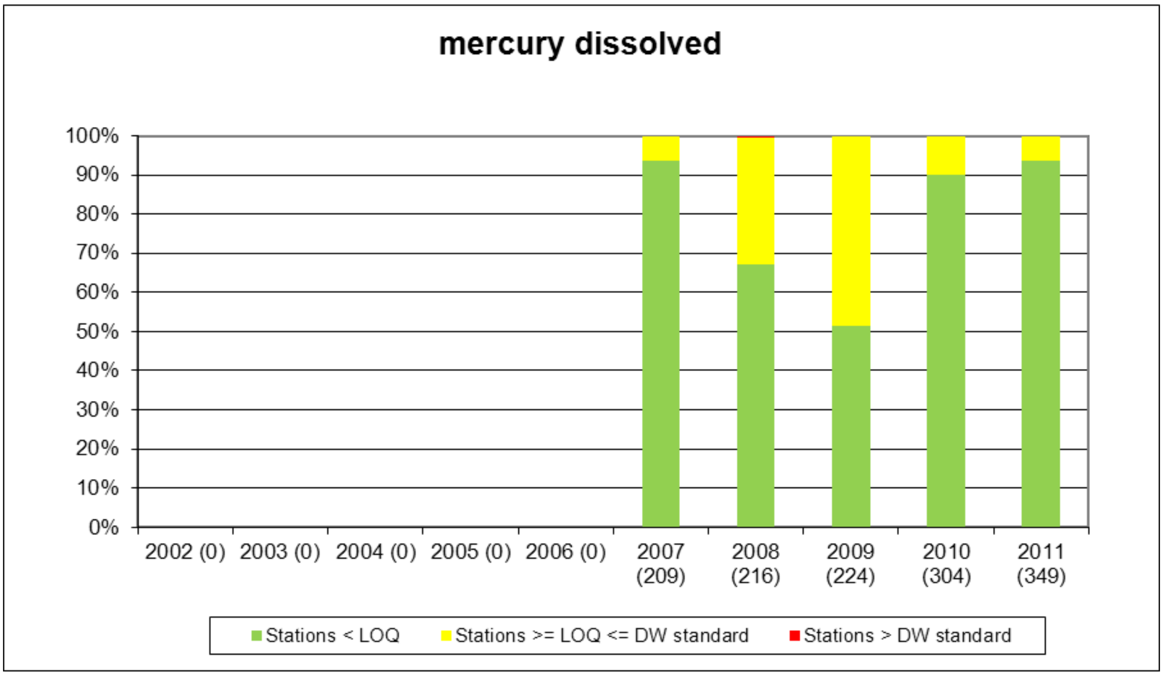



**Figure 4.1.2.43b Indicator for dissolved mercury in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

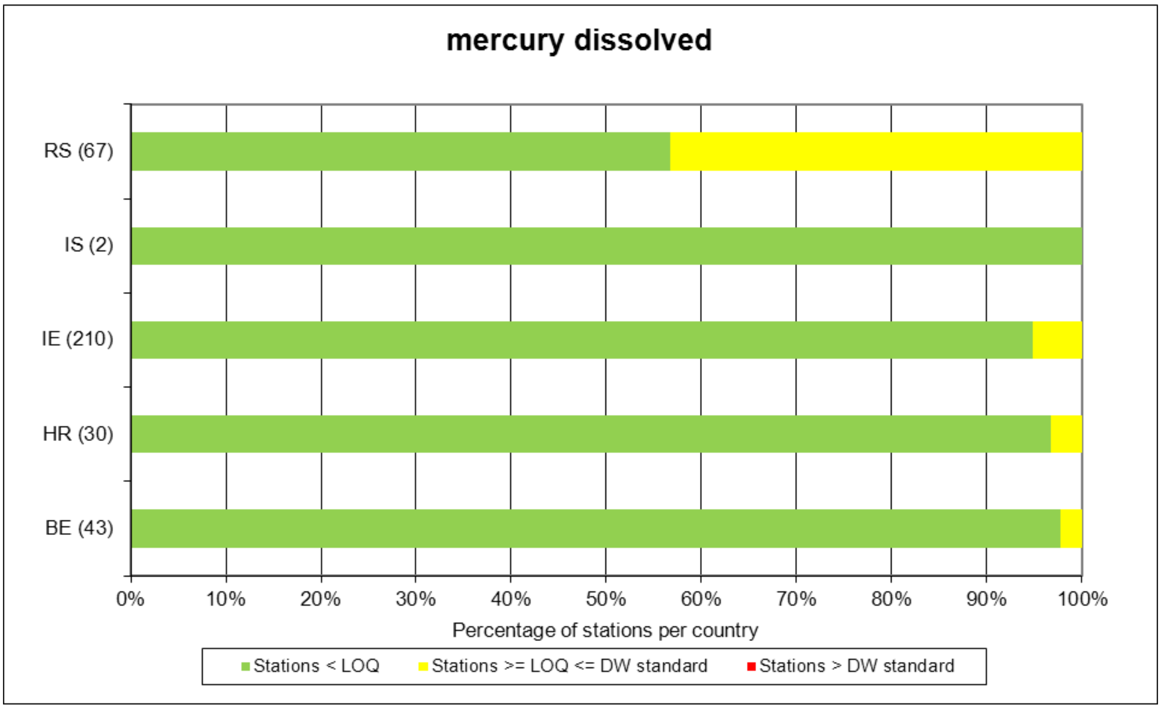
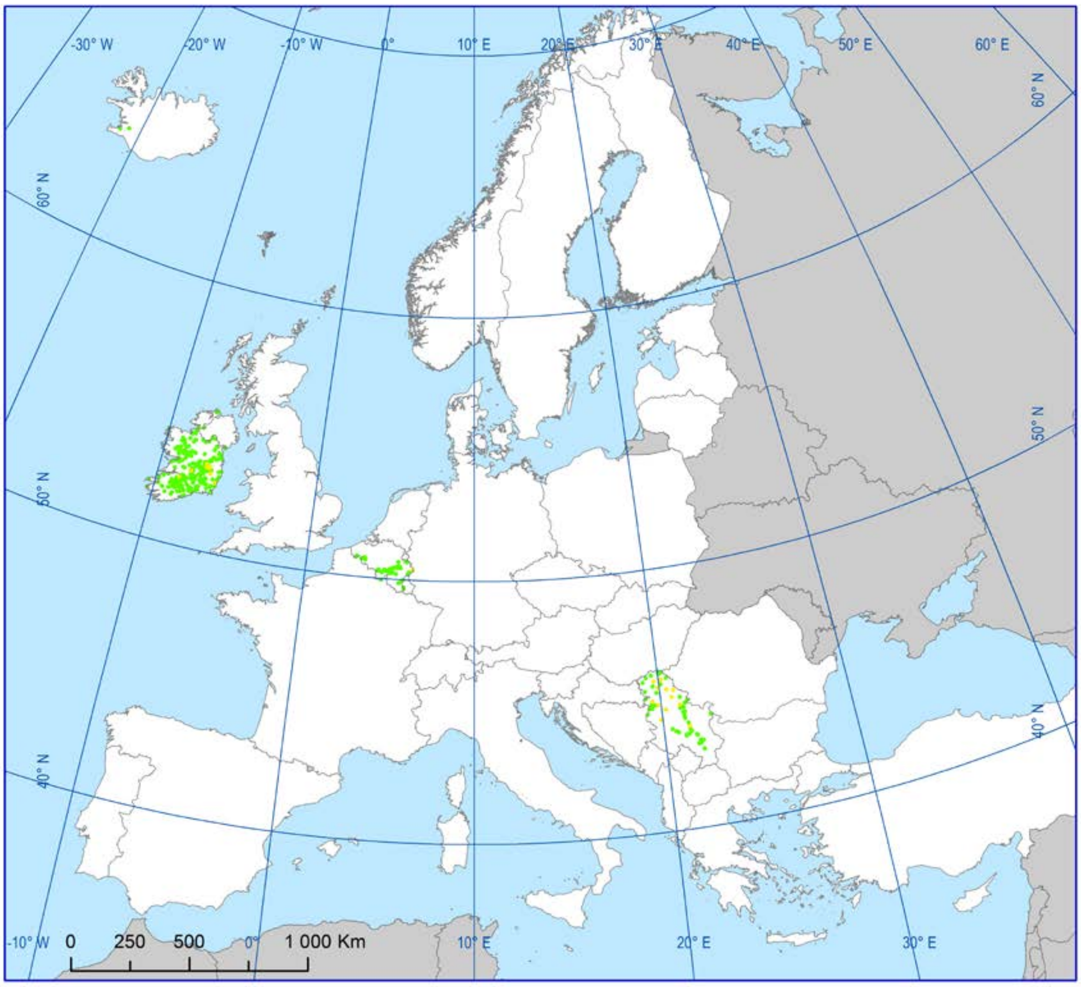


