



# STEER: Enhancing Coordination in Water Management

## Water as a Global Resource (GRoW)

In many regions around the world, water resources are not being used sustainably. Pollution and overuse of surface water and groundwater bring major social, ecological and economic problems in their wake. Conflicts can arise in situations where one particular water use degrades the quality or depletes the amount of water available to such an extent that other uses are restricted or even not possible at all. Such conflicting demands for water often have negative effects on the environment. The joint research project STEER seeks to find innovative forms of coordination and cooperation to help resolve such conflicts in water use and water management. Central to the project is a diagnostic approach where the researchers identify typical problems and develop suitable strategies for finding solutions.

### Inadequate Coordination of Water Use

Whether drinking water for private use, water for agricultural irrigation or water used in cooling systems in power generation plants: the different uses of water in different parts of the world are often not adequately coordinated, resulting in conflicts between users. And this situation is very likely to be exacerbated by global trends such as population growth, economic development and climate change. Conflicts relating to the use of water resources also affect Germany. Water supply companies, for example, have been grappling with the problem of nitrate contamination in groundwater resulting from excessive fertilization in agriculture, and have indicated that costs for drinking water supply may therefore increase in the future.

### Strategies for Solving Typical Water-Related Problems

Over the past two decades, Integrated Water Resource Management (IWRM) has become popular across the globe as a means of making the use of water resources more sustainable. The idea behind this concept is to bring the requirements that different users and types of water use have into line with one another. In reality, however, Integrated Water Resource Management is proving harder to implement and many challenges still remain.

Often the causes of water-related problems are known. The real issue lies in finding solutions, because this requires the involvement of stakeholders from sectors other than the water industry – agriculture, the energy sector or urban planning, for instance. These stakeholders often have different interests and goals. To align these, effective coordination mechanisms are needed. This includes, for example, legal frameworks to harmonize the aims and

mechanisms in place at the different dedicated authorities, as well as the appropriate involvement of relevant stakeholders in strategy development, or various forms of voluntary cooperation between different sectors. The ability to successfully align different areas is known as good cross-sectoral governance.

This is the starting point for the STEER project. It seeks to develop innovative ways to improve steering capacities in order to solve water resource problems, one of the key points of interest being the development of new forms of coordination and cooperation. Using in-depth case studies in South Africa, Mongolia, Spain and Germany, the researchers will investigate what impact certain governance-related factors such as statutory requirements or coordination between different authorities and other underlying conditions (e. g. pressure on water resources) have on the effectiveness of harmonization and cooperation measures and hence the overall success of Integrated Water Resource Management. STEER seeks to determine the conditions under which certain aspects of effective governance systems are transferrable. On the basis of these analyses, the



Catchment basin for unpurified wastewater from mining activities in the Kharaa River catchment in Mongolia

project partners will develop strategies for solving existing conflicts over the use of water resources.

STEER is unique in its diagnostic approach to identify promising strategies, which can be used to resolve typical problems in the water sector, so that they are transferrable to a large number of similar situations. The project findings will be made available to users from research and water management practice in the form of an online platform. Besides diagnostic tools for analyzing complex water resource problems, the platform will also feature support to identify appropriate strategies and solutions.

### Less Conflict and More Synergy

The STEER project is intended to contribute to solving water conflicts among different sectors and to create synergies that foster the implementation of sustainable water resource management. In selected regions, the project seeks to achieve model agreements between local stakeholders with the aim of improving coordination of water use. On the global level, STEER will help achieve the United Nations sustainable development goal to implement IWRM worldwide. The project envisages several user groups to benefit from the research findings including regional stakeholders from the water sector (e. g. water associations, river basin organizations), national ministries and administrations as well as international organizations advocating the sustainable management of water and land resources. The project findings may also be of interest to researchers and consultants active in the field of water management.



River Emscher in Bottrop: intensive land use on both sides of the river hampers renaturalization.

#### Funding Measure

Water as a Global Resource (GRoW)

#### Project Title

Increasing Good Governance for Achieving the Objectives of Integrated Water Resources Management (STEER)

#### Grant Number

02WGR1425A-F

#### Duration

June 1, 2017 – May 31, 2020

#### Funding Volume

EUR 1,446,871

#### Contact

Universität Osnabrück  
Institut für Umweltsystemforschung  
Prof. Dr. Claudia Pahl-Wostl  
Barbarastraße 12  
49076 Osnabrück  
Phone: +49 (0) 541 969 2536  
E-mail: cpahlwos@uni-osnabrueck.de

#### Project Partners

Deutsches Institut für Entwicklungspolitik, Bonn  
Ecologic Institut, Berlin  
Emschergenossenschaft, Essen  
Oldenburgisch-Ostfriesischer-Wasserverband, Brake  
Kassel University, Kassel

#### Website

[www.steer.uni-osnabrueck.de](http://www.steer.uni-osnabrueck.de)

#### Publisher

Federal Ministry of Education and Research (BMBF)  
Department of Resources, Circular Economy; Geosciences,  
53170 Bonn

#### Editorial Work and Design

Project Management Agency Karlsruhe (PTKA)

#### Print

BMBF

#### Photo Credits

Front page: Mirja Schoderer, Deutsches Institut für Entwicklungspolitik  
Back page: Dr. Baoquan Song, Ruhr-Universität Bochum  
Project Logo: Mareike Schmidt, CC BY-NC-ND 4.0

#### Version of

January 2019