

Water quality, climate change and the Sustainable Development Goals

Research needs for application

8th Water Research Horizon Conference

Open Space Workshop

20 September 2017

14:00-16:00

Hamburg, Germany

Organizers of the Workshop

Sabrina Kirschke and Dr. Tamara Avellán, United Nations University – Institute for Integrated Management of Material Fluxes and of Resources (UNU-FLORES)

Partners:

Prof. Dr. Dietrich Borchardt, Helmholtz-Centre for Environmental Research (UFZ)

Prof. Dr. Kenneth Irvine, IHE Delft Institute for Water Education (IHE Delft)

Prof. Dr. Florian Leese, University of Duisburg-Essen (UDE)

Summary of the workshop

Good water quality plays a particularly important role in achieving the Sustainable Development Goals (SDGs) in its ecological, social and economic dimensions. Good water quality is directly addressed in SDG 6 on clean water. It also impacts the achievement of many other SDGs. These include major importance of good quality water to combat hunger (SDG 2) and to achieve good health (SDG 3). Likewise, the quality of waters is affected by various boundary conditions and dynamics such as climate change and socio-economic developments.

Identifying a good qualitative status of waters in view of the different SDGs, and under various conditions such as climate change is not straightforward. A major challenge is identifying the right set of water quality indicators for specifying the status of waters. While there has been the development of many water quality indicators, their applicability and feasibility to support the SDGs, and under the various natural and social conditions, requires further consideration and development.

The workshop addresses this issue by discussing two research areas, each encompassing a set of sub-questions:

- 1) **Water quality indicators and the SDGs (e.g. SDG 2, 3, 13):** Do we know which sets of indicators are relevant to measure water quality in terms of different goals such as providing water for drinking purposes, agricultural production, energy production, or industrial use, and the interaction among these?
- 2) **Water quality indicators and their context (factors and their dynamics):** Do we know in which way the numerous effects of climate change and other context factors (e.g. capacities of public authorities) impact the usefulness and future reliability of indicators?

As a main output of the workshop, there will be a list of research areas and questions related to the role of water quality indicators depending on various goals and contexts. These can be part of joint research proposals by organizers and participants of the workshops, as well as their networks.

Schedule (total time 120 minutes)

Moderator: Ken Irvine, IHE-Delft; Sabrina Kirschke, UNU-FLORES

20min Welcome, presentation of workshop goals and schedule, short introduction round

Speaker: Tamara Avellán, UNU-FLORES

20min Input statements on water quality indicators in the context of the SDGs and climate change

- *Dietrich Borchardt, UFZ*

- *Florian Leese, UDE*

50min Roundtable discussions

- 2 tables on water quality indicators and the SDGs, e.g. one table focusing on ecological dimensions of the SDGs and one table focusing on the socio-economic dimensions of the SDGs

- 2 tables on water quality indicators and their context, e.g. one table focusing on climate change and one table focusing on further, especially social factors such as capacities of public authorities

30min Reporting back and proposed outputs, closing

Speaker: Rapporteurs of the roundtables, Ken Irvine, IHE Delft