**Figure 4.1.2.43c Map of the indicator for dissolved mercury in groundwater in 2010–2011**




< LOQ    >= LOQ and <= DW standard    > DW standard    outside coverage

**Figure 4.1.2.44a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for nickel in groundwater**

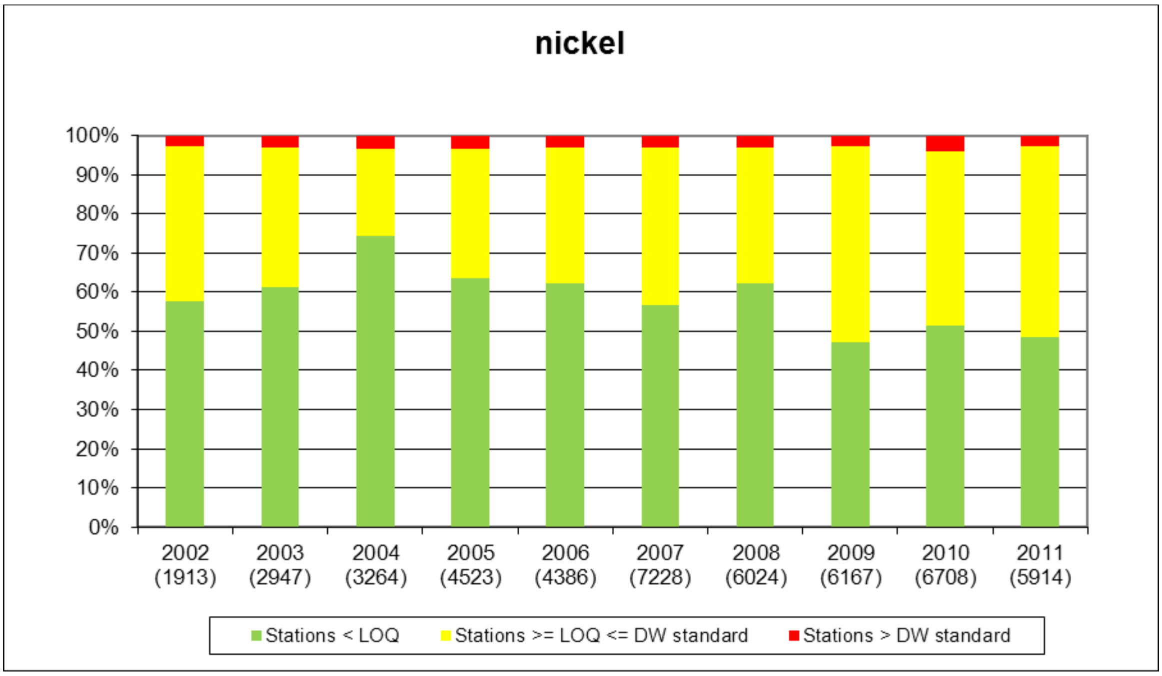



**Figure 4.1.2.44b Indicator for nickel in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

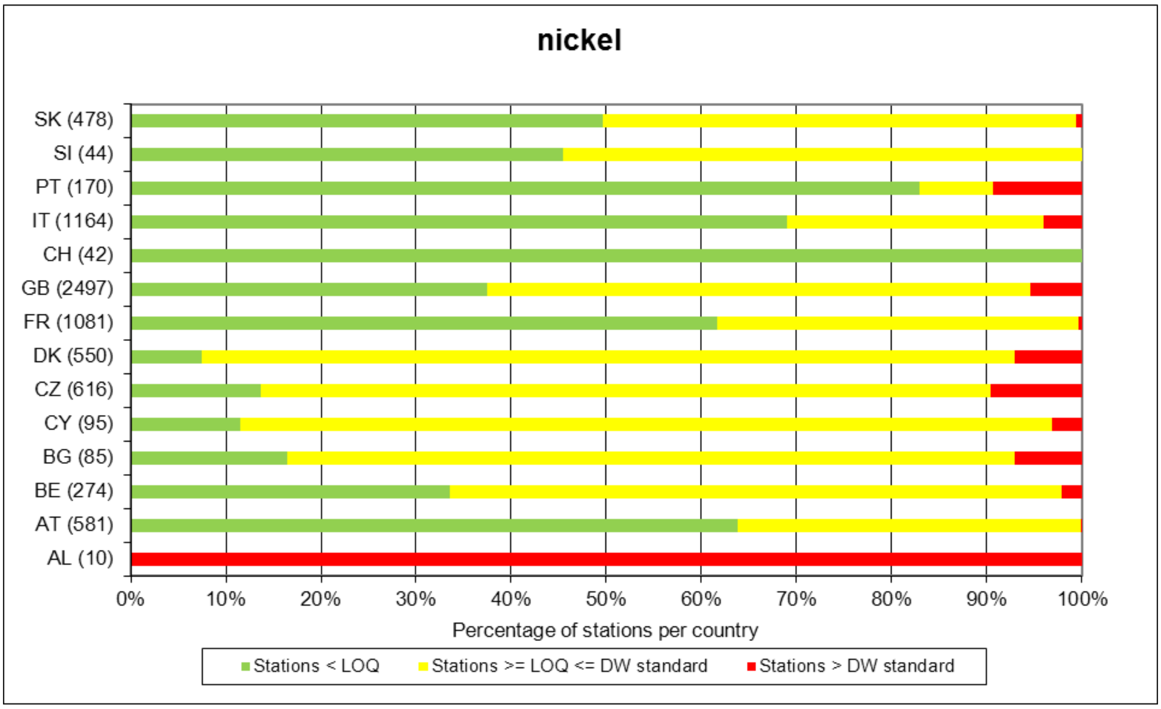


**Figure 4.1.2.44c Map of the indicator for nickel in groundwater in 2010–2011**

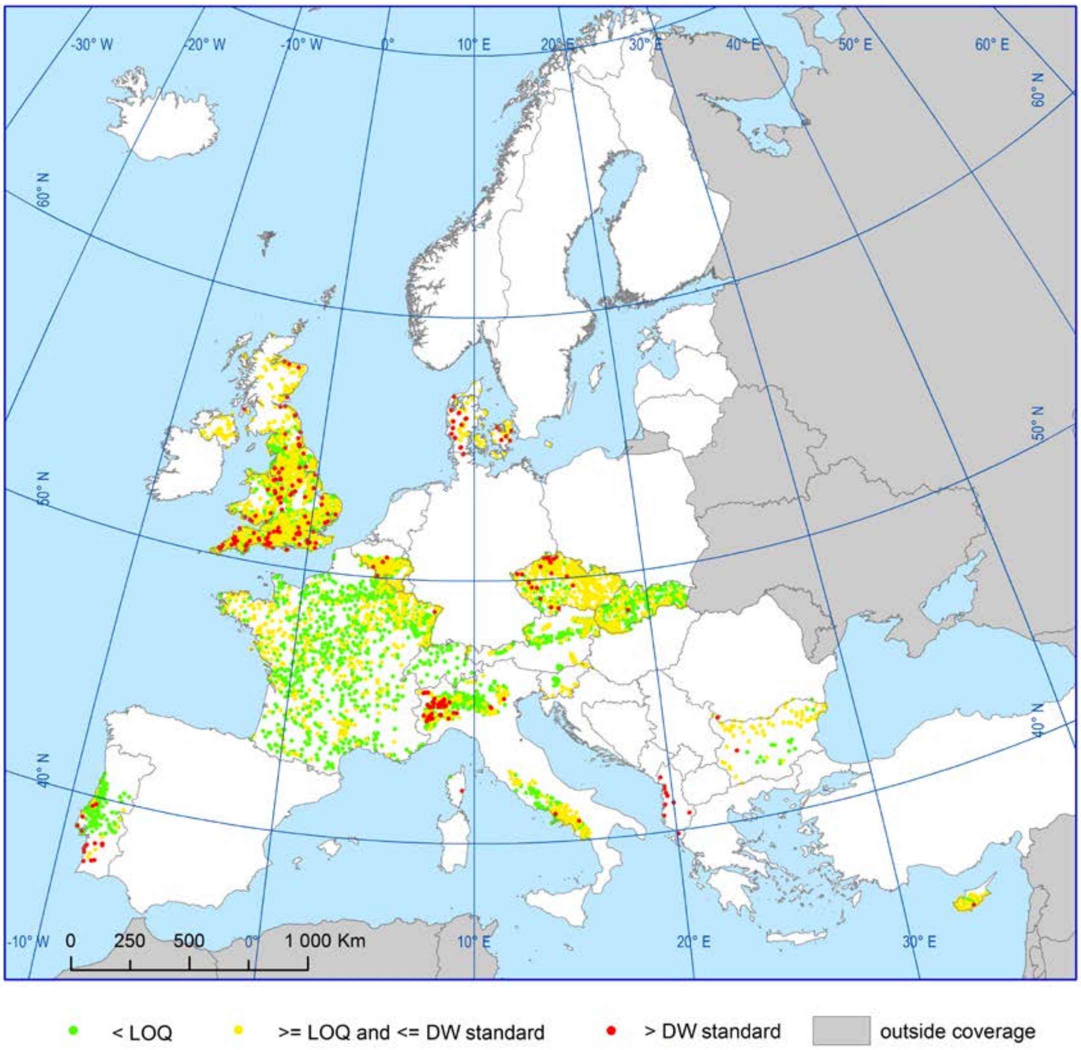


**Figure 4.1.2.45a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for dissolved nickel in groundwater**

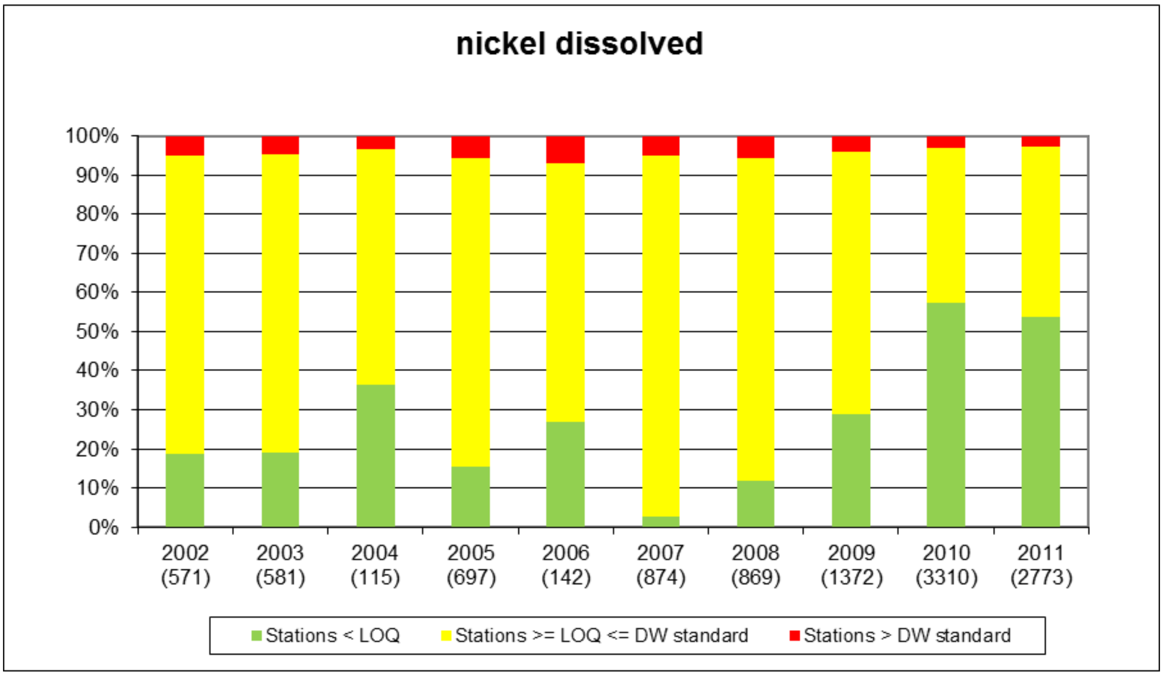



**Figure 4.1.2.45b Indicator for dissolved nickel in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

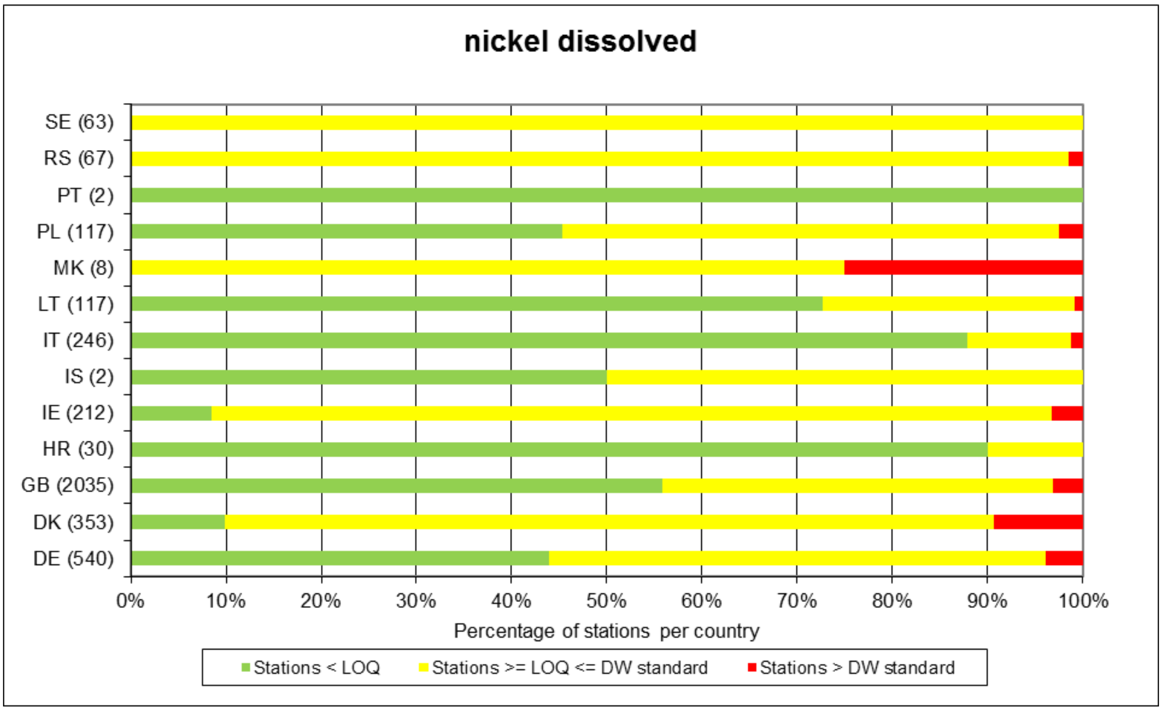


