



ILLINOIS  
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



## 基于“人类-自然”耦合系统理念的流域管理国际研讨会

2013年5月6-7日

北京大学中关村新园国际会议中心

### 组织者

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### 赞助方

美国国家科学基金会

中国国家自然科学基金委员会

随着人类活动对于水文过程的时空影响越来越大,全球范围内的各大流域已经逐渐演变成了“人类-自然”耦合系统。与之相关的模式-过程、互动-反馈以及生物物理-社会经济学的共同演化塑造着“人类-自然”耦合系统的特征。因此,流域必须被看作人类与自然耦合的系统来进行管理,从而在自然和人类的需求中间取得平衡。本次研讨会召集了中美以及其它国家的流域管理领域研究者,就不同国家在流域管理领域的经验进行交流和比较,同时对相关问题进行研究,并探讨合作的可能性。

本次研讨会的参与者包括由美国国家科学基金会项目资助的美方研究人员,中国国家自然科学基金委重大研究计划“黑河流域生态-水文过程集成研究”资助的中方研究人员,以及国际农业研究磋商组织资助的发展中国家流域管理项目研究人员。

## 会议议题

- 地表水-地下水交互建模以及地表-地下水联合管理分析；
- 水文-生态-社会学集成建模；
- 操作、监测以及适应；
- 流域管理治理；
- 不同国家的流域自然条件、社会条件以及管理政策对比。

## 会议成果

- 计划下一次由美国国家科学基金会和中国国家自然科学基金委员会共同资助的研讨会；
- 基于“人类-自然”耦合系统理念的流域管理白皮书；
- 国际水文和水资源期刊专辑的建议。

## 联系方式

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## 会场交通

会场：北京大学中美新园国际会议中心 1 号楼观湖会议室

用餐：北京大学中美新园国际会议中心 5 号楼和园餐厅



## 日程安排

星期一（5月6日）

**8:00-8:30: Introduction: Ximing Cai, Chunmiao Zheng, Nick Brozovic, Jinren Ni**

**8:30-10:30: Oral Presentation 1) Integrated modeling and analysis for coupled natural-human systems – I, moderator: Ximing Cai**

Nick Brozovic, Integrated hydrologic-economic modeling at a river basin scale

Dawen Yang, Modeling of eco-hydrological processes in cold mountain region of the Heihe Basin

Chunmiao Zheng, Modeling the water flow across an arid ecosystem: The Heihe experiment

Yangwen Jia, New concepts for coordinating water uses of socio-economy and ecosystems in water-stressed regions

Wolfgang Kinzelbach, Sustainable water resources management in dry environments: Can models help?

**10:30-11:00: Break**

**11:00-12:30: Panel 1, Heihe basin study, moderator: Simon Cook**

Panelists: Wolfgang Kinzelbach, Xiaodong Yan, Junguo Liu, Jie Liu, Songbing Zou  
(Each panelist gives 10-minute presentation; 40 minutes for open discussion)

**12:30-2:00: Lunch**

**2:00-4:00, Oral Presentation 2, Regional case studies of river basin management, moderator: Junguo Liu**

Issam Nouri, Groundwater management optimization: The case of the Zeuss Koutine Aquifer

Miguel Saravia, Benefit sharing mechanism: Improving water management in the

Andes

Jorge Rubiano, Water issues in Latin America, research constraints and opportunities

Zhongjing Wang, Prospect of river basin management—a view from the evolvement of governance strategies in Yellow River

Zhenghui Xie, Effects of anthropogenic groundwater exploitation on land surface and regional climate: A case study of Haihe River Basin, Northern China

**4:00-4:15: Break**

**4:15-5:45: Panel 2, basin studies out of China, moderator: Jie Liu**

Panel 2 (other basins) Amanda Palazzo, Thouraya Mellah, Nick Brozovic, Simon Cook, Yi Zheng (Each panelist gives 10-minute presentation; 40 minutes for open discussion)

**6:30 : Dinner**

星期二，5月7日

**8:30-10:30, Oral Presentation 3) Social and economic analysis of river basin management, moderator: Nick Brozovic**

John Braden, Humans and the water environment: The need for coordinated data collection

Yusuke Kuwayama, The regulation of a spatially heterogeneous externality: Tradable groundwater permits to protect streams

Jinxia Wang, Integrated assessment of climate change impact on water and agriculture in China

Stephen Gasteyer, Sociology of river basin management in coupled natural-human systems

Xiangzheng Deng, A systematic approach and cases for improving watershed management

**10:30-11:00: Break**

**11:00-12:30: Panel 3, Student panel, moderator: Nick Brozovic**

Panelists: Students from U.S.: Tianfang Xu, Ruijie Zeng, Taro Mieno, Elise Benveniste, Richael Young; Students from China: Yue Yao, Huanhuan Qin, Yingying Yao, He Chen, Jun Wang

**12:30-2:00: Lunch**

**2:00-4:30: Oral Presentation 4) 1) Integrated modeling and analysis for coupled natural-human systems – II, moderator: Chunmiao Zheng**

Albert Valocchi, Groundwater models for assessment of irrigation pumping: Uncertainty of human impacts and hydrogeological parameters

Simon Cook, Can river basins support global development through to 2050 and beyond?

Xiaodong Yan, Orderly management of river basins as coupled human-natural systems: A functional extreme framework

Jinren Ni, Erosion-induced carbon and nitrogen emission/sequestration in small basins

Xiaoliu Yang, Land use/ cover change vs. flood security in the Beijing Area

Ximing Cai, Coupling a distributed hydrologic model with a distributed decision model for river basin management

**4:30-4:45: Break**

**4:45-5:45: Wrap up**

**6:45: Dinner**