

ICWRER conference, Koblenz
Session abstract

Title:

Microbial quality of surface waters – are we prepared to face future challenges?

Session chairs:

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Scope:

Anthropogenic activities strongly affect microbial pollution of surface waters. Potentially pathogenic organisms like faecal bacteria, viruses and parasites enter aquatic systems from a variety of sources, e.g. direct and indirect wastewater discharge or surface rainwash from rural or urban areas. Many open questions still remain as to the environmental effects on the survival and growth of potential pathogens, such as the role of sediments for viability or the impacts of climate change on future pathogenic loads. Surveillance – most often restricted to bathing beaches while neglecting streaming waters – is rather descriptive than sourcing emission pathways. In addition, ordinary indicator approaches may not necessarily mirror the actual microbial water quality, particularly with regard to autochthonous pathogens.

This session aims at bringing together experts from the field of medical and environmental microbiology as well as computational modelling in order to exchange knowledge on current microbial water quality surveillance practices and their drawbacks as well as to discuss future-oriented water management concepts. Researchers and decision makers are invited to share their insights into the pros and cons of existing observation policies with regard to their suitability in minimizing microbial water pollution and to present their experiences with emission-based water quality management approaches. Topics of interest comprise studies on interactions of pathogens with their environment and the development and application of model-based management tools that allow to now-cast microbial water quality and to predict the hygienic status and infection potential of surface waters under the influences of a changing climate.

Target group:

The meeting is targeted at researchers, health management workers and authorities working in the field of pathogenic microbial water management.

Matching conference topics:

- Sustainable water management
- Water quality
- Water policy
- Monitoring systems