**Figure 4.1.2.45c Map of the indicator for dissolved nickel in groundwater in 2010–2011**

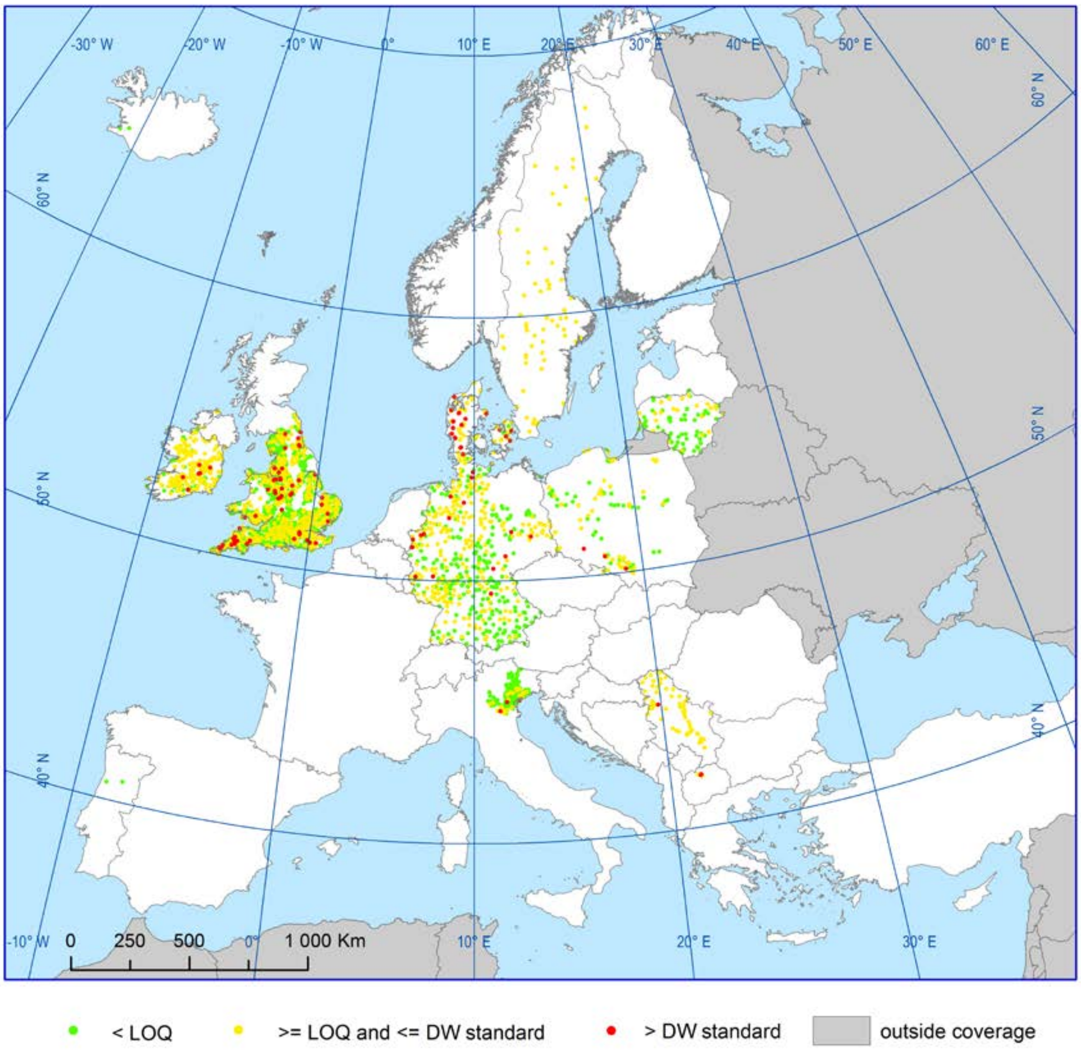


**Figure 4.1.2.46a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for prometryn in groundwater**

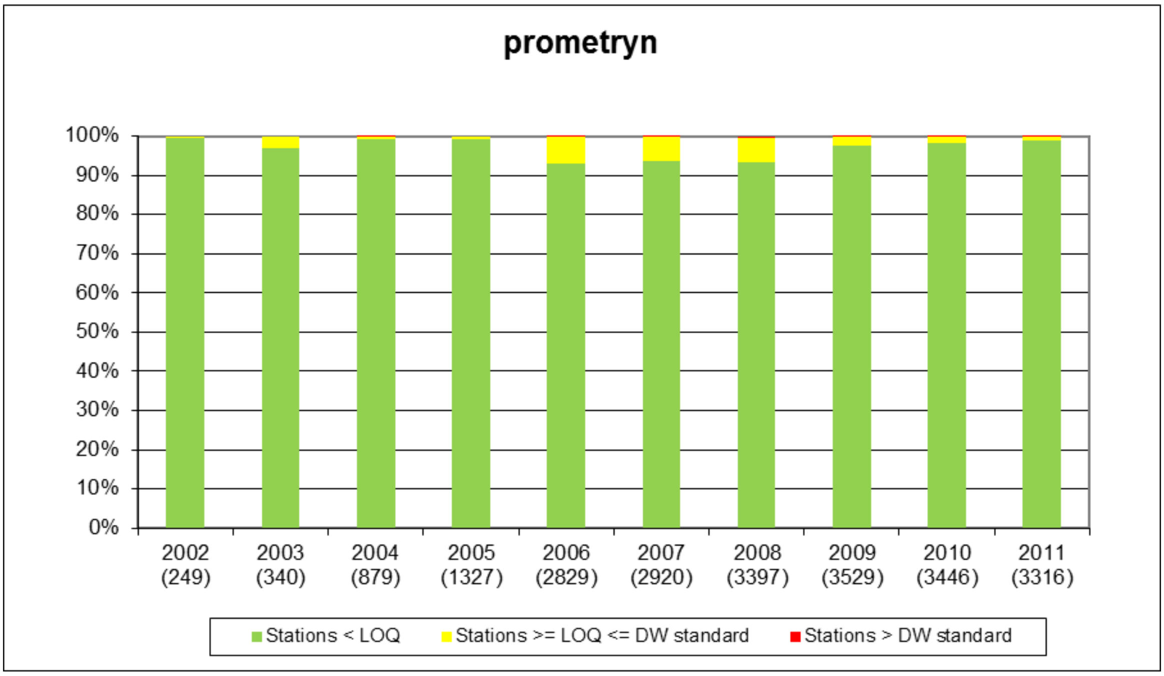



**Figure 4.1.2.46b Indicator for prometryn in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

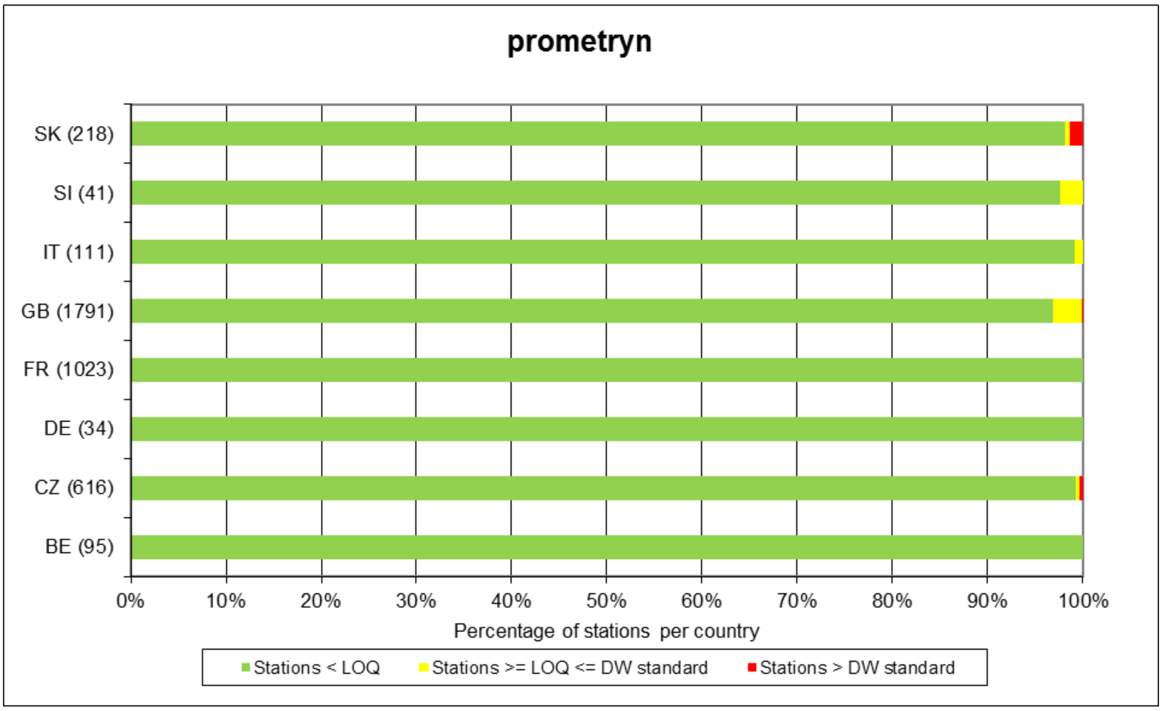


**Figure 4.1.2.46c Map of the indicator for prometryn in groundwater in 2010–2011**

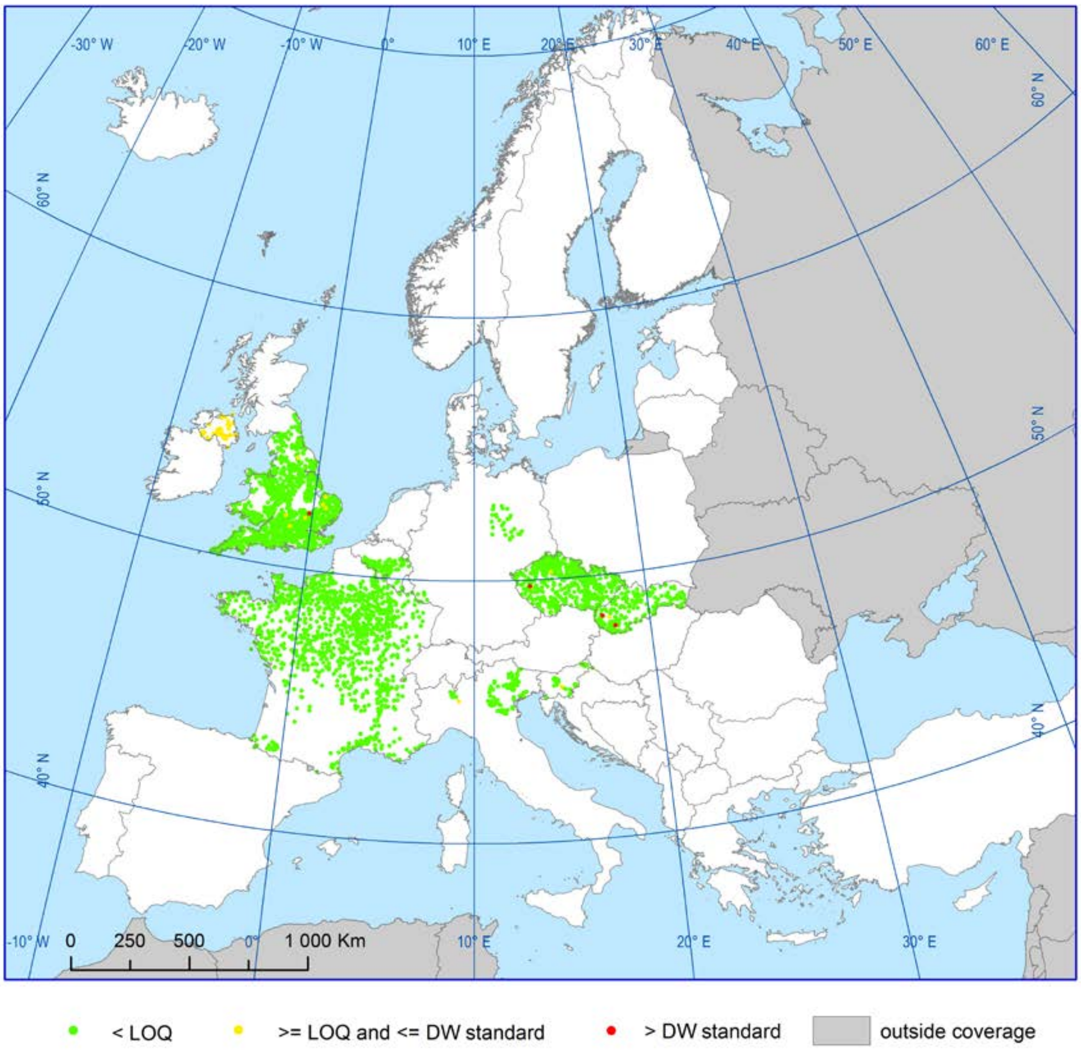


**Figure 4.1.2.47a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for propazine in groundwater**

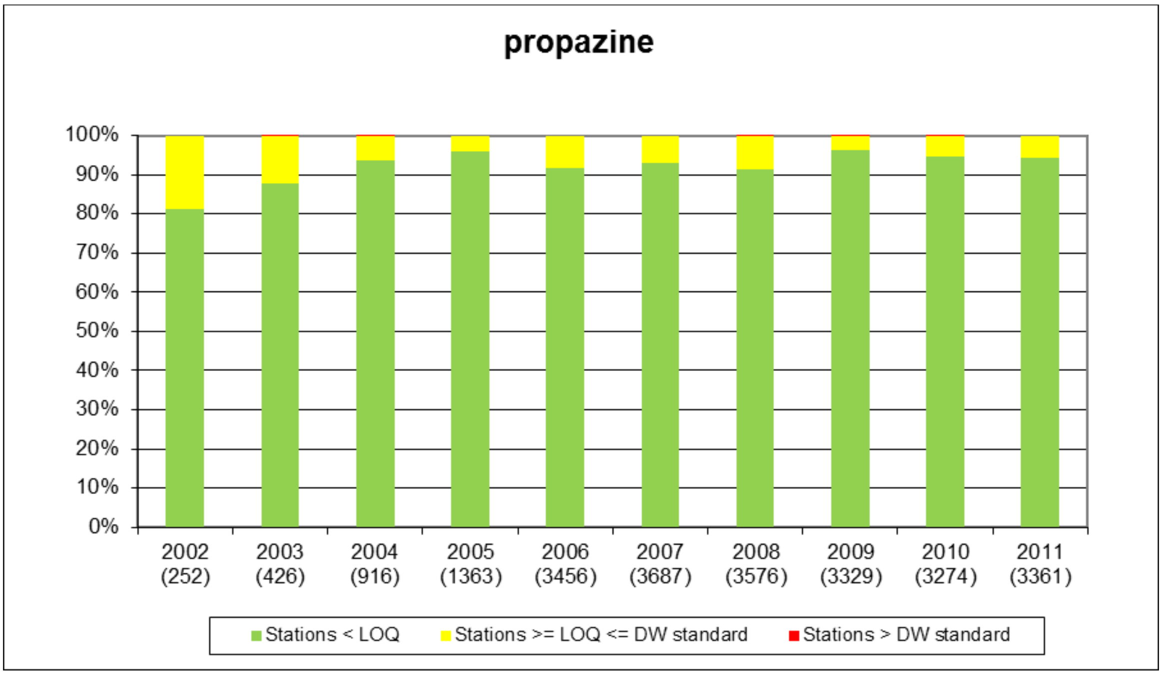



