

NGOs position on the European Commission's proposal for revised list of priority substances for surface and groundwater

Introduction

On 26 October 2022, the European Commission presented its [proposal for a Directive](#) amending the **Water Framework Directive** (WFD 2000/60/EC), the **Groundwater Directive** (GWD 2006/118/EC) and the **Environmental Quality Standards Directive** (EQSD 2008/105/EC). The initiative updates the lists of priority substances for surface and groundwater as well as their associated legal threshold values that are used to assess chemical status under the WFD. It also covers monitoring and reporting of concentrations and measures taken to mitigate pollution.

The lists of priority substances and groundwater pollutants urgently need updating since they are **incomplete, out of date** and do not offer adequate protection of ecosystems and human health from risks posed by water pollution. Additionally, they are largely focused on individual substances that do not consider the effect of **chemical mixtures**, while monitoring practices are often incoherent from a country to another (sometime even between regions) and miss **peak events** and the real loads of pollutants felt by aquatic life.

The Commission's proposal adds a range of crucial water pollutants such as PFAS, pharmaceuticals and additional pesticides to the list of priority substances for surface water, which will require Member States to monitor their presence in water and make sure that quality standards are not surpassed. However, the proposal largely falls short of tackling chemical mixtures and reduces and limits ambition of monitoring or substances of emerging concern. More importantly, the Commission backtracks on existing requirements by abolishing the current 20-year deadline for the phase-out of priority hazardous substances.

The European Parliament have concluded their negotiations and adopted on 12 September 2023, with large majority, their position on the Commission's proposal.¹

The EEB, Surfrider and PAN Europe call on the Council to adopt the proposed Directive and to strengthen it where needed in line with the main points in this assessment.

1. Surface water

Good elements of the proposal

- **24 critical pollutants** for surface water, including pharmaceuticals, pesticides and industrial chemicals and a group of **24 PFAS** have been **added to the list of priority substances** meaning that Member States will have to monitor their presence in surface water and make sure their associated environmental quality standards (EQS) are not surpassed. A total threshold value for pesticides has been introduced making provisions for surface and groundwater coherent.
- EU-wide threshold values have been introduced for **River Basin Specific Pollutants** (RBSP) to counter the previously large variance of standards used in different countries (or even regions). The

¹ Amendments adopted by the European Parliament on 12 September 2023 on the proposal for a directive of the European Parliament and of the Council amending Directive 2000/60/EC establishing a framework for Community action in the field of water policy, Directive 2006/118/EC on the protection of groundwater against pollution and deterioration and Directive 2008/105/EC on environmental quality standards in the field of water policy (COM(2022)0540 – C9-0361/2022 – 2022/0344(COD))(1) https://www.europarl.europa.eu/doceo/document/TA-9-2023-0302_EN.html

quality standards of RBSP will now also be taken into account when chemical status is determined meaning that regionally important pollutants will be accounted for.

- The Commission will develop methodologies to monitor **micro-plastics** and **antimicrobial resistance genes** with the intention to add them to the surface and groundwater Watch Lists. These two pollutants (including **nanoplastics**) are also added to Annex VIII WFD which is an indicative list of pollutants that need to be considered at various implementation steps.
- The definition of environmental quality standard in the WFD is amended to include **effect-based trigger values**. This opens the possibility for the introduction of effect-based monitoring (EBM) of mixture effects in the future assessment of chemical status.

To be improved

The proposal **does not sufficiently address the effects of chemical cocktails**, even if this was one of the key issues to be resolved by this initiative and despite the commitment of the Chemicals Strategy for Sustainability to “introduce or reinforce provisions to take account of the combination effects in other relevant legislation, such as legislation on water”.

- Pollutants have largely been added as **individual substances**, which risks the lists being outdated shortly, e.g., if listed substances are taken off the market and substituted with others with similar harmful properties. Additionally, this single-substance approach does not account for the combined effects that can occur even when the individual substances are present at ‘safe’ concentrations.²
- The Commission deploys the use of **Relative Potency Factor** for the setting of group EQS values for PFAS and PAHs in order to account for additive effects of substances with similar modes of action. Such an approach, or other implementations of the **Concentration Addition** concept should be systematically applied also to other groups of priority substances with similar modes of action such as neonicotinoids, pyrethroid insecticides, photosynthesis-inhibiting herbicides, estrogenic hormones and macrolide antibiotics³.
- While the Commission is introducing monitoring of the **effects of estrogenic substances** using EBM for a period of two years, the proposal is phrased like a data-collection exercise, although trigger values for estrogenic substances are already considered robust and could be applied as a complement to conventional chemical monitoring to assess chemical status.
- Many substances of concern for aquatic life are still not listed as priority substances but can still drive negative mixture effects. Mixture assessments, such as **broad chemical screenings** at water body level are needed to identify hotspots and direct measures to abate pollution at source. The EU project SOLUTIONS has recommended updating the WFD technical guidance with a “comprehensive mixture assessment framework”.

