

Water resources and health

(organised as world café)

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Technische Universität Dresden (TUDD)

18 June 2015

13h30 – 15h30

Botanical Garden Museum Berlin

Purpose (objectives)

to collate the research needed for empowering practitioners to assess the risk of pathogenic microorganisms and/or harmful substances to reach water to which people are exposed

- a) an agreed list of priority research questions
- b) "embryos" for research consortia/working group to address these questions and a follow up process resp.

Introduction to the problem

Ingrid Chorus / V.S. Saravanan

What do operators of drinking-water utilities or recreational sites at waterbodies need to know to assess health risks from exposure to hazards? How can we better communicate acceptance of a (low) residual risk?

Key questions to discuss at the café tables

Tables 1-2 (hosted by C. Schüth, TUDA, J. Schijven, NIPHE, S. Klitzke, UBA and M. Schneider (FUB))

Ecology of flowing water: possibly differentiating surface waterbodies/groundwater and/or pathogens/chemicals

Practitioners need to estimate how much of a given hazard could reach the point of human exposure. A target therefore is to develop decision support systems which help assess the risk of hazard break-through - both in natural systems and in technical water treatment.

- What are the opportunities and limitations for developing such decision support systems?
- How feasible is it to identify key parameters which determine transport and attenuation and can be (semi-) quantified? Which parameters are key in determining transport and attenuation of pathogens (table 1) and chemicals (table 2) in such systems?
- Which knowledge gaps do we still need to close for this purpose?

Table 3-4 (hosted by V.S. Saravanan, ZEF, O. Schulz, ISOE and A. Hakobjanyan, HUB)

Governance and institutional arrangements

- What are the types of management structures and governance/institutional arrangements that facilitate the flow of substances (pathogens and chemicals) in the water systems and its impact on human health?
- Which structures are key to implementing barriers against pathogens and chemicals occurring in the water to which people are exposed?

Tables 5-6 (hosted by I. Chorus, UBA, U. Schuhmacher-Wolz, FoBiG and E. Günther, TUDD)

Toxicology and risk communication

- How safe is safe enough?
- Which open questions are perceived as key to assessing health risks from chemicals / pathogens? Are health risks perceived and strategized differently by different actors (households, public authorities, media, others)?
- How can we move public perception of hazards in water away from yes-no, black-white, safe-dangerous towards understanding the continuum of dose-dependent risk? Which level of health impairment through exposure to water would we be willing to tolerate (for drinking water? For recreational water use)?

Agenda (*procedure and time schedule*)

- 5 – 7 minutes intro to the questions by Ingrid Chorus (UBA)
- 5 – 7 minutes clarification of the rules of the game
- 2 x 30 minutes for participants to switch the table groups (only between two of three)
- 45 minutes plenary to put together the outcomes from the tables