**Figure 4.1.2.47b Indicator for propazine in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

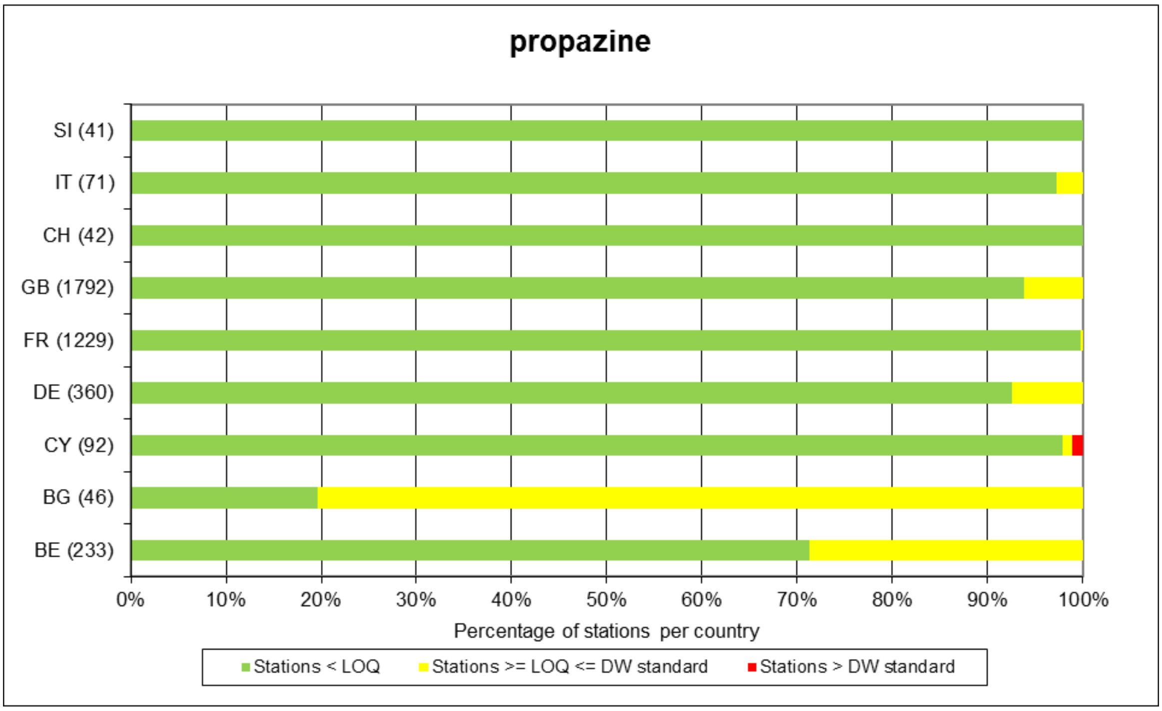


**Figure 4.1.2.47c Map of the indicator for propazine in groundwater in 2010–2011**

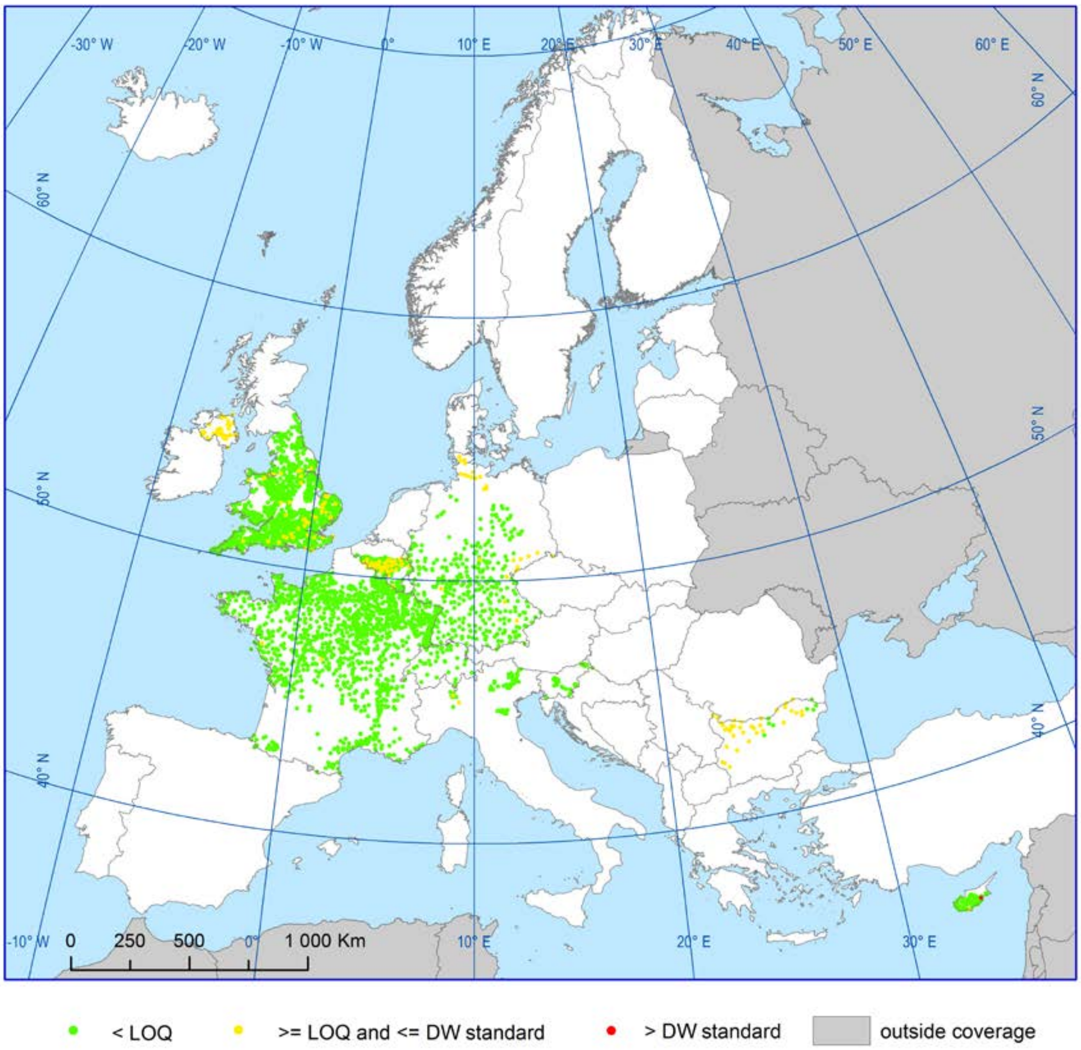


**Figure 4.1.2.48a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for simazine in groundwater**

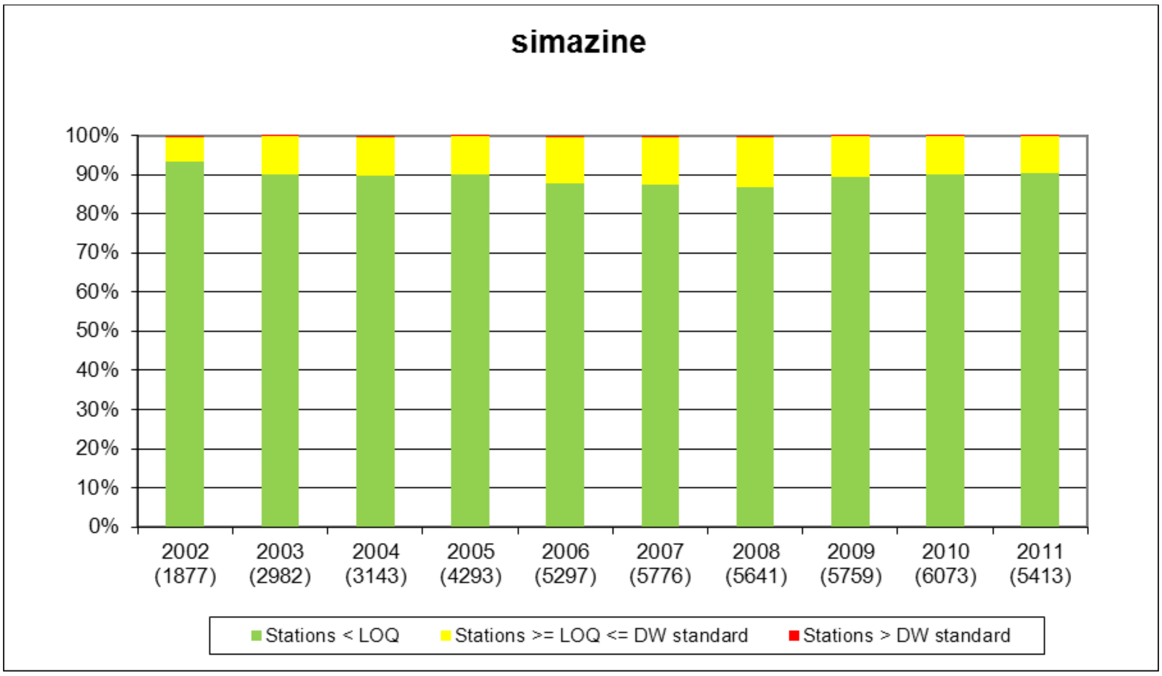



**Figure 4.1.2.48b Indicator for simazine in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

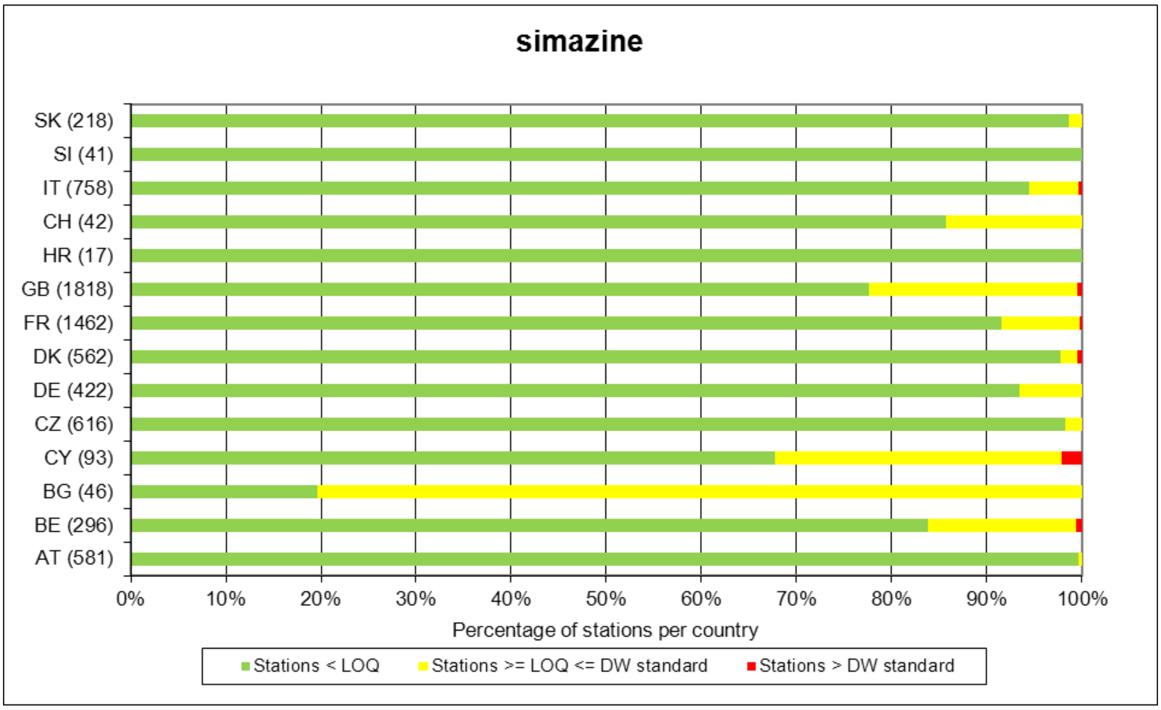


**Figure 4.1.2.48c Map of the indicator for simazine in groundwater in 2010–2011**

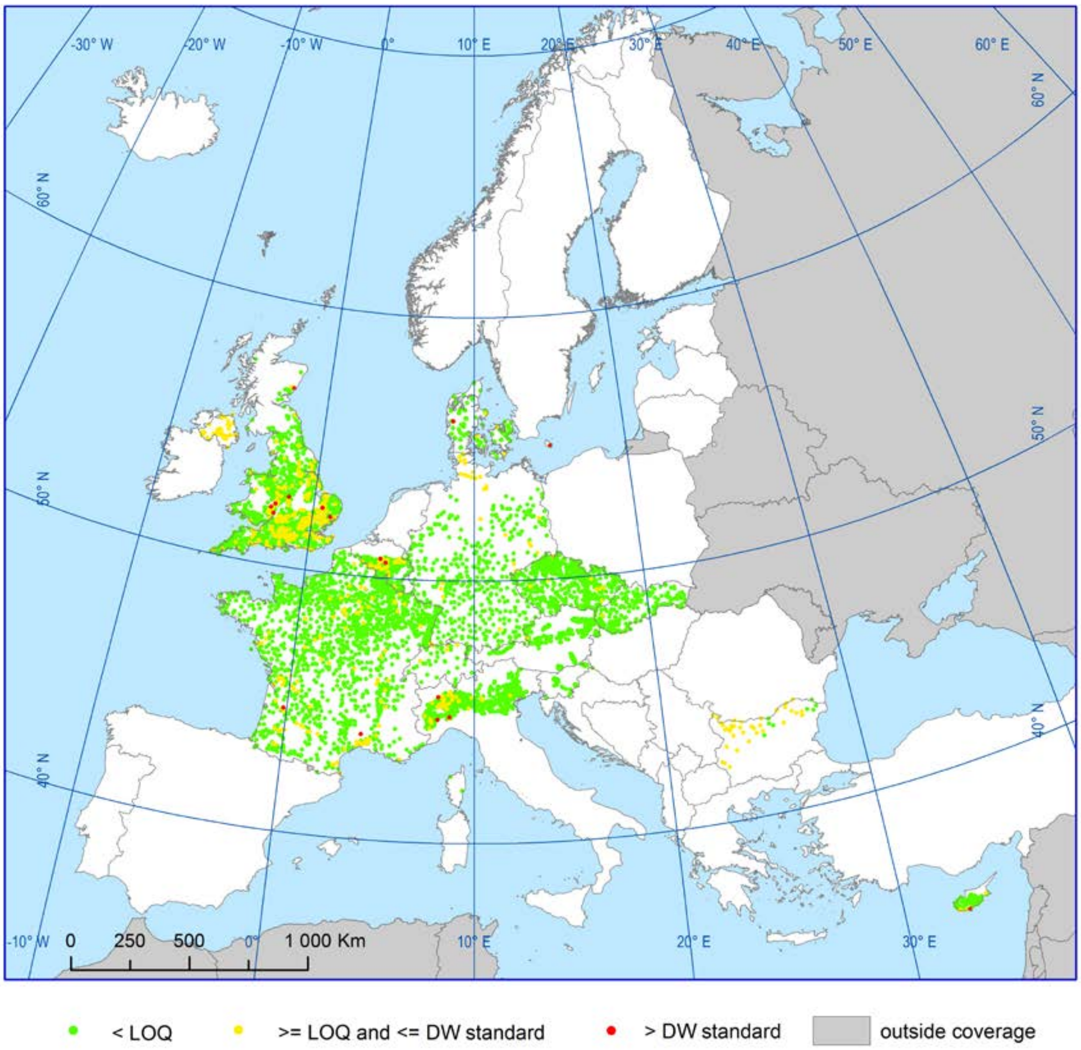


**Figure 4.1.2.49a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for terbuthylazine in groundwater**

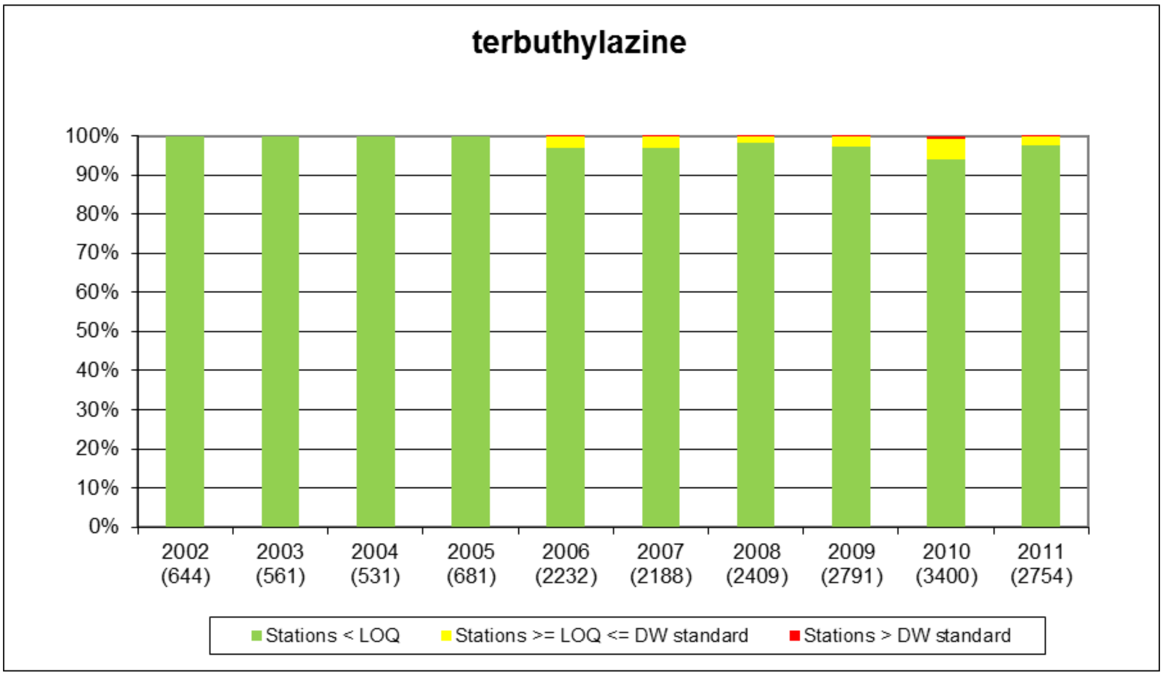