While it is essential to have EQS for banned substances due to the long-term impacts of pesticides and possible emergency uses, it is crucial that currently authorised active substances are monitored under the WFD. Yet, 11 out of the 19 pesticide substances added by the European Commission's proposal are already banned under Regulation 1107/2009.

² See e.g. Carvalho et al., Mixtures of Chemical Pollutants at European Legislation Safety Concentrations: How Safe Are They?, Toxicological Sciences, Vol. 141, Issue 1, September 2014, Pages 218–233, <https://doi.org/10.1093/toxsci/kfu118>

³ Backhaus, T. Commentary on the EU Commission's proposal for amending the Water Framework Directive, the Groundwater Directive, and the Directive on Environmental Quality Standards. Environ Sci Eur 35, 22 (2023). <https://doi.org/10.1186/s12302-023-00726-3>

- Synergies between the WFD and Regulation 1107/2009 should be further developed. For instance, the list of priority substances should reflect the current state of active substances currently approved on the European market. Too many substances currently approved at the EU level are of concern for aquatic life and not within the list of priority substances e.g., the active substance abamectin⁴, Pendimethalin⁵ Propyzamide⁶ or Pirimicarb⁷.

The Commission has introduced a **threshold limit of 0.5 µg/L for the total of active substances in pesticides, including their relevant metabolites, degradation and reaction products the total of pesticide active substances**, but at the same time proposed quality standards for glyphosate⁸ that are much higher than this threshold. Additionally, the existing EQS for atrazine⁹ surpasses the total threshold. This inconsistency must be rectified. **No individual EQS for pesticide or their metabolites should exceed the total pesticides and metabolites EQS.**

- The quality standard for **glyphosate** has been set before the final opinion of SCHEER has been issued without indication that the value will be revised following the final scientific opinion. The proposed EQS for glyphosate has several deficiencies that should be corrected:
 - The glyphosate EQS needs to be accompanied with a **threshold value for AMPA**, its main metabolite, which is of proven concern for aquatic life.
 - The EQS for glyphosate in surface water must be revised and lower than 0.1 µg/L EQS should be considered, based on scientific findings for aquatic toxicity of glyphosate, AMPA, and glyphosate-based herbicides towards different aquatic species¹⁰.
 - We **reject the distinction between surface water intended for drinking water and not**, proposed only for the active substance glyphosate. Instead, we advocate for the value of 0.1 µg/L to be used for all inland surface water and the distinction to be deleted. The AA-EQS for other surface water also must be modified and recommend the following value of 0,01 µg/L¹¹ according to a precautionary approach.

The fitness check of the WFD concluded that the lengthy process to update the lists of priority substances is one of the reasons the current framework is sub-optimal. We therefore welcomed the ENVI committees' suggestion to shorten the **review cycle** to 4 years as was initially stated in the WFD.

2. Groundwater

Good elements of the proposal

⁴ Hong Y, et. Al., Abamectin at environmentally-realistic concentrations cause oxidative stress and genotoxic damage in juvenile fish (*Schizothorax prenanti*). *Aquat Toxicol.* 2020 < <https://pubmed.ncbi.nlm.nih.gov/32569996/>>

⁵ Wang JQ et al., Clinicohematological, Mutagenic, and Oxidative Stress Induced by Pendimethalin in Freshwater Fish Bighead Carp (*Hypophthalmichthys nobilis*). *Oxid Med Cell Longev.* 2022 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9072014/>>

⁶ <https://www.pan-europe.info/propyzamide>

⁷ <https://www.pan-europe.info/pirimicarb>

⁸ Proposed AA-EQS inland surface water: **glyphosate** 86.7 µg/L (inland waters, non-drinking water sources), 8.67 (other surface waters)

⁹ Existing AA-EQS: **atrazine** 0.6 µg/L

¹⁰ See Weidong Zhang et al (2021) < <https://www.sciencedirect.com/science/article/pii/S0147651321009660>>, Tamsyn M Uren Webster (2018) < <https://bmccgenomics.biomedcentral.com/articles/10.1186/s12864-015-1254-5>>.

