

**Exemplary Responses to the
Fitness Check of the Water Framework Directive -
Groundwater ecosystems and Colmation**

Remarks:

Groundwater ecosystems are currently disregarded by the European Water Framework Directive (EC-WFD), as colmation, a main stressor for stream and river ecosystems.

However, there is a chance to change things:

Recently, **until 11th of March 2019**, the EU-Commission is running online-consultations to check the Water Framework Directive (WFD).

Each citizen - European and non-European - and most organisations can take part in the consultations. **The more persons and organisations from science and environment protection are involved the better for our aquatic environment.**

The consultation consists of two parts:

Part I – General public questionnaire

Part II – Expert stakeholder questionnaire

To make your response as easy as possible, we prepared some exemplary answers. They are exclusively focused on groundwater ecosystems and on colmation, the clogging of the riverbed sediments and belong to Part II – Expert stakeholder questionnaire

If you like to address more topics, it's up to you.

Here, you find a detailed statement to groundwater ecosystems and colmation http://1373.gvs.arnes.si/newwp/wp-content/uploads/2019/03/Statement_WFD_GW-Ecologists_20190306_final.pdf

This is the link to the consultations:

https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-5128184/public-consultation_en

- Hearing has been extended to 11.3.2019
- Indicate your name and address
- Please register prior to answering.

Relevant for NGOs, scientists and other experts is Part II

With respect to groundwater ecosystems and riverbed colmation, it's recommended to focus on three question only, which are questions #6, #7 and #10

Instruction - How to respond to EU-Commission?

- **To register** go to this link

https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-5128184/public-consultation_en

You can also select your native language

- Press the yellow button „**respond to questionnaire**“
- Go to the menu on top and press „You“. Insert your personal data and confirm that you agree with the personal data provisions
- Go to the menu on top and press „Part II – Expert stakeholder questionnaire“
- Adress the topics you like
- For **questions #6, #7 and #10** you'll find the **exemplary responses** below. Just copy them from this document into the consultation form.
- **Important:** Please, copy the link of the detailed statement at the very end of this document into the last space of the consultation form.
- **Press „submit“**

Answers - Part II – Expert stakeholder questionnaire

6. Do you think that there are enough quantifiable indicators of when the objectives of the Directives have been achieved?

The Water Framework Directive (EC-WFD), the Groundwater Directive (EC-GWD) and the Environmental Quality Standards Directive (EC-EQSD) don't provide enough quantifiable indicators to achieve the objectives.

Thus, please mark „no“ at GWD and EQSD!

7. If you answered 'no' to the previous question or think that the indicators are not sufficiently quantifiable, please explain why.

The recent indicators are not sufficiently quantifiable to reflect all aquatic ecosystems and to achieve the targets. This applies in particular to groundwater ecosystems and riverbed colmation.

Thus, please insert the texts below into GWD and EQSD!

GWD

To protect groundwater (GW) and groundwater ecosystems (GWE) (s. recital #20 and Art. 4 (5) GWD) and to achieve the targets (Art. 1 and 4, WFD) better indicators are required for the monitoring and assessment. Such indicators are available, now. They will help to indicate trends earlier and allow for a better assessment. Hence, for the protection of gw and gwe, these new indicators are highly recommended for consideration, in particular by adding them to Annex IIb, GWD (s. also links „materials/publications available online“).

- Heat as an indicator: Heat is a ‚contamination‘. Temperature data and the deviation from a local or regional reference give indication for a thermal stress. GWE and their species are sensitive to warming. By using GW fauna, temperature thresholds can be delineated, and invertebrates allow for a thermal assessment of gw.
- Additional ecological indicators: Since the release of the EC-GWD (2006), new approaches for the assessment of GWE status have been developed.
 - An easy use of GW fauna as bio-indicators – by calculation of an index based on the differentiation of higher taxonomic levels - is ready to be used by small private companies.
 - Results allow to rate the impact of land use, the influence of surface waters, the degree of vulnerability, and the ecosystem stability and resilience can also be determined. Proposals for regional references are also available.
 - Microbiology: The easy to apply and comparatively cheap B-A-E concept allows a basic microbiological characterization of groundwater. Measurement of Biomass (B), Activity (A), and Energy (E) allows the determination of changes in GW quality that effect microbial processes or are a result of it.
 - Ecotoxicology: It has been proposed to consider one order of magnitude lower thresholds for GWE than for surface waters (“Guideline on veterinary medicinal products”;
EMA/CVMP/ERA/103555/2015; “Guideline on medicinal products for human use” “EMA/CVMP/ERA/103555/2015).

EQSD

Colmation means the clogging of the riverbed interstices (Hyporheic Zone, HZ) by fine sediments. The EU Technical Report on Groundwater Associated Aquatic Ecosystems – GWAAE (Technical Report - 2015 – 093) defines the hyporheic zones as a GWAAE. The preservation of GWAAE is a key objective of the EU Water Framework Directive (EC-WFD). Anthropogenically increased fine sediment impact from the catchments (fine sand, silt, clay) often boost natural colmation processes. Although, the significance of colmation for the degradation of stream biocoenosis is increasingly recognized, it's disregarded for the stream assessment according to EC-WFD. EC-WFD expected the Good Ecological Stage for all European surface waters which were not heavily modified by 2015 at the latest. Only in exceptional cases can this deadline be extended to 2027. However, recent studies indicate that these targets have not been achieved in most cases – probably also as a result of colmation.

Meanwhile, it's technically possible to measure quantitatively the permeability (in terms of colmation) of the Hyporheic Zone. Based on regional references (yet to be defined, s. EC-WFD Annex II, Art. 1.3 Establishment of type-specific reference conditions for surface water body types), the quantitative measurement of colmation will be an additional tool for the objective assessment of streams. Since the hyporheic fauna reflects, even on a higher taxonomic level, the degree of colmation, the definition of faunistically based assessment schemes for colmation is possible (Annex V, Art. 1.1 Quality Components)

Thus, it's urgently recommended to consider parameters relevant for colmation in the EC-GWD (s. also EC-WFD Annex V, Art. 1.1 Quality Components) or in the Environmental Quality Standards Directive (EC-EQSD, Directive 2008/105/EC, e.g. Art. 3). (s. also links „materials/publications available online“).

10. In your opinion, does the current reporting under the Water Framework Directive and the Floods Directive need to be revised, improved or simplified to allow for further reduction of administrative burden?

The obligation to submit a report must be improved. With the aid of the management plans and detailed planning the member states have to inform which measures they have taken and how they succeeded with:

- To record the extent of colmation and to reduce the sediment impacts, also in streams with a catchment < 10 km²;
- To protect groundwater ecosystems (GWE) against anthropogenic pressure (according to recital 20, Art. 4 (5) und Art. 5 (2) GWRL), including chemical, thermal and other pollution;
- To achieve the water-related protection targets of Natura 2000 and other protected areas and habitats;

Final questions (at the very end of the questionnaire)

If you wish to expand on any of your answers or if you wish to add comments or information on anything else relevant to the Fitness Check, please do so in the box below

Put in links to the detailed statement

If you consider there are materials / publications available online that should be considered further in relation to this evaluation exercise please feel free to describe them (title and author) in the box below and include any relevant links.

Insert, for example

The recent indicators are not sufficiently quantifiable to reflect all aquatic ecosystems and to achieve the targets. This applies in particular to groundwater ecosystems and riverbed colmation

Following this link, you will find detailed statements including references on groundwater ecosystems and riverbed colmation:

<http://1373.gvs.arnes.si/newwp/index.php/2019/03/06/review-process-of-eu-water-framework-directive-ec-wfd-expert-consultations/>

Others:

<https://ak.quellen-grundwasser.de/aktuelles/>