**Figure 4.1.2.49b Indicator for terbuthylazine in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

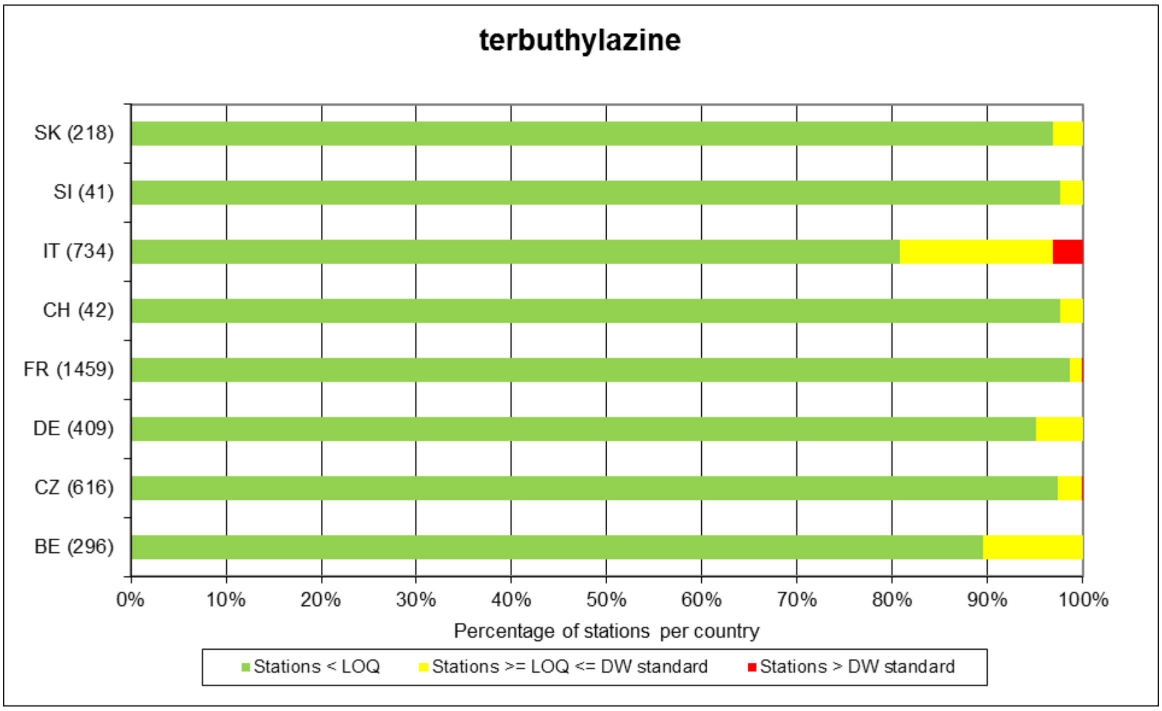


**Figure 4.1.2.49c Map of the indicator for terbuthylazine in groundwater in 2010–2011**

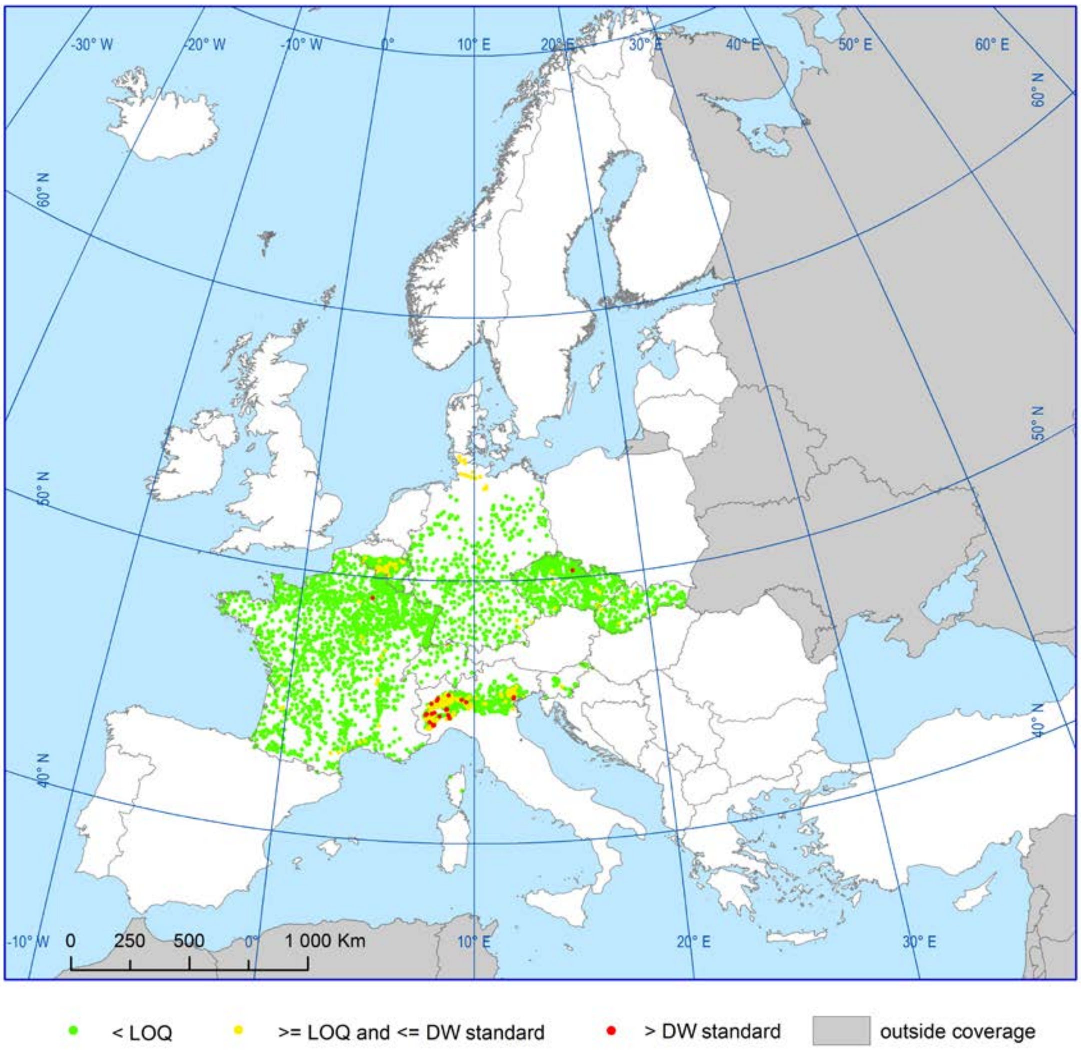


**Figure 4.1.2.50a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for terbutryn in groundwater**

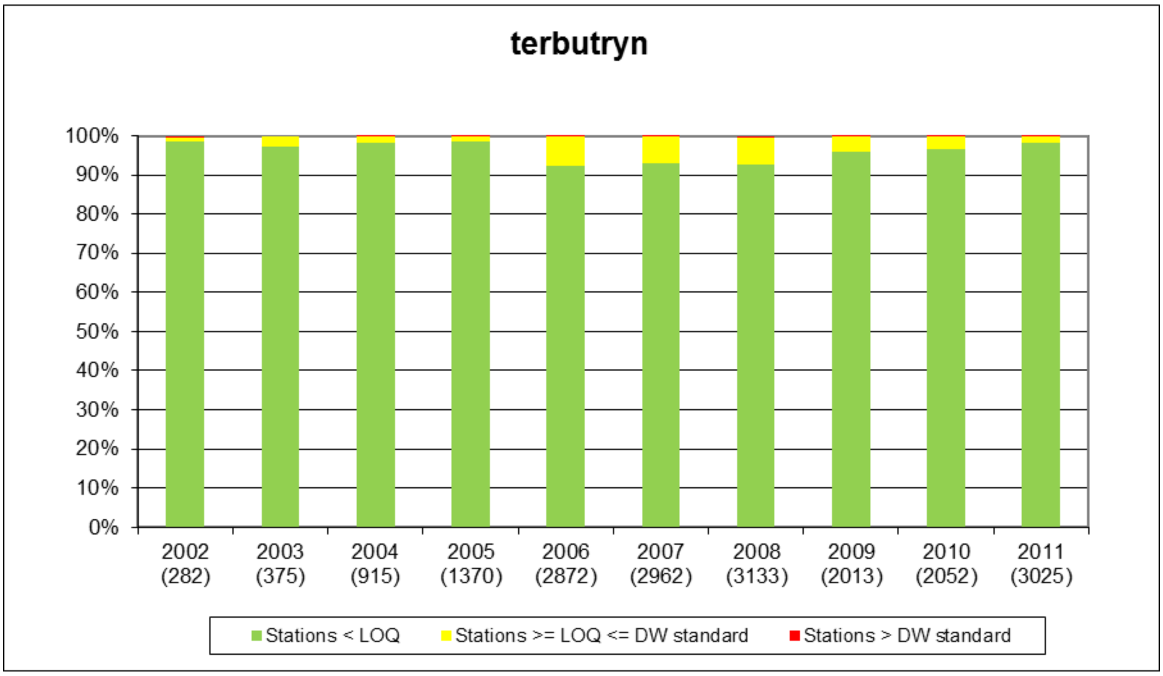



**Figure 4.1.2.50b Indicator for terbutryn in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

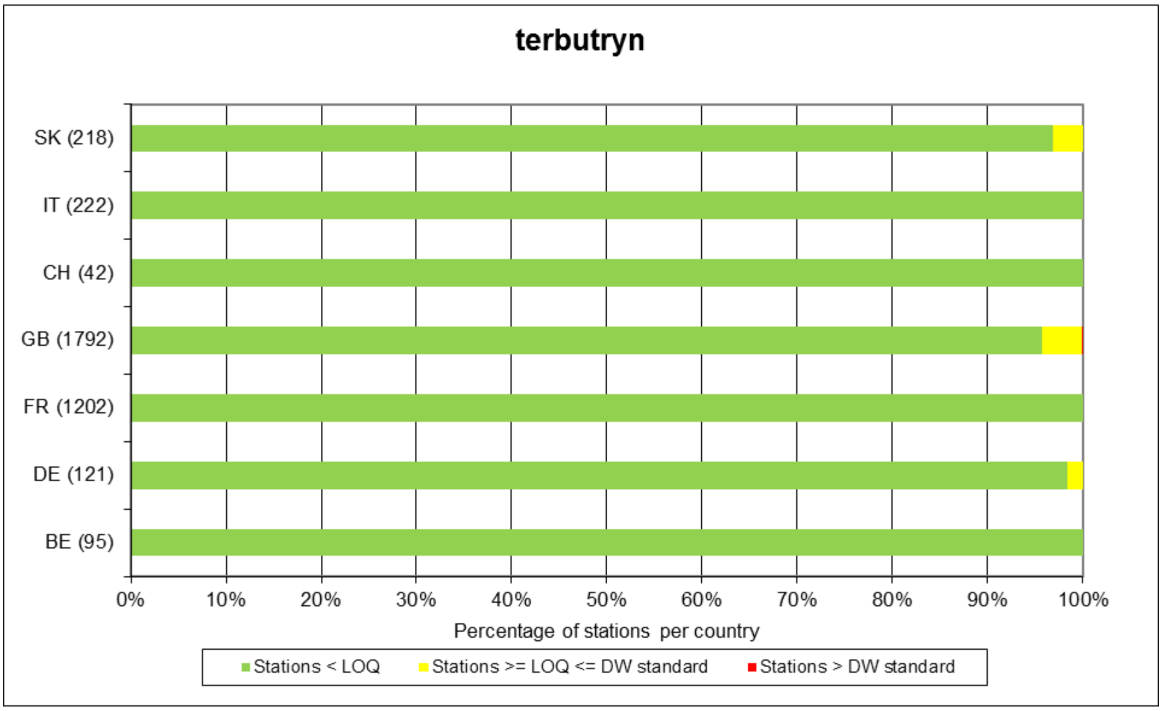


**Figure 4.1.2.50c Map of the indicator for terbutryn in groundwater in 2010–2011**

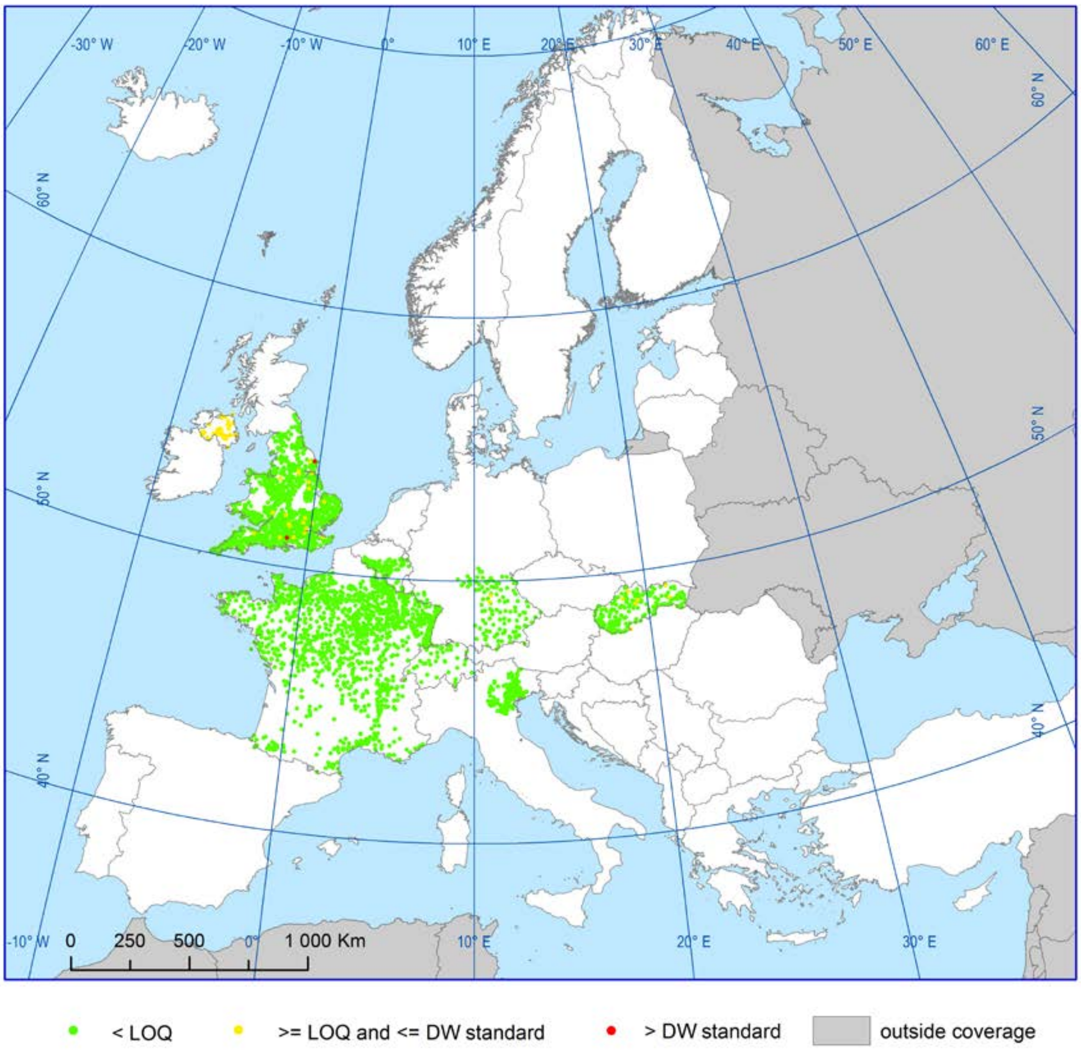


**Figure 4.1.2.51a Long-term indicator (% of sites within indicator class, number of stations shown in parenthesis) for trifluralin in groundwater**

