

# **HYDROLOGICAL SCIENCES FOR MANAGING WATER RESOURCES IN THE ASIAN DEVELOPING WORLD**

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## **THE SECOND GWSP ASIA NETWORK WORKSHOP**

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Guangzhou, China

SPONSORED BY  
Center for Water Resources and Environment Research  
of the Zhongshan University

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# Preface

The international conference on “Hydrological Sciences for Managing Water Resources in the Asian Developing World”, held on June 8-10, 2006, Guangzhou, is an important and exciting event which have attracted overwhelming responses from many hydrologists and water resources professionals around the world. The conference is actually the first of such a large scale ever taking place in South China. We warmly welcome all the conference participants and their accompanies from 33 countries in Asia and Pacific region, Europe, North America, and Africa. We would also wish everyone of you an enjoyable and rewarding stay in Guangzhou, the largest and most prosperous city with a history of over 2200 years in South China.

This CD-ROM records the total 610 abstracts submitted for this conference in which 317 abstracts have been accepted for oral and poster presentation at the conference. According to the themes of the conference, apart from 13 keynote presentations, all abstracts have been divided into the following five groups for presentation in 35 parallel sessions: (1) Hydrological science and engineering for solving water problems; (2) Development and application of new technologies in hydrological practices; (3) Modeling technique in water resources planning and management; (4) Management of Water environment; and (5) Sustainable water resources management. We hope this conference will offer a multi-disciplinary platform for water experts and professionals, within and outside of Asia, to exchange their views and research findings on a wide range of water problems. It will be an excellent opportunity for hydrologists from developed and developing countries around the globe to meet and jointly search for more effective and science-based solutions for water management in Asian countries.

We would like to thank Honorary Chairmen of the conference and members of the three committees (advisory, scientific, and organizing), especially Dr. Zhang Jianyun and Dr. Cai Jianyuan from Ministry of Water Resources, China, for their time and effort to make the event a success. Besides the conference funds from Department of Water Resource and Environment, Zhongshan University, and Department of Geography and Resource Management, The Chinese University of Hong Kong, we have also received financial