¹¹ Luis Terrazas-Salgado et al, 2022, Effects of glyphosate on zebrafish Effects of glyphosate on zebrafish: a systematic review and meta-analysis. *Ecotoxicology* 31, 1189–1204 (2022). <https://doi.org/10.1007/s10646-022-02581-z>

- Two antibiotics, a wider range of pesticide breakdown products (non-relevant metabolites) and a group of 24 PFAS have been added to Annex I of the GWD with EU-wide threshold values and a threshold for pharmaceutical substances has been introduced.

To be improved

The 0.1 µg/L threshold for **individual pesticides** and 0.5 µg/L for the **sum of all pesticides** were introduced in the 2006 GWD not based on a risk assessment but based on the typical chemical-analytical detection limits for pesticides available in the 1990s¹². As a result, the 0.1 µg/L **threshold for individual pesticides is higher, sometimes by several orders of magnitude, than for many pesticides and fungicides on the list of Priority Substances for surface water** (e.g., Endosulfan, Dicofol, Cypermethrin and Dieldrin), an inconsistency that has also been highlighted by EMA as well as by EEA¹³.

- We support a **precautionary approach** for the setting of groundwater thresholds, to protect groundwater ecosystems and minimize the need for drinking water treatment.¹⁴ This is also advocated for by drinking water providers in catchment areas of the rivers Rhine and Ruhr, Danube, Elbe, Meuse and Scheldt, expressed in the [Groundwater memorandum](#).
- The total pesticides threshold could further be complemented with refined thresholds for groups of substances based on **relative potency factors** (RPFs), such as was done for the group of PFAS²⁴. This approach could be used to set **threshold values for more substance groups**, including estrogenic compounds, photosynthesis-inhibiting herbicides and neonicotinoid insecticides.
- We believe there is a need for concrete wording that **no groundwater threshold should be higher than the corresponding EQS for surface water** (view supported by SCHEER).
- There is a serious lack of **indicators to monitor health of groundwater systems**, such as **temperature**, although science has already provided robust findings for establishing relevant criteria. Such criteria should be added in the Annex I GWD in coherence with recital 20 and Art. 4(5) GWD and comply with the groundwater-related requests in the resolution of the European Parliament concerning the implementation of the water legislation (17/12/2020).
- Annex I GWD is proposed to be deleted and substituted with the text in Annex III of the proposed Directive. This is a roll back as the new Annex III only lists the groundwater quality standards and omits the text of current Annex 1.3 GWD that requires **more stringent threshold values** to be established where groundwater quality standards could result in failure to achieve the environmental objectives of the WFD for associated surface water bodies. This requirement should be maintained and expanded to also include requirements to better protect **vulnerable sites** (e.g., groundwater-dependent Natura 2000 sites) from pollution.
- The distinction established between '**data poor**', '**data-fair**' and '**data-rich**' nrMs is unclear if the procedure that would apply in case data for 'data rich' or 'data fair' nrMs points to toxicity for aquatic life or human health. Firstly, it remains unclear why the EQSs for 'data-rich' nrMs are not derived directly from the available empirical data¹⁵. Secondly, the proposed directive should make clear that in case data establishes a risk for aquatic species or human health the ESQ should be modified accordingly. Moreover, in line with the **precautionary principle**, a metabolite should be considered relevant until proven otherwise. We suggest drawing inspiration from the European Groundwater

¹² SCHEER opinion on groundwater standards as well as by EMA (in their 2018 [guidance doc on toxicological risk to human health and groundwater communities from veterinary pharmaceuticals in groundwater](#)).

¹³ See their [technical report on pesticides in European rivers, lakes and groundwaters](#)

¹⁴ 75% of drinking water in Europe is derived from groundwater

¹⁵ Thomas Backhaus (2023) < <https://enveurope.springeropen.com/articles/10.1186/s12302-023-00726-3>>

Memorandum⁷, which demands an 'intervention value' of 0.05 µg/L for non-evaluated or partially evaluated substances and degradation products in groundwater.

3. Monitoring

Good elements of the proposal

- The **groundwater Watch List** has been made mandatory for all Member States, this will allow for more coherent collection of data to determine if pollutants are of EU-wide concern.
- Member States will be required to **monitor estrogenic substances using Effect-Based Methods** during a period of two years (in parallel to chemical monitoring of three estrogenic hormones). This will capture the effect of all estrogenic substances with similar effects and not only from the three estrogenic substances monitored using conventional chemical techniques.