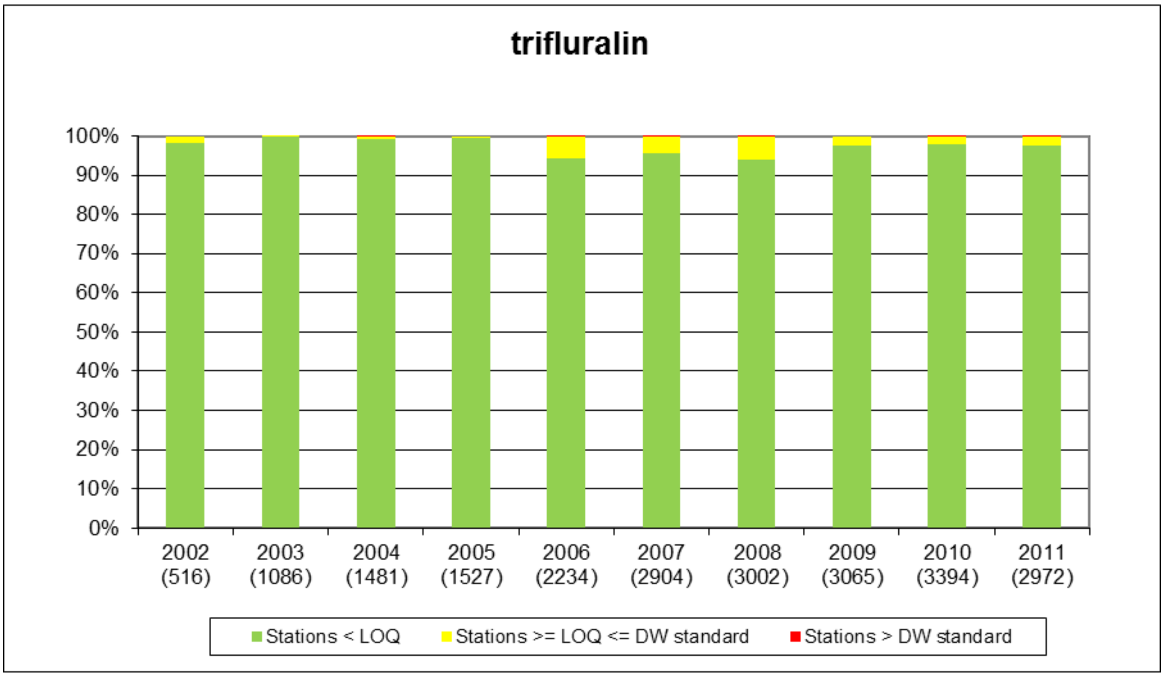



**Figure 4.1.2.51b Indicator for trifluralin in groundwater in 2010–2011 (number of stations per country shown in parenthesis)**

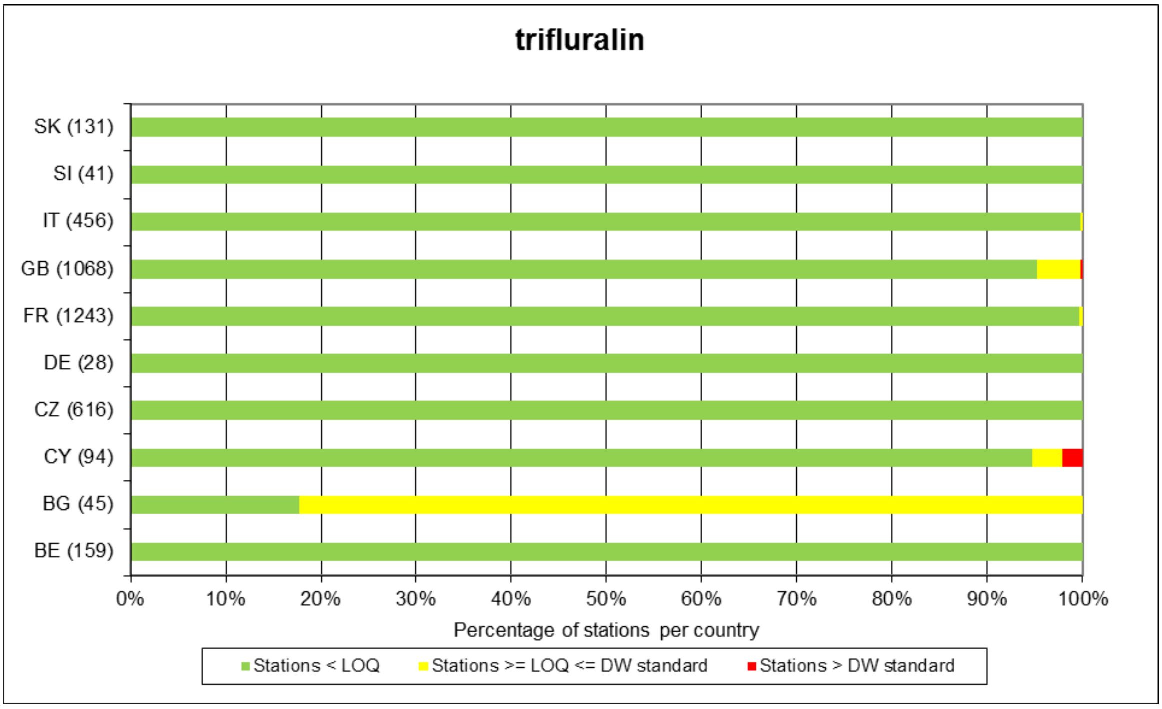
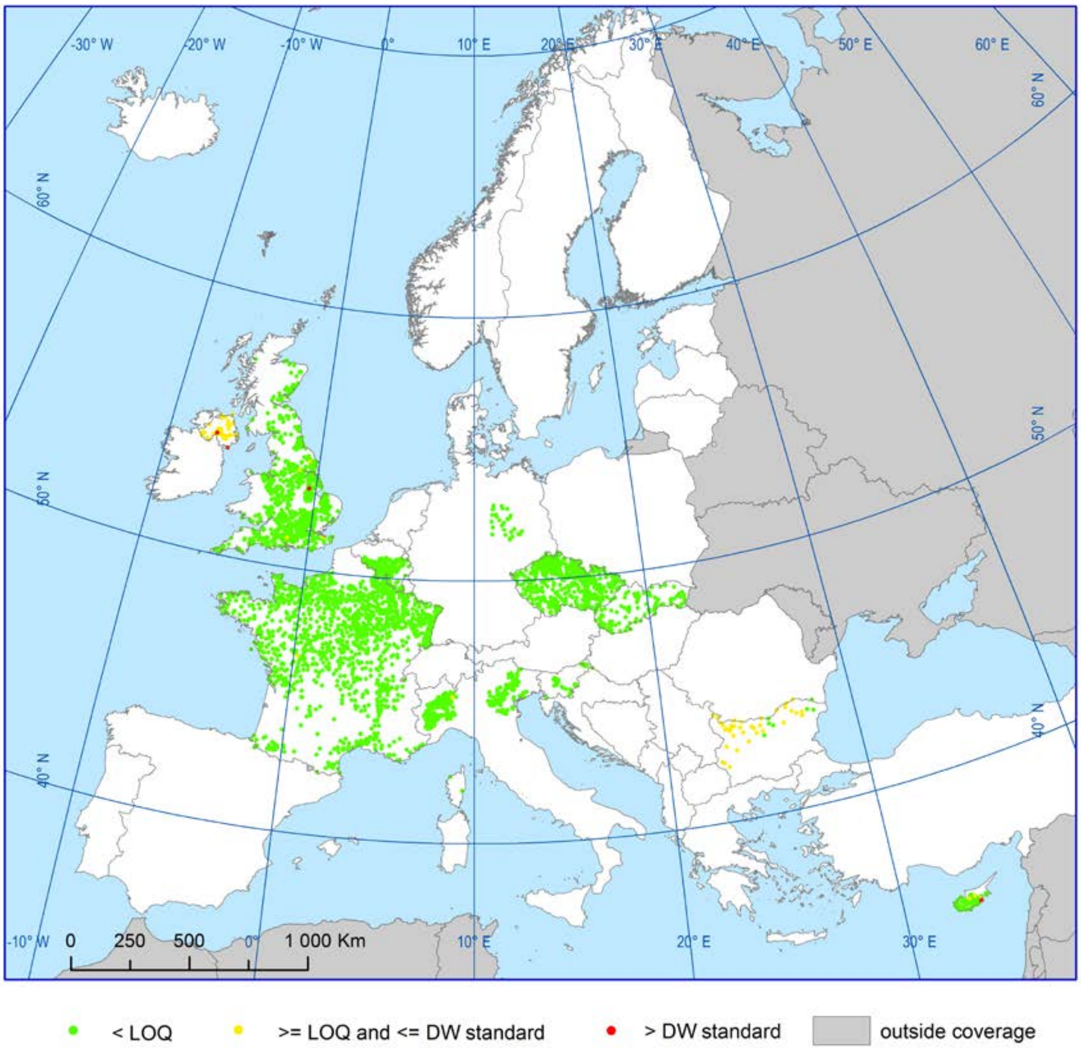


**Figure 4.1.2.51c Map of the indicator for trifluralin in groundwater in 2010–2011**



## *4.2 Hazardous substances in the marine environment in 1998–2010*

### 4.2.1 Overview

Hazardous substances are widespread in the marine environment. The pathway of contamination is not always obvious. Although hot spots tend to be directly linked to particular human activities, the substances are also found in organisms that are collected far away from point-sources. Some substances are transported by ocean currents, the atmosphere or by migrating species. Considerable efforts have been made to establish and maintain monitoring programmes to assess the level, trends and effects of hazardous substances in biota and sediment, and to select the preferred indicator matrices. However, there is a lack of reliable and consistent data for many hazardous substances and for several regions. Although basic legislation is in place to combat excessive exposure, specific assessment criteria with respect to levels, trends and effects need to be further developed for the indicator matrices.

The results reveal that concentrations are generally low or moderate for all seven hazardous substances. Cadmium, lead and mercury are found at low concentrations in the earth's crust and occur naturally in seawater. HCB, lindane, PCB and DDT are synthetic substances that are not found naturally in the environment. Human activities have caused a general mobilisation of these hazardous substances in aquatic and terrestrial environments. In the marine environment, they accumulate in fish and shell fish, and because these in return are a food source for marine wildlife and humans the substances are moved to higher levels in the food chain. The contaminants are not needed for any organism (they are not essential) and are toxic. In humans long-term exposure or consumption of contaminated seafoods can be detrimental. The main sources, at least in the North Sea, are from general waste/disposal, burning of fossil fuels and industrial activities, including mining and production.

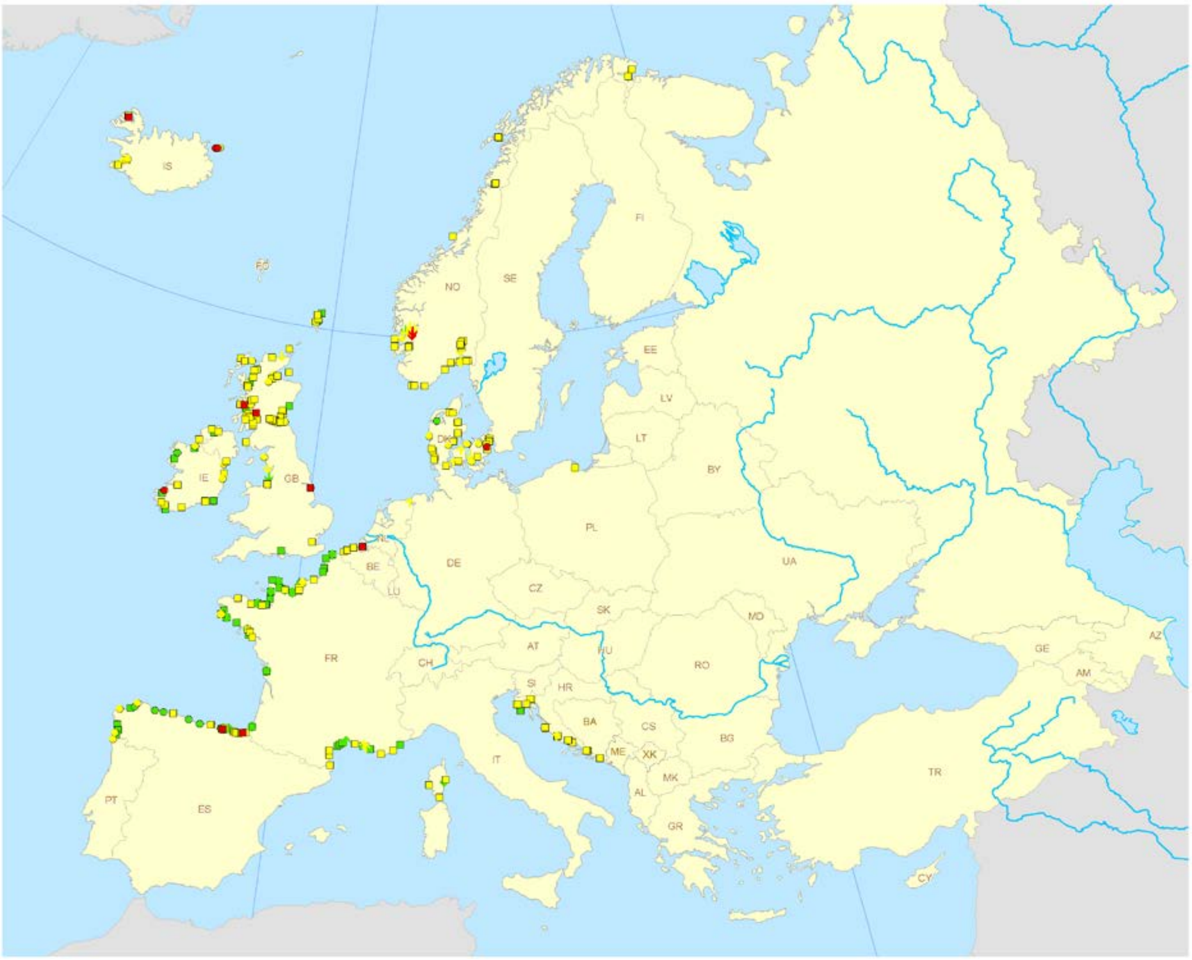
### 4.2.2 Occurrence and concentrations of hazardous substances in the marine environment

Results are shown in maps (Figures 4.2.2.1 to 4.2.2.7), with one map for each substance. The maps show an assessment for each time series, using the symbols described in Table 2.2.1.

