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Water Reuse from the One and Planetary Health Perspective

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Rising temperatures, changing precipitation patterns and increasing frequencies of drought periods have impacted the water availability in Germany. Especially agriculture is facing challenges due to an increasing demand for irrigation water. The use of reclaimed water, i.e. wastewater that has been treated to be suitable for another use, can help to alleviate the pressure on freshwater resources. However, water reuse comes with risks and potential trade-offs. Remaining pollutants, including contaminants of emerging concern (e.g. pharmaceutical residues, PFAS) as well as human pathogens can enter the food chain, can accumulate in soils, plants or reach groundwater and drinking water resources. Additional water treatment processes can be energy-intensive, contributing to an increase in CO₂ emissions. Using the reclaimed water, instead of discharging it to the river, can have adverse impacts on the ecological flow. Water reuse thus requires to be assessed from a “One and Planetary Health” perspective to ensure an appropriate balance between healthy ecosystems, human and animal health, nutrition, socio-economic development as well as climate change mitigation and adaption. This has guided the interdisciplinary discussions on national requirements for water reuse complementing the EU regulation 2020/741 on minimum requirements for water reuse. The negotiations between the different objectives were partially hampered by the lack of a common tolerable risk level.

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Professional Status of the Speaker

Senior Scientist

Junior Scientist Status

No, I am not a Junior Scientist.

Authors: HELMECKE, Manuela (German Environment Agency (UBA), Dessau, Section II 2.1 General Aspects Water and Soil); RECHENBERG, Jörg (German Environment Agency (UBA), Dessau, Section II 2.1 General Aspects Water and Soil)

Presenter: HELMECKE, Manuela (German Environment Agency (UBA), Dessau, Section II 2.1 General Aspects Water and Soil)

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