Surface water chemical status

For surface waters, good chemical status means that no concentrations of priority substances exceed the relevant EQS established in the Environmental Quality Standards Directive 2008/105/EC (as amended by the Priority Substances Directive 2013/39/EU). EQS aim to protect the most sensitive species from direct toxicity, including predators and humans via secondary poisoning.

A smaller group of priority hazardous substances were identified in the Priority Substances Directive as uPBT (ubiquitous (present, appearing or found everywhere), persistent, bioaccumulative and toxic). The uPBTs are mercury, brominated diphenyl ethers (pBDE), tributyltin and certain polyaromatic hydrocarbons (PAHs).

In addition, further information is available in chapter 3 of the EEA report European waters – assessment of status and pressures 2018, and section 2.5 Chemical status and exemptions of the WFD 2016 reporting guidance.

Caution is advised when comparing Member States and when comparing the first and second RBMPs, as the results are affected by the methods Member States have used to collect data and often cannot be compared directly. The major contribution to variability seems to arise from the approach taken to monitoring, modelling and extrapolating results and from the choice of monitoring matrix: water, sediment or biota (e.g. fish). Some countries extrapolated failure to meet the standard (EQS) at monitoring sites to all water bodies, while others reported failure only where failure was confirmed. Typically, measurements of mercury in biota extrapolated to all similar water bodies lead to widespread failure to meet the EQS.

The following dashboards are available (2018/07/16)

Chemical status

- Chemical status - tables overview table ; by category
- Chemical status - charts (with or without uPBTs) by category ; country comparison ; by country and category
- Chemical status - maps (with or without uPBTs) by country ; by RBD ; by country and RBD
- Chemical status in 2015 overview table, and expected achievement year of good status overview table
- Chemical status in the 2nd and 1st RBMPs - charts by category country comparison ; by country and category
- Chemical status assessment confidence overview table ; charts by category ; country comparison ; by country and category

Priority substances and River Basin Specific Pollutants (RBSPs)

- Priority substances table priority substances by country ; overview table ; causing failure - improving chemical status
- River basin specific pollutants (RBSP) - tables table RBSPs by country ; overview table ; other RBSPs ; overview graph

Chemical status

There are two tables presenting overview of surface water chemical status: overview table and by category.

Main features
- The overview table presents the results by number of water bodies and by size (length in km and area in km^2). The table is by default without unknown but by selecting unknown in the filter 'chemical status' extra columns are added to the table.
- The table by category presents the results by category and number of water bodies (default), but by using the filters results can be changed to by percentage (pane) or by size.
- Moving the mouse to NUT0 (column with Member States) a [+] will appear and clicking on [+] will drill down to RBDs. On euRBDCode column a new [+] will appear, and by clicking on [+] it will drill down to sub-units. If a RBD has not identified sub-units RBDcode and SubunitCode are generally equal.
- Columns can be sorted by selecting a column and right click on ascending or descending sort.

    √ Keep Only   X Exclude   ⤓ ⤒ ☷   If the sorting is by percentage the overview table should be used and filters may be used to select categories.

Chemical status is also presented in by three charts (with or without uPBTs) by category; country comparison; and by country and category and by three maps chemical status (with or without uPBTs) by country; by RBD; and by country and RBD.

Main features
- The chart dashboards consist of a top chart illustrating chemical status with uPBTs and a lower chart without uPBTs. Only results from the 2nd RBMPs are shown, as it is not possible to show the results for the first RBMPs with and without uPBTs.
- The chart with country comparison illustrates the proportion of unknowns per country and the different approaches in assessing chemical status by Member States. Countries with high proportion of failing to achieve good chemical status (red) generally have extrapolated failure due to mercury to all water bodies, while other countries only have reported failure when the water body has observed exceedance of the EQS.
- The maps illustrate proportion of water bodies failing to achieve good chemical status. The filters may be used to show percent failure with or without unknowns and failure with or without uPBTs.

Expected status in 2015 and achievement year of good status

Two table dashboards present chemical status expected in 2015 overview table, and expected achievement year of good status overview table.

In the reporting Member States had the possibility to indicate whether it is expected that this surface water body will achieve good chemical status by the end of 2015. This may differ from the data reported under above chemical status, because the assessment of status included in the second RBMP will most likely be based on monitoring data from the period 2010-2014, given that the second RBMP will be prepared in 2014 for public consultation. Therefore, the status communicated in the second RBMP may not necessarily reflect the expected status in 2015.

If good chemical status will NOT be achieved by 2015 (i.e. the above-expected chemical status in 2015 is No), Member States have reported the date by which it is expected that it will be achieved in full.

Main features
- The results on expected chemical status in 2015 (overview table) differ from the 2ⁿᵈ RBMPs chemical status as the 2015 has no unknowns, and there is an overall improvement in good status from 45 % to 51 %. The main explanation of this change is that Member States have generally set the 16 % of water bodies with unknown chemical status to expected good status in 2015.
- The table dashboard on and expected achievement year of good status (overview table) present columns with water bodies already in good chemical status (2015), water bodies with less stringent objectives, and the expected achievement date of good chemical status either by the end of the 2ⁿᵈ RBMPs (2021), by the end of the 3ʳᵈ RBMPs (2027) or after 2027.
  - Member States have generally set the 16 % of water bodies with unknown chemical status to expected good status in 2015.
  - One country (Sweden) account for the majority of water bodies with less stringent objectives.
  - Member States foresee a major improvement in chemical status in the 3ʳᵈ RBMPs, while only a few percent of water bodies are not expected to achieve good chemical status in 2027.

Chemical status assessment confidence

Member States have with the 2ⁿᵈ RBMPs reported the chemical status assessment confidence as either no information, low, medium or high confidence. The criteria used by Member States to assess confidence vary considerably, but general guidance has been: Low = no monitoring data; Medium = limited or insufficiently robust monitoring data for some or all Priority Substances that are discharged in the RBD; High = good data for all Priority Substances that are discharged in the RBD. Results on chemical assessment confidence are only available for the second RBMPs.

One tabular and three chart dashboards present overview of chemical status assessment confidence overview table ; charts by category; country comparison; and by country and category.

Main features
- The tabular dashboard (overview table) present overview of number percentage of high, medium, low or unknown chemical status assessment confidence. By using the filters number of water bodies can be changed to size.
- Moving the mouse to NUT0 (column with Member States) a [+] will appear and clicking on [+] will drill down to RBDs.
- The chart dashboards (by category; country comparison; and by country and category) present bar charts of chemical status assessment confidence (charts at the bottom). By using the filters, different aspects can be illustrated. The country comparison chart illustrates differences in chemical status confidence by Member States.

Priority substances and River Basin Specific Pollutants (RBSPs)

Member States have for water bodies failing to achieve good chemical status reported the priority substances causing failure. A water body may have more than one priority substance causing failure.

Member States were asked to indicate if the priority substance is causing failure to achieve good chemical status. According to the WFD 2016 reporting guidance, Member States should have reported chemical status for 2015 using the standards laid out in Directive 2008/105/EC, but some reported it using the stricter standards in the 2013 amendment of the EQS Directive.

Member States have reported whether the Priority Substance improved from poor to good chemical status since the first RBMP. The dashboards have a filter to illustrate the priority substances that have improved in status.

Three table dashboards present results on the priority substances causing failure table priority substances by country ; overview table ; causing failure - improving chemical status

Main features
- The main priority substance dashboard (table priority substances by country) has on top EU results and below results from Member States. The priority substances are ranked by number of water bodies failing the EQS.
- The percentages are calculated as the proportion of water bodies failing due to the specific priority substance. As a water body may be affected by more than one priority substance the sum of percentage values is greater than 100 %.
- By using the filters different results on priority substances can be shown, for example, by selecting a specific priority substance the results will show the number of water bodies affected in different Member States.
- Selecting a specific Member State will illustrate the priority substances causing failure (select 'yes' in the filter causing failure). The (*) indicate the discrete number of water bodies (if filter causing failure 'yes' only the water bodies with exceedance of EQS, while if causing failure 'all' (*) is count of all water bodies.
- The dashboard overview table presents an EU overview of the priority substances including number of Member States, number of water categories (rivers, lakes, transitional, coastal and territorial waters) and the number and size of water bodies.
- The 'overview table' may similar to above be used to illustrate the priority substance per Member State. If filter causing failure 'yes' only the priority substances causing failure are shown.
- The dashboard causing failure - improving chemical status provides an overview of the priority substances. By selecting improving status 'Yes' and Causing failure 'No' results on the priority substances that improved status from 1st to 2nd RBMPs are presented.
- There are some inconsistencies in the report values, for example, water bodies having good chemical status and priority substances causing failure. Also for some water bodies priority substances have 'yes* improving status, but are at the same time failing due to the particular priority substance.
- For some surface water bodies in Poland (1 265) and Italy (265), there is no information on the priority substances causing failure.

Similar to priority substances a set of table dashboards have been produced to illustrate the River basin specific pollutants (RBSP) causing failure to achieve good ecological status. The identification of RBSPs in these tables indicate that the RBSP exceed the threshold set for the specific water body. The thresholds may for a specific RBSP may vary between Member States or RBDs (dashboards illustrating the thresholds used will be produced).
- tables table RBSPs by country ; overview table ; other RBSPs ; overview graph
- The functionality of the RBSP dashboards are similar to the above priority substance dashboards. (*further description may be added later*)
- Selecting a specific Member State will illustrate the RBSP causing failure to achieve good ecological status (there are some water bodies with high or good ecological status or potential and reported RBSPs (59 water bodies)). The (*) indicate the discrete number of water bodies (if filter River basin specific pollutants (RBSP) without 'none' only the water bodies with exceedance of threshold (EQS), while if filter RBSP including 'none'/'all' (*) is count of all water bodies. 'none' indicate water bodies without RBSPs failing, this may be due to unknown RBSP status or 'high'/'good' ecological status in relation to RBSPs.

- For RBSPs Member States had the possibility to report RBSPs not in the standard chemical substance codelist (+700 substances). These other substances are in general causing failure in few water bodies and are listed in the separate 'other RBSPs' dashboard.