**Cadmium**

Concentrations of cadmium in recent years were generally classified as Low or Moderate in mussels and fish of the north-east Atlantic, fish in the Baltic Sea, and mussels in the Mediterranean. No general regional trend was detected in any of these regions, which indicates that no general change in status is anticipated (Assessment based on results for 1998–2010).

**Figure 4.2.2.1 Trends and Low, Moderate and High concentrations of cadmium in biota in European Seas**



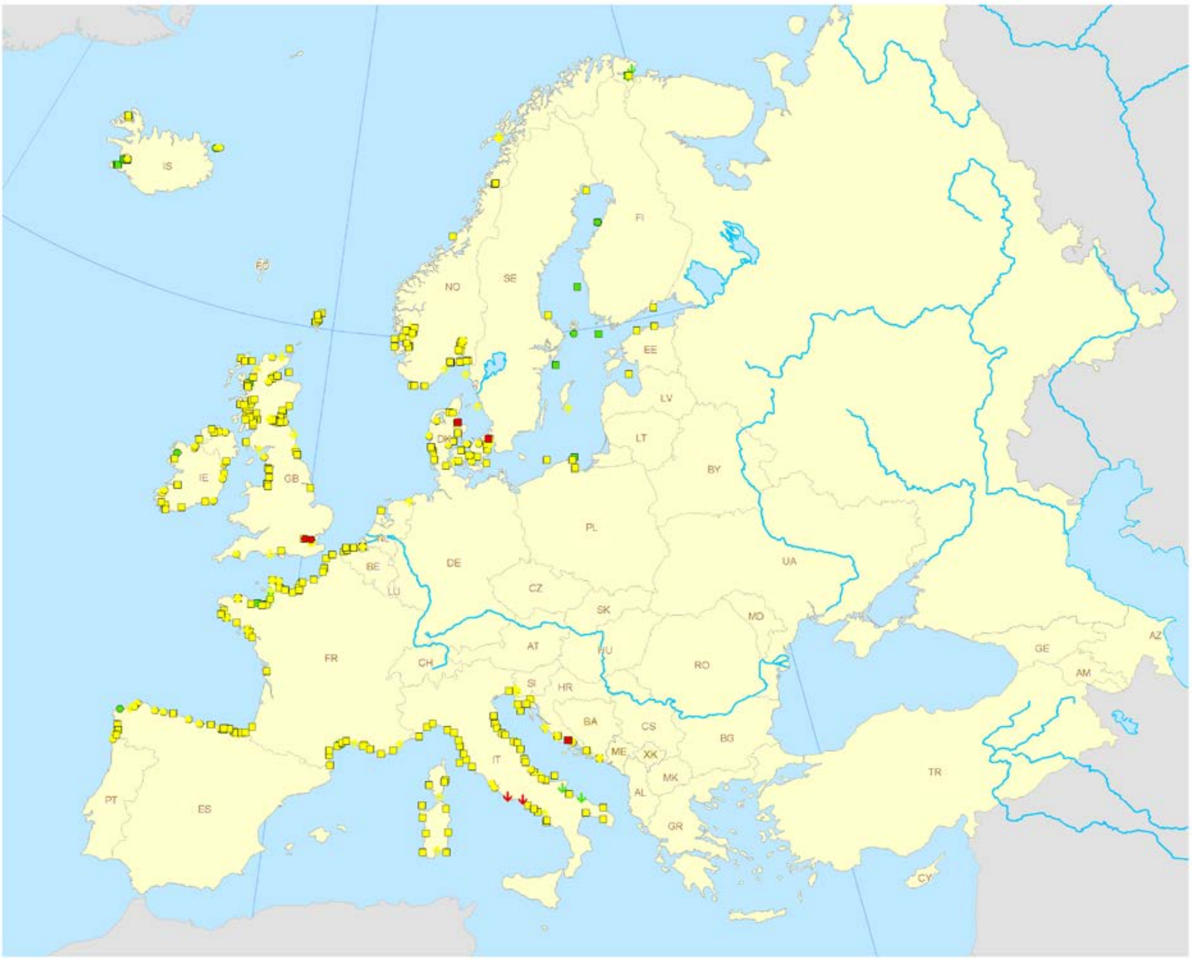
Notes: The arrows indicate direction of significant trend (if any) and the colour indicates the concentration category for recent years as Low (green), Moderate (yellow) and High (red). (See Table 2.2.1 for description of symbols).

Sources: Data from HELCOM, OSPAR and EEA member countries.

**Mercury**

Concentrations of mercury in recent years were generally classified as Low or Moderate in mussels and fish of the north-east Atlantic, fish in the Baltic Sea, and mussels in the Mediterranean, which is positive. However, there is an overweight of upward trends in the Mediterranean Sea (Assessment based on results for 1998–2010).

**Figure 4.2.2.2 Trends and Low, Moderate and High concentrations of mercury in biota in European Seas**



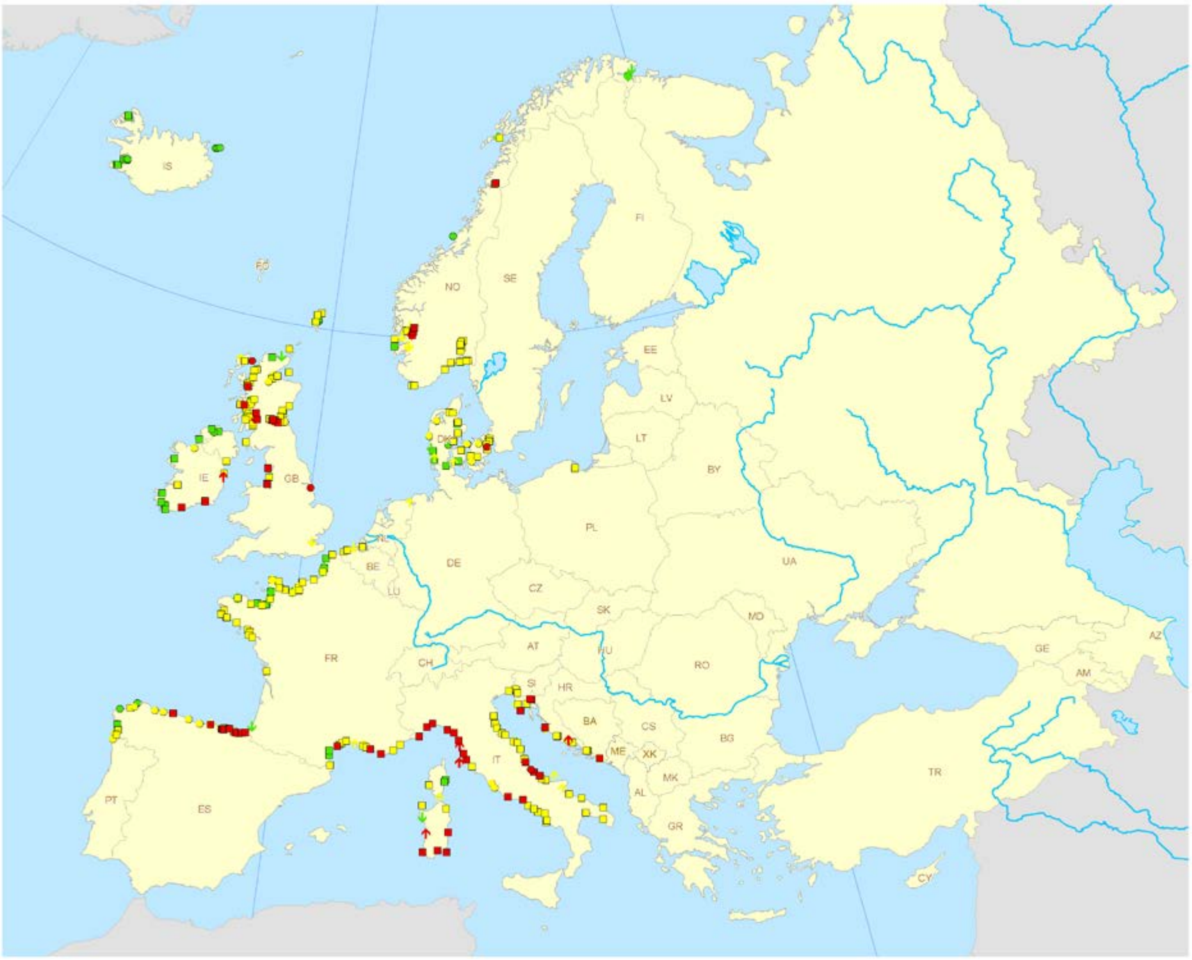
Notes: Arrows indicate direction of significant trend (if any) and the colour indicates the concentration category for recent years as Low (green), Moderate (yellow) and High (red). (See Table 2.2.1 for a description of the symbols).

Sources: Data from HELCOM, OSPAR and EEA member countries.

**Lead**

Concentrations of lead in recent years were generally classified as Low or Moderate in mussels and fish of the north-east Atlantic, Baltic Sea and the Mediterranean Seas. The fraction of High level stations was largest in the Mediterranean (only mussels monitored here). A regional downward trend was found for the north-east Atlantic but a regional upward trend in the Mediterranean (Assessment based on results for 1998–2010).

**Figure 4.2.2.3 Trends and Low, Moderate and High concentrations of lead in biota in European Seas**



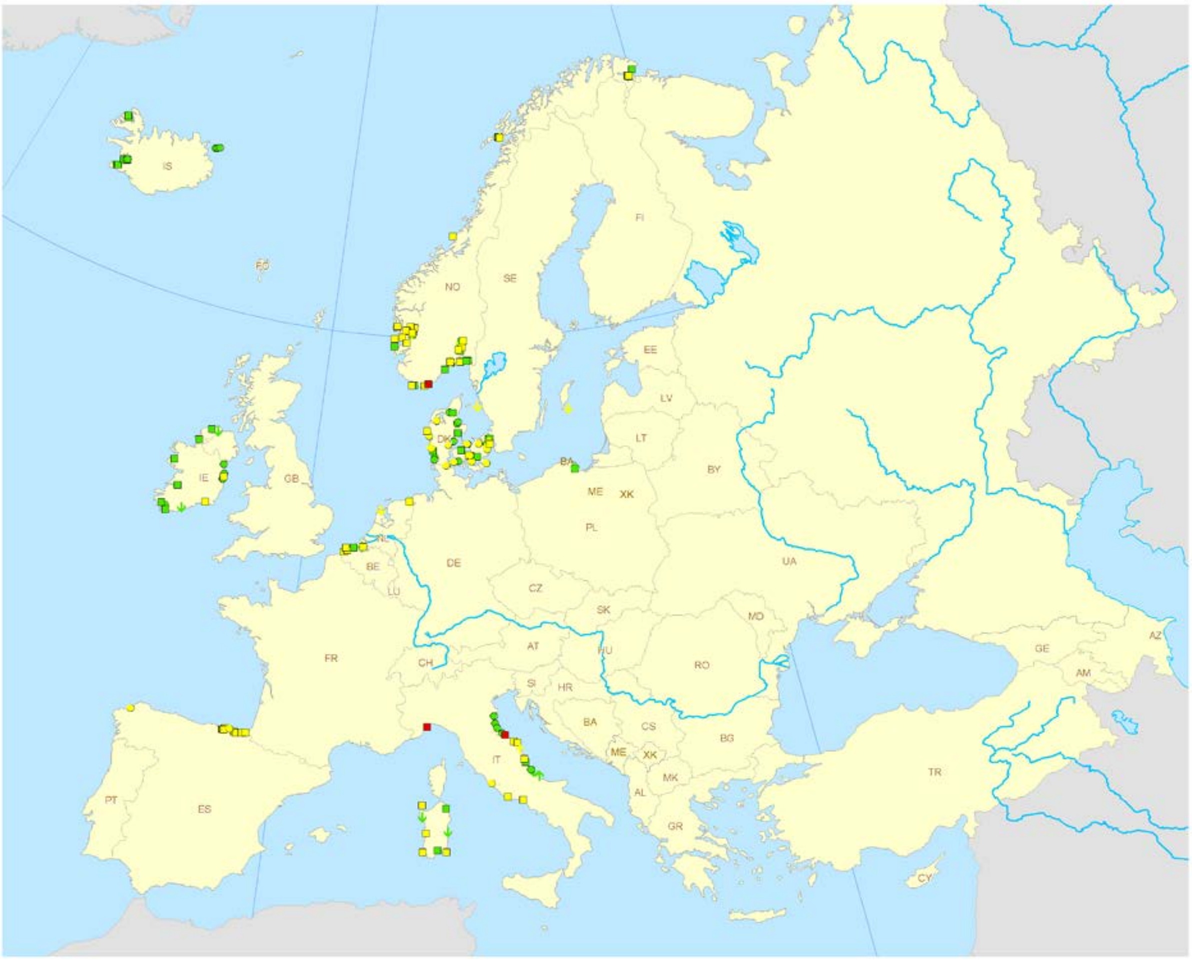

Note: The arrows indicate direction of significant trend (if any) and the colour indicates the concentration category for recent years as Low (green), Moderate (yellow) and High (red). (See Table 2.2.1 for description of symbols).

Sources: Data from HELCOM, OSPAR and EEA member countries.

**Hexachlorobenzene (HCB)**

Concentrations of HCB in recent years were generally classified as Low or Moderate in the north-east Atlantic, the Baltic Sea and the Mediterranean Sea. There is a predominance of no indication of improvement (no significant trend) for Moderate or High classifications (Assessment based on results for 1998–2010).

**Figure 4.2.2.4 Trends and Low, Moderate and High concentrations of HCB in biota in European Seas**



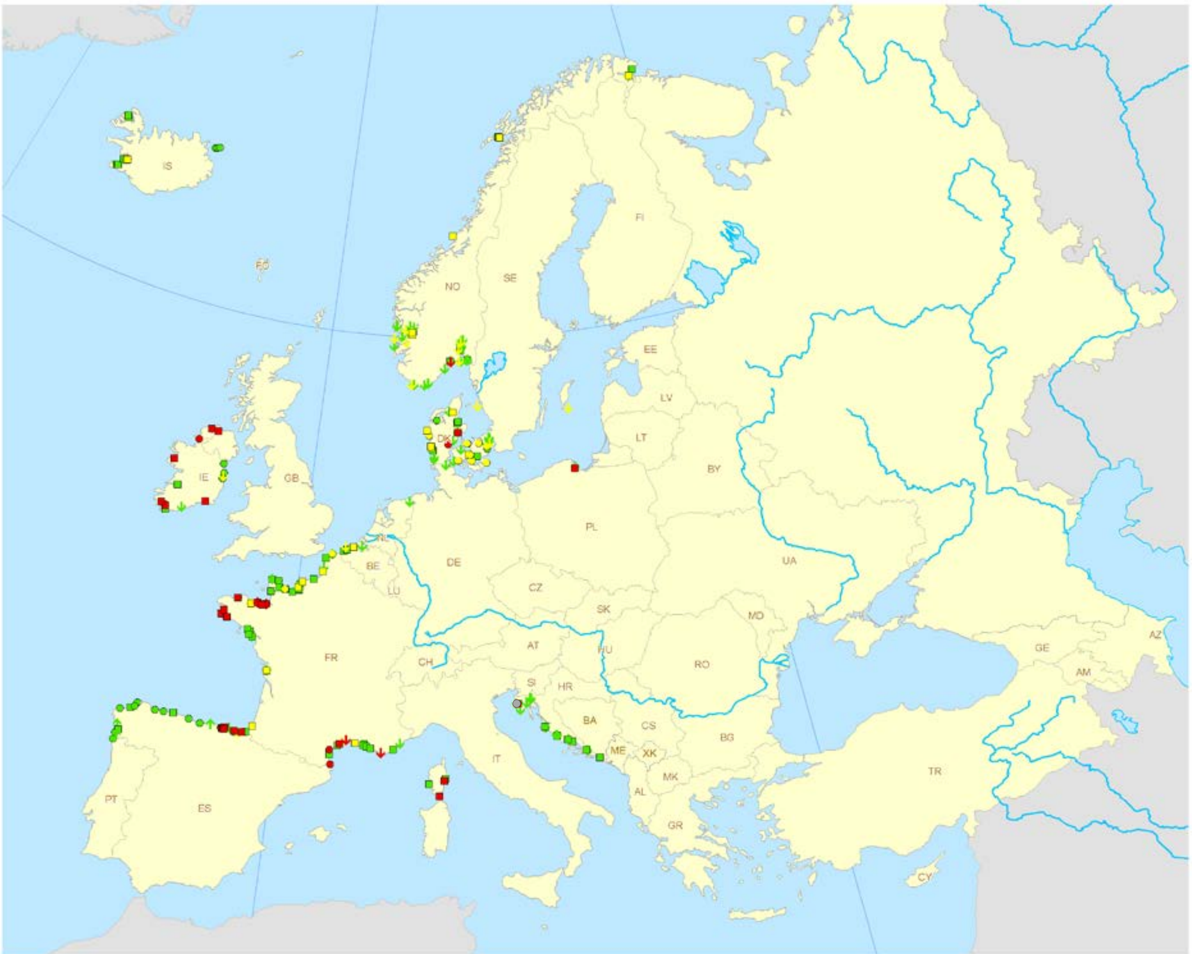

Notes: HCB = hexachlorobenzene. The arrows indicate direction of significant trend (if any) and the colour indicates the concentration category for recent years as Low (green), Moderate (yellow) and High (red). (See Table 2.2.1 for description of symbols).

Sources: Data from HELCOM, OSPAR and EEA member countries.

**Gamma-HCH (Lindane)**

Concentrations of lindane in recent years were generally classified as Low or Moderate in the north-east Atlantic, the Baltic Sea, and the Mediterranean Sea. Regional downward trends were found in all three seas; these are positive signs. However, where High concentrations are found, there is a predominance of not significant trends, and no indication of general improvement (Assessment based on results for 1998–2010).

### Figure 4.2.2.5 Trends and Low, Moderate and High concentrations of lindane in biota in European Seas



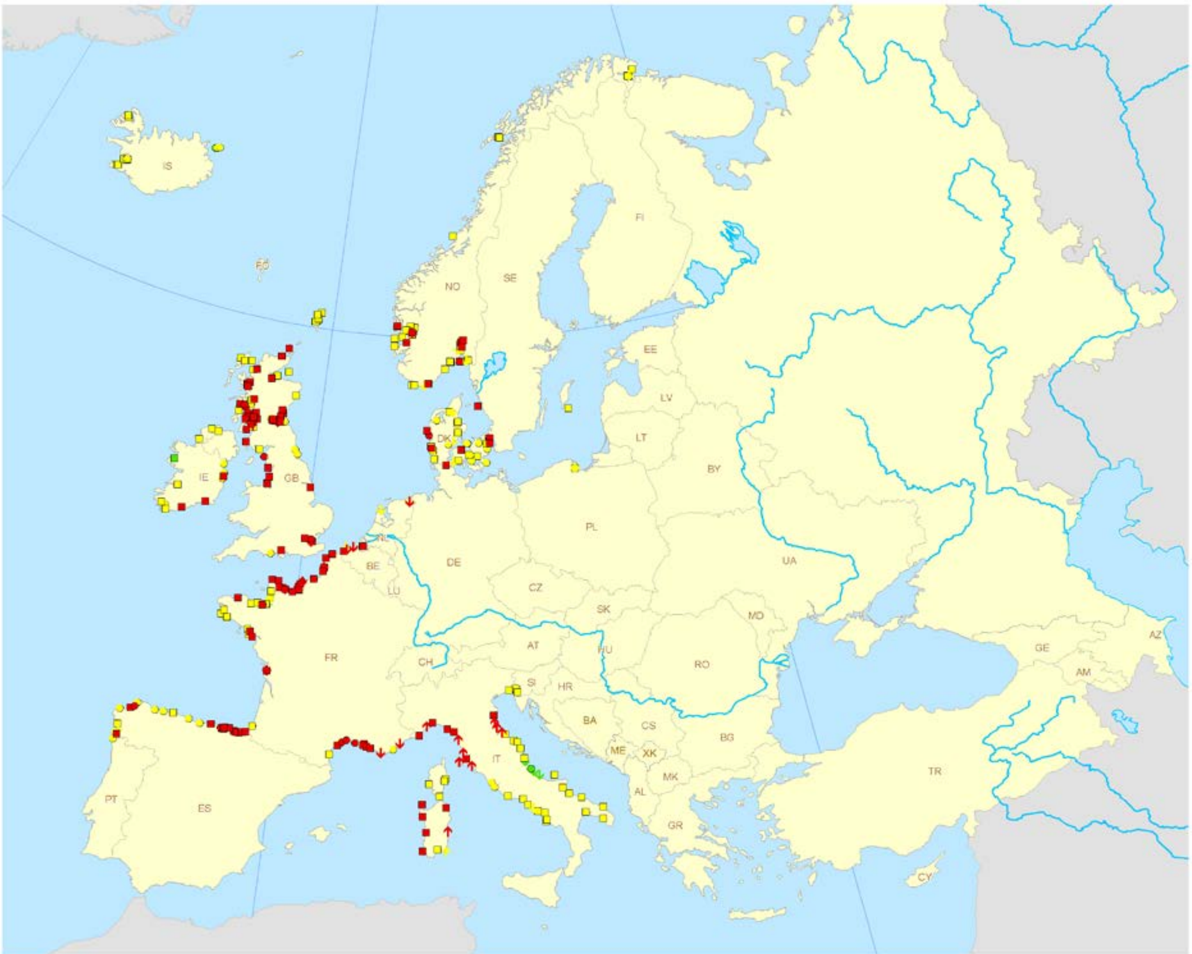

Notes: Lindane = gamma hexachlorocyclohexane (γHCH). The arrows indicate direction of significant trend (if any) and the colour indicates the concentration category for recent years as Low (green), Moderate (yellow) and High (red). (See Table 2.2.1 for description of symbols). Grey symbol on the western coast of Istria means, that a short time serie for this site resulted in the assessment level being above the highest observed value due to using upper 95 % confidence limits of average values for assessment, although all lindane concentrations in period 2002–2011 were lower than the limit.

Sources: Data from HELCOM, OSPAR and EEA member countries.

## PCB

Concentrations of PCB in recent years were generally classified as Moderate or High in the north-east Atlantic, Baltic Sea and Mediterranean Sea. High concentrations were more dominant in the north-east Atlantic. Generally there was a predominance of downward trends over upward trends and a regional downward trend was found in the north-east Atlantic, which is positive. However, the large number of time series with High concentrations and that showed no significant downward trend could be grounds for concern (Assessment based on results for 1998–2010).

**Figure 4.2.2.6 Trends and Low, Moderate and High concentrations of PCB in biota in European Seas**



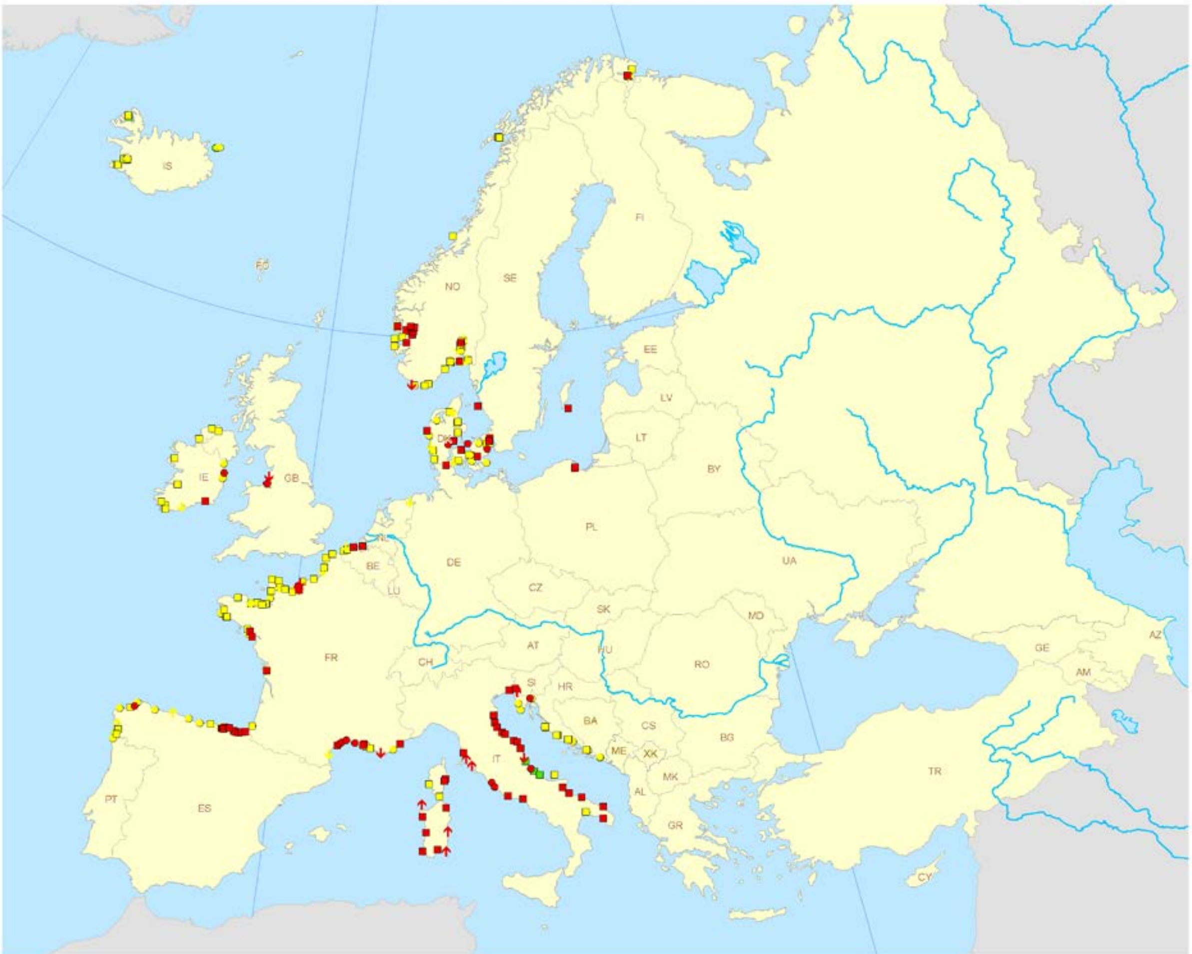

Notes: PCB = assessment based on the classification of the second highest congener of polychlorinated biphenyl (PCB) congeners 28, 52, 101, 118, 138, 153 and 180. The arrows indicate direction of significant trend (if any) and colour indicates the concentration category for recent years as Low (green), Moderate (yellow) and High (red). (See Table 2.2.1 for description of symbols).

Sources: Data from HELCOM, OSPAR and EEA member countries.

## DDT

Concentrations of DDT in recent years were predominantly classified as Moderate or High in the north-east Atlantic, Baltic Sea and Mediterranean Sea. High level classifications were more dominant in the Baltic and Mediterranean Seas than in the north-east Atlantic. Generally there was a predominance of downward trends over upward trends and a regional downward trend was found in the north-east Atlantic, which is positive. However, the large number of time series with High concentrations and that showed no significant downward trend could be grounds for concern (Assessment based on results for 1998–2010).

**Figure 4.2.2.7 Trends and Low, Moderate and High concentrations of DDT in biota in European Seas**




Notes: DDT using DDE as representative. The arrows indicate direction of significant trend (if any) and colour indicates the concentration category for recent years as Low (green), Moderate (yellow) and High (red). (See Table 2.2.1 for description of symbols).

Sources: Data from HELCOM, OSPAR and EEA member countries.

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