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Baltic Sea Centre's reply to the Commission's public consultation on policy options to set minimum quality requirements for reused water in the EU

Who we are

Baltic Eye, part of the Baltic Sea Centre at Stockholm University, is made up of a team of scientists, policy and communication experts who analyse and synthesise scientific research on the Baltic Sea - and communicates it to stakeholders in the decision-making process. The realm of work is transdisciplinary and covers the broad areas of science important for Baltic Sea management. It focuses on four themes: eutrophication, sustainable fisheries, environmental pollutants and management of marine habitats and protected areas.

2.1 Please indicate your views on the level of the following potential benefits of water reuse in agriculture irrigation?

Nutrient rich water fertilises soil. Nutrients can replace imported mineral fertiliser. If the quality of reused water is high with low levels of e.g. cadmium, reuse of water also reduces the amount of new cadmium brought in when importing mineral fertiliser. The aquatic environment benefits if increased efforts to reduce pollutants in wastewater by advanced wastewater treatment as well as upstream actions to reduce the use of potentially harmful chemicals, and pharmaceuticals, are introduced.

2.3 Please indicate the importance of the following main barriers to a wider uptake of water reuse solutions in agriculture irrigation

Advanced wastewater treatment needs to be implemented. Pollutants in treated water must be monitored with standardised technology and levels of detection. It requires regulation for limits of tolerable concentrations of many pollutants. Nutrient levels must be monitored and data made available. Fertilisation by mineral fertilisers and manure must be adjusted to avoid increased risk of eutrophication of surrounding waters. Responsibility for adverse effects by polluted water must be clarified.

2.4 Please indicate the importance of the following main barriers to a wider uptake of water reuse solutions in aquifer recharge:

Across the EU, actual advanced wastewater treatment (not only by name) will have to be implemented. (Micro)pollutants in treated wastewater will have to be monitored with standardised technology and levels of detection. It would require standardised regulations for limits of tolerable concentrations of a wide range of chemicals, pharmaceuticals and particles. Additionally, the responsibility for adverse effects by polluted reused water must be clarified.

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3.1 What kind of instrument should be used to set EU minimum quality requirements for water reuse in agriculture irrigation?:
To facilitate stringent EU quality regulation, economic instruments can be considered in order to ensure that the cost of using freshwater for irrigation covers the costs for advanced treatment of wastewater.

3.2 What kind of instrument should be used to set EU minimum quality requirements for water reuse in aquifer recharge?:
IF reused water is to enter aquifer recharge in the first place, and to facilitate stringent EU quality regulation, economic instruments can be considered in order to ensure that the cost of using freshwater for this covers the costs for advanced treatment of wastewater.

3.3 Beyond fostering the development of reuse, which specific objectives should be addressed by EU minimum quality requirements for water reuse in agriculture irrigation?
The protection of ecosystem health, including all living organisms and ecological processes as this is not stated clearly enough in the writing “Protection of water resources and dependent ecosystems”. Additionally, monitoring of nutrients levels must be part of the quality standard.

3.4 Beyond fostering the development of reuse, which specific objectives should be addressed by EU minimum quality requirements for water reuse in aquifer recharge?
The protection of ecosystem health, including all living organisms and ecological processes as this is not stated clearly enough in the writing “Protection of water resources and dependent ecosystems”.

3.5 Which specific aspects should be covered by EU minimum quality requirements for water reuse in agriculture irrigation?
Risk of unidentified hazardous substances in wastewater & risk of unknown effects related to known hazardous substances are missing. Clarification needed of farmers’ responsibility using reused water for irrigation vs responsibility of the EU to set quality requirements & promote reuse in case of permanent contamination of agri land & water resources by substances for which quality criteria are lacking. It’s unclear if the risk assessment for each substance is assessed based on exposure or only risk.

3.6 Which specific aspects should be covered by EU minimum quality requirements for water reuse in aquifer recharge?
The risk of yet unidentified hazardous substances in the wastewater and the risk of unknown effects related to known/unknown hazardous substances.

4.1 If you have any additional comments, please provide them in the box below:
Wastewater collects many chemical flows from urban areas and should therefore be released to the environment with great precaution. In particular drinking water and agricultural soil should be protected from both known and unknown chemical threats as far as possible. The

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minimum quality requirements for water reuse should mirror how we value these resources, fundamental for our societies.

The only way to consider unknown hazardous substances in wastewater is to demand advanced treatment that can remove a wide spectrum of e.g. organic pollutants and metals and should be the strict requirement for any aquifer recharge. This is costly in terms of money and energy, but must be weighed against the cost of contaminating drinking water and soil used for food production. Strict and precocious quality requirements is imperative for the public's trust in the safety of water reuse.