

SRI Event Updates

Moving towards a Holistic and Inclusive Global Water Quality Monitoring – Leveraging Emerging Technologies and Global Partnerships to inform Climate, Nature and Pollution Action

The world is facing growing water quality challenges due to serious and increasing water pollution, both in developed and developing countries. This poses a mounting risk to public health, food security, biodiversity and other ecosystem services. Monitoring the world's freshwater resources is a critical step in shaping any coherent water quality policy and is indispensable to responding to current water quality challenges arising from climate and pollution pressures as well as the destruction of natural capital. UNEPs Global Environment Monitoring System for Freshwater (GEMS /Water) Programme has been mandated to keep the state of the world's freshwater resources quality under continuous review. The success of the mandate relies both, on access to and processing of existing data and on fostering innovation and emerging technologies as well as society engagement, as they play an increasingly vital role in monitoring and assessing water quality globally and in building water ownership.

This session aims to think out of the box. Key is to define how to do business differently, to make global environment monitoring fit for future purpose in the 2030 Agenda and beyond and to build effective partnerships. The session will review the GEMS/Water engagement with national custodians of data, and the potential and limitations of those data in supporting decision-making to accelerate sustainable water quality management. It will further present new challenges and opportunities of emerging technologies (such as modelling, Earth Observation, Big Data, AI, citizen science etc.) for global water quality monitoring. The main focus will lie on how and to what extent these new technologies can contribute to fill the massive data gaps and allow GEMS/Water to go beyond providing opportunistic in-situ water quality information. The input of the speakers will catalyze the discussion on how to achieve holistic monitoring of water quality in often data scarce surroundings. The underlying question of this session will therefore be how global water quality monitoring needs to be modernized and improved to provide the greatest possible end to end benefit for users in science-policy processes (i.e., governments, decision-makers, scientists, civil society, businesses) - and – with whom to partner to achieve this goal.

Update of the SRI event from the GEMS/Water global programme coordination unit



GEMSWater Sessi...eport SRI21.pdf

Presentations

General Information about GEMS and GEMStat



General I...MStat.pdf

The Role of Satellite EO in Holistic and Inclusive Global Water Quality Monitoring (Andrew Tyler, University of Stirling)



The Role...ring.mp4

A Holistic and Inclusive Global Water Quality Monitoring and beyond; contribution from WMO Earth System approach (Dominique Béro, World Meteorological Organization)



A Holisti...eyond.pdf

Clean water for a healthy planet – who defines water quality? (Bernd Gawlik, Joint Research Centre of the European Commission)



Clean wat...ality.mp4

Role of Science to achieve an Inclusive Global Water Quality Monitoring System (Anik Bhaduri, Sustainable Water Future Programme)



Role of S...ystem.pdf

Actionable Monitoring for the achievement of Global Water Security (Dietrich Borchardt, Helmholtz Centre for Environmental Research, UFZ)



Actionable...curity.pdf