



RA3 Zoom Series

Advances in Modelling Global Hydrology and Water Resources under Change

This seminar reviews the current state of global hydrological and water resources modelling under change, discusses past and recent developments, and extrapolates these to future challenges and directions. It starts with describing the history of global hydrological model development in three established domains: atmospheric modelling, global water resources assessment and dynamic vegetation modelling. Next, a genealogy of global hydrological models is given. Thereafter, recent efforts to connect model components from different domains are reviewed with special reference to multi-sectoral inter-comparison projects. Also, new domains of application are identified where global hydrology is now starting to become an integral part of the analyses. I will end the seminar with a short overview of recent and future work on global hydrology and water resources in our own group on three related subjects: 1) very-high resolution global modelling of surface and groundwater hydrology; 2) including surface water quality and groundwater salinity; 3) the global limits of groundwater use.

Marc Bierkens (1965) holds the chair in Earth Surface Hydrology at the Department of Physical Geography at Utrecht University

Speaker: **Marc F.P. Bierkens**, Department of Physical Geography, Utrecht University, Utrecht, the Netherlands

Date: **Thursday, May 6th at 14h00**

► Zoom: <https://stockholmuniversity.zoom.us/j/8295564699>

and was acting chairman of the department between 2009 and 2015. He is also partly employed by Deltares. He received his MSc in Hydrology from Wageningen University (1990), a PhD in Physical Geography from Utrecht University (1994) and became professor of Hydrology at Utrecht University in 2002. Between 1994 and 2002 he worked as a senior scientist and team leader at Alterra Research Institute in Wageningen. Marc Bierkens' fields of expertise are groundwater hydrology, ecohydrology, stochastic hydrology, hydrological regionalisation, upscaling theory and geostatistics and global hydrology. His current research focuses on global scale hydrological modelling in relation to climate change and water availability.

Read more at www.bolin.su.se



Photo: Private