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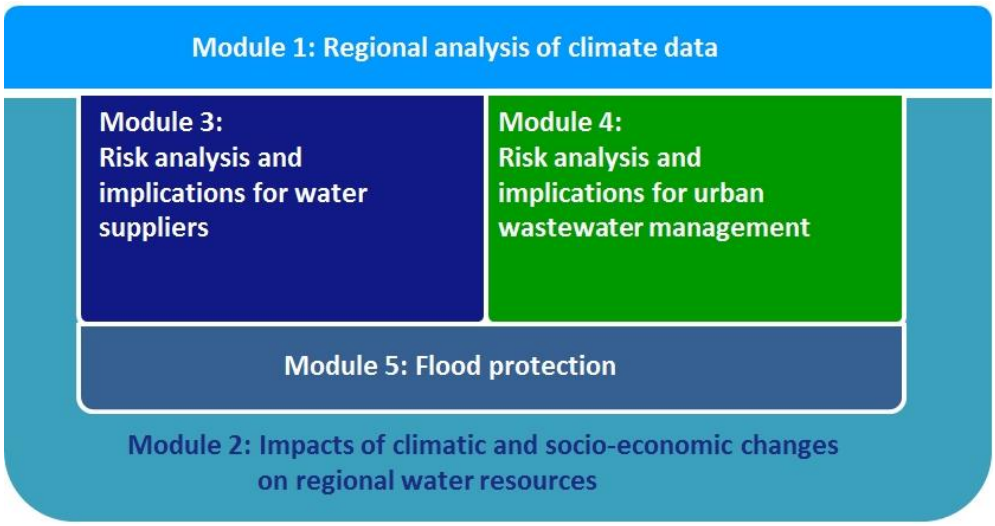
Global Change and Mitigation Strategies:
Climate resilient water resources management

01/2016

Project:
Development of regional risk management strategies for climate resilient water resources management

Sponsors:
Water suppliers and wastewater treatment operators in NRW



Project description:
The infrastructure of public water supply and wastewater companies is usually based on climatic conditions of the 20th century. In order to analyse the effects of future climate change, IWW Water Centre, in cooperation with two research partners, has conducted climate and water projections until 2100. This allows water suppliers and wastewater treatment operators to be prepared to changes in water availability and demand. One major challenge within this project was to cope with uncertainties of climate and socio-economic projections and to derive precise options for action.

Our services:
By combining historical climate data with future climate projections, changes within the regional water balance have been identified and analysed. Based on statistical analysis, specific changes in water catchment within different river basins, as well as their effect on raw water quality have been quantified. As a next step, recommendations for adaptation measures and monitoring of operational processes have been developed in order to ensure safe water supply and wastewater disposal. For example, GIS-based risk assessment of flood protection measures was applied to show the need to act in order to secure drinking water supply infrastructure. Prolonged dry spells, intense rain events, and changing demography have shown in this project to also strongly affect wastewater disposal. It could be demonstrated that, for example, rain storm events cause sewage water accumulation at specific locations within the pipeline network, for which immediate actions are necessary.

Project duration
2013 - 2014

Contact at IWW
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