



UFZ-Seminar

Research Unit



Water Resources and Environment

3 March 2020, 10 a.m.

Seminar Room 1, Brückstr. 3a, Magdeburg

Tim aus der Beek

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will give a talk on:

Water resources management in a changing world

During the last decade there was an increasing demand for sustainable, integrated water resources management. This especially holds true for the development of measures and solutions and their transfer and application to the real world. This presentation will focus on examples of applied research. Among research needs concerning water quantity, global change impacts can be considered crucial on multiple scales. For example, in order to analyse the impact of near-term climate change on different water compartments, decadal climate projections (MiKlip) have been applied to more than 20 hydro models in 6 European countries. In close collaboration with local stakeholders, impacts on e.g. reservoir management, salt water intrusion, bathing water, combined sewer overflows have been analysed and the according measures derived (BINGO project). Within the InoCottonGROW project, current and future irrigation demand modelling has shown that until 2050 temperature stress will dominate water stress for some crops and that adaptive solutions, such as heat resistant crops, provide more applicable and sustainable potential than e.g. improving irrigation efficiencies.

Concerning water quality issues, organic pollutants have shown to become a problem for the environment and society. A global database on pharmaceuticals in the environment has been established (UBA), which for the first time showed that they are a global problem. The database was used to convince UNEP to integrate pharmaceuticals as emerging policy issue in SAICM (Strategic Approach to International Chemicals Management) and thus to provide funding for measures on the global scale. Due to the polarity and persistency of many organic pollutants, drinking water providers are facing severe problems in providing safe drinking water. Within the SIGN project, occurrence and fate of 200 organic pollutants and toxicity parameters are analysed in three advanced drinking water treatment plants.

Websites: <http://www.projectbingo.eu/>
<https://www.inocottongrow.net/>
<https://www.umweltbundesamt.de/en/database-pharmaceuticals-in-the-environment-0>