



## **ZeroPM feedback on the call for evidence by DG ENV for the 8<sup>th</sup> EAP 8th Environment Action Programme – Mid-term Review**

The Horizon 2020 Research Project ZeroPM supports the six interlinked thematic priority objectives of the 8<sup>th</sup> Environment Action Programme. However, the EAP could be further enhanced by including three new indicators: i) “Water Quality”, ii) “Water Pollution (Premature Deaths) and indicator, and iii) “Water Pollution (Biodiversity). These new indicators would:

- Address the gap in the current EAP indicators related to water quality.
- Support the Commission’s Zero pollution action plan: Towards zero pollution for air, water and soil.
- Support the basis of the 8<sup>th</sup> EAP being the precautionary principle, as well as the principles of preventive action and of rectification of pollution at source and the polluter pays principle

### **1 Gap in the current indicators**

None of the indicators in the 8<sup>th</sup> EAP address water quality and related premature deaths or biodiversity loss due to water pollution. The two indicators towards the Zero Pollution and a toxic free environment (Indicator 7 – Premature deaths due to exposure to fine particulate matter, and Indicator 8 – Nitrates in Groundwater), only reference water quality towards one type of pollutant (nitrates). Further, the indicators to living well within planetary boundaries only refers to water scarcity (Indicator 23 – water exploitation index plus).

Given the UN recognized triple crisis of climate change, biodiversity loss and pollution (<https://unfccc.int/news/what-is-the-triple-planetary-crisis>) it seems paramount that an indicator be added that relates **water quality, premature deaths caused by water pollution, biodiversity loss due to water pollution**, similar to the inclusion of air quality.

### **2 Suggestion of new indicators to support the Zero Pollution Action Plan**

To support the Commission’s Zero pollution action plan: Towards zero pollution for air, water and soil, we recommend three new indicators, the “Water Quality”, “Water Pollution (Premature Deaths) and “Water Pollution (Biodiversity).





## 2.1 Proposed new indicator on Water Quality

***Water Quality Indicator: The volume of raw water requiring advanced treatment for safe drinking water in the EU decreases by 50% from 2025 to 2050.***

Whereby for this indicator

“**raw water**” refers to water entering drinking water production facilities. The contaminant levels of which are often measured by drinking water producers, who have to adjust their production methods (potentially to advance treatment) based on reported levels of raw water concentrations.

“**Advanced treatment**” refers to treatment methods that are not nature based. As examples, natural based treatment methods can include aeration, sand filtration, or bank filtration, which occur in nature and can be replicated in drinking water plants at relatively low cost. Advanced treatment methods refer to filtration/destruction process that do not occur readily in nature, such as activated carbon or resin-based filtration, enhanced oxidation/chlorination, nanofiltration, reverse-osmosis, etc., and require high cost and energy consumption.

“**Safe drinking water**” can be defined based on meeting Drinking Water Directive (DWD) requirements, or potentially a novel parameter to reflect substances not on the DWD (e.g. a maximum tolerable concentration for total contaminants/ novel entities in raw water).

The **target “50% from 2025 to 2050”** refers to the ambition of having a survey of drinking water facilities in Europe requiring Advanced Water Treatment completed in 2025, and this is monitored in subsequent years towards a goal that this number is reduced due to actions leading to cleaner raw water quality.

## 2.2 Proposed new indicator on Water Pollution (Health)

***Water Pollution (Health) Indicator: Premature deaths due to exposure to water pollution decreases***

Whereby for this indicator:

A recent Lancet study by Fuller et al (2022) found that “In 2019, pollution was responsible for approximately 9·0 million premature deaths. Air pollution (both household and ambient air pollution) remains responsible for the greatest number of deaths, causing 6·7 million deaths in 2019. Water pollution was responsible for 1·4 million premature deaths”  
[https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(22\)00090-0/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(22)00090-0/fulltext)

With this consideration, that essentially 1 in 6 premature deaths are due to pollution, and water pollution is one of the major causes, premature deaths in addition to air pollution particulate matter premature deaths (Indicator 7) should and ought to be added as new indicator.



## 2.3 Proposed new indicator Water Pollution Indicator (Biodiversity)

***Water Pollution (Biodiversity) Indicator: Loss of biodiversity due to exposure to water pollution decreases***

Whereby for this indicator:

Pollutants in water do not only impact humans via drinking water consumption, but also by ecotoxicological effects on biodiversity (Sigmund et al., 2022 <https://pub.epsilon.slu.se/31047/1/sigmund-g-et-al-20230530.pdf>). As it is often difficult to decouple climate change and pollution causes for biodiversity loss, aquatic biodiversity loss can be considered related to both, particularly since water scarcity due to climate change will increase the concentration of novel water pollutant entities that remain dissolved and up concentrated in the depleted water bodies.

### 3 These three suggested water quality and pollution indicators would support the Basis of the 8<sup>th</sup> EAP

Collectively, these proposed new indicators put the emphasis on pollution prevention, so that pollution is mitigated upstream before entering raw water for drinking water production.:

- precautionary principle – by limiting the amount of hazardous and potentially hazardous substances entering raw water in the absence of data, to protect human health and the environment.
- principles of preventive action and of rectification of pollution at source – by putting the emphasis on clean-up at the source of pollution and not down stream at a raw water resource
- polluter pays principle – by putting the financial burden of pollution on the polluter upstream, not the drinking water producer, in order to achieve this suggested indicators

#### About ZeroPM

The Horizon 2020 Research and Innovation Action project **ZeroPM: Zero pollution of persistent, mobile substances**, interlinks prevention, prioritization and removal strategies to protect the environment and human health from persistent and mobile substances, particularly in relation to protecting ground and drinking water resources. ZeroPM has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101036756. More information can be found on our website: <https://zeropm.eu/>

#### Disclaimer

This statement reflects the personal views of the researchers listed below who are members of the ZeroPM research project. This statement does not necessarily represent the opinion of the institutions of the undersigned researchers, nor other researchers in the ZeroPM project, nor their institution:

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