

**International Workshop on
Water and Climate Change in a Coupled
Human-Natural System**

September 02-05, 2019

Shenzhen, China

Organizers

School of Environmental Science & Engineering, Southern University of
Science and Technology, Shenzhen, China

Chair of Engineering Hydrology and Water Management, Ruhr-
University Bochum, Bochum, Germany

Supporters

Sino-German Center for Research Promotion (SGC)

National Natural Science Foundation of China (NSFC)

German Research Foundation (DFG)

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Introduction

Exponentially growing water demands and increasing uncertainties in the hydrologic cycle due to climate change and human activities are challenging the water security in the coming decades, and thus hampers sustainable development of the society. Investigating the potential for adaptation policies in water systems requires accounting for both their natural and human components, along with their reciprocal interactions. As the global anthropogenic climate change is expected to cause higher climate variability and more extreme events in the near future, the improvement of our knowledge and practices are imperatively needed to cope with water issues in a rapidly changing world by shaping the evolution of hydrological and meteorological sciences.

To engage the international research collaboration on climate change impact and water sciences, a 3-day International Workshop, entitled “Water and Climate Change in a Coupled Human-Natural System” is planned by the Southern University of Science and Technology (SUSTech) in China and the Ruhr-University Bochum (RUB) in Germany, will be held in Shenzhen, China. This workshop is supported by the Sino-German Center for Research Promotion (SGC), the National Natural Science Foundation of China (NSFC), and the German Research Foundation (DFG)

The purpose of this International Workshop is to improve our understanding of complex mechanisms within the water cycle in a coupled human-natural system, thus increasing water security in a changing environment. Advanced global hydrological model development and systems analysis will be central components of the International Workshop. The new generation models are expected to capture complex dynamics among different systems as hydrology, meteorology, climate, landscape, ecosystem, and society are closely interwoven. Advancing our models of such complex

systems allows us to study how water systems will evolve under changing climate forcing and human decisions, which improves our capability towards more detailed analysis to predict the dynamics of water resources and therefore support sustainable societal development in a changing environment.

The planned International Workshop is expected to attract a diverse group of experts in hydrology, meteorology, numerical modeling, atmospheric processes, data assimilation, observing systems, forecasting/prediction, economics, and social science. The perspective of the Forum is to bring together scientists mainly from China and Germany in various disciplines that share a common interest in the coevolution of our coupled system under climate change as well as human impacts. The fundamental theme of this International Workshop will relate to hydrology, meteorology, climatology, and society mainly concentrated on their interconnections and their compound impacts on water resources.

There are five main objectives for this workshop:

- 1) Assess both the climate and human impacts on freshwater systems.
- 2) Advance model development to derive adaptation and mitigation strategies to cope with the impacts of a changing world.
- 3) Advance model evaluation metrics to improve the understanding of uncertainties and error propagation across models.
- 4) Assess the model credibility for projections of climate and global change.
- 5) Exchange ideas, discuss recent as well as planned future work and further specify the needs for the Inter-Sectoral Impact Model Intercomparison Project (ISIMIP), in particular the water sector.

Registration fees

No registration fees will be charged. Travelling and accommodation fees are covered for the participants listed in the proposal for this workshop supported by the Sino-German Center for Research Promotion (SGC). Other participants are responsible for their own travelling and accommodation. Workshop organizers will help participants arrange hotels and travelling within China.

Key deadlines

March 29, 2019	Submission of proposal and confirmation of invited participants
July 16, 2019	Confirmation of financial support from SGC
July 18, 2019	First announcement of International Workshop information
August 1, 2019	Second announcement of International Workshop information
August 15, 2019	Deadline for collecting Return Receipt
August 28, 2019	Last announcement with detailed conference information
Sep 2-5, 2019	International Workshop

Preliminary Agenda

Date/Location		Content	
September 1, 2019 (Shenzhen)		Arrival & Registration	
September 2, 2019 (Shenzhen)	Morning	Opening	Welcome remarks from organizer and sponsors, picture time, general announcements
	Afternoon	Topical sessions	High-level forum (full day) with introduction and presentations
September 3, 2019 (Shenzhen)	Morning	Topical sessions	Discussion day
	Afternoon	Topical sessions	Discussion day Reporting back and plenary discussion;
September 4, 2019 (Shenzhen)	Morning	Discussion day in break out groups and ISIMIP Writing Workshop	
	Afternoon	Discussion day in break out groups and ISIMIP Writing Workshop	
September 5, 2019 (Shenzhen)	Morning	Field trip	
	Afternoon	Field trip	
September 6, 2019 (Shenzhen)	Morning	Leave for home	

Contact Information

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Organizer Information

Southern University of Science and Technology (SUSTech) was founded in 2011 in the southern city of Shenzhen, the epicenter of China's economic miracle and ingenuity over the past 35 years. Situated on a tranquil and picturesque campus of rolling hills and wandering creeks, SUSTC is widely known as a pioneer for higher education reform and innovation in China. With an outstanding faculty trained globally, SUSTC is making great strides toward its goal of building a world-class institution of higher education and cutting-edge research with broad societal impacts. The successful candidates will have great opportunities to contribute to the advancement of science in an increasingly global economy. Web site: www.sustech.edu.cn

Located in the heart of Europe in the dynamic metropolitan region of the Ruhrgebiet, **Ruhr-University Bochum (RUB)** with its 20 faculties is home to over 43,000 students from over 130 countries. Research at RUB is characterized by interdisciplinary collaboration and networking. Prof. Martina Flörke (formerly Center for Environmental Systems Research, University of Kassel) now heads the Chair of Engineering Hydrology and Water Management. In her new position she will continue with and expand her activities in numerous aspects related to research questions addressing the impacts of global change on the terrestrial water cycle and achievement of sustainable development objectives on regional and global scales. Current projects are dealing with questions related to state and variability and trends in water availability, water quality, water use, and related impact research as well as scenario development processes including stakeholder participation. Research project are and have been funded by the German National Research Foundation (DFG), German Ministry of Education and Research (BMBF), the European Commission, UNEP and others. Web site: <https://www.ruhr-uni-bochum.de/de>

Return Receipt

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September 2-5, 2019

Please print in ink or type. This form may be duplicated for additional registrations.

Personal Information

- Male Female
- Last name _____ First name _____ Middle initial _____
- (as you wish to see it on your name tag)

- The title of my talk _____
- ◆ Special Needs _____

Accompanying Guests

- Yes No
- Male Female
- Last name _____ First name _____ Middle initial _____

Additional Information

- Arrival date _____ Leave date _____
- Willing to participate in the field trip: Yes No

Return this receipt form before **August 15, 2019** to: liujg@sustech.edu.cn