To be improved

- The **surface water Watch List** has been reduced to maximum 10 substances (down from 14).
- The **groundwater Watch List** is limited to five substances only and it takes another 2 years before the first GWWL will be established, although a voluntary approach is already in place. We regret the Commission's approach to reduce and limit monitoring of substances of emerging concern. This is not in line with recommendations from scientists.¹⁶ We support the ENVI position to include [a minimum of 10 substances on the Watch Lists]. If concerns about monitoring costs are the concern, less monitoring is not the answer, instead efforts should be taken to recover these costs from producers (and users), see suggestions in section Governance.
- There is no transparent mechanism for selecting relevant groundwater monitoring sites and there is no provision to establish an inventory for point/ diffuse sources which helps clarify relevant measurement point results. We share the concerns of the German Environmental Agency regarding the wording of the Commission's proposal for the **selection of groundwater monitoring sites for the new Groundwater Watch List**.¹⁷ We advise the Council, together with the EP rapporteur and the Commission to develop provisions that establishes a sufficient groundwater monitoring network for substances of emerging concern.
- Member States may **monitor ubiquitous PBTs less intensively** than is required for priority substances, this concerns e.g., Brominated diphenylethers, Chlorpyrifos, mercury and its compounds, Fluoranthene, PAHs, Tributyltin compounds, Dioxins and PFAS. We hold that such provisions could not be applied to any substance that is still in use.
- While the proposal requires Member States to monitor substances that are sensitive to climatic or seasonal variabilities more often than the required minimum two times per year for the surface water watch list, **the proposal largely lacks provisions that improves monitoring that captures the effects of peak events** (e.g., event-based monitoring, passive sampling etc.)
- To ensure efficient implementation and comparability of data, the new pesticides-total EQS for surface water, the new pharmaceutical threshold value in groundwater and the existing threshold value for pesticides in groundwater, should be accompanied with a **common minimum reference framework for monitoring**, including a minimum number of sampling points per unit area, sampling

¹⁶ IGB, (2021) Short news [Water pollution in Europe: scientists recommend better monitoring and management](#)

¹⁷ UBA, (2023), Feedback to the Commission's proposal https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12662-Integrated-water-management-revised-lists-of-surface-and-groundwater-pollutants/F3388457_en

frequency and duration as well as coherence in terms of which substances to be monitored and how.

4. Governance

Good elements of the proposal

- A regular screening of relevant findings, including those generated from other water-relevant legislation and in the framework of citizen science projects, is introduced for the **surface and groundwater Watch List selection process**.
- Monitoring data and the resulting status should be made available to the public and to the EEA at least **once a year** (instead of every six years previously). This will give a more up-to date picture of the state of Europe's waters.
- The requirements for **transboundary cooperation** (Art 12 WFD) have been strengthened (following the Oder disaster). Member States are now required to notify concerned Member States and the Commission about issues that affect their waters but cannot be resolved by that Member State. However, this should be extended to also require Member States to notify any other Member State that could be adversely affected by pollution occurring in the Member State concerned.

To be improved

- The Commission proposes to delete Article 16 and 17 WFD with the argument that it is obsolete. However, key provisions of the article still stand. We are particularly concerned that this would result in an elimination of the **20-year deadline for the phasing out of priority hazardous substances**. The phasing out obligation - one of the main objectives of the WFD - is only enforceable if it is linked to a clear deadline.¹⁸ As the starting date of the 20-year timeline has been legally disputed, we welcomed the ENVI report to maintain the phase-out obligation with a clarification of the timeline.
- The move of competency from the Joint Research Centre and DG ENV to **ECHA** is questionable as ECHA primarily deals with chemicals legislation (REACH) and might not have sufficient competence on pesticides and pharmaceuticals and needs to develop that competence as matter of urgency.
- Monitoring costs still fall solely as a responsibility of the public budget. In line with the Polluter Pays principle, producers and importers of substances of concern for aquatic life should contribute to the monitoring costs, e.g., via Extended Producer Responsibility based on the toxicity of the substance and volume basis.

Finally, the EEB, PAN Europe and Surfrider Foundation welcomed¹⁹ the ambition of the European Parliament and urge the Council to ensure that the progressive measures introduced to be preserved in the final text.

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¹⁸ Stated in Art. 16.6 in the WFD, see further reasoning in EEB letter to the European Commission <https://eeb.org/wp-content/uploads/2022/12/221219-Letter-to-Commission-re-Art-16-WFD.pdf>

¹⁹ Joint reaction, 12 Sept 2023, [Clear message from Parliament: We must tackle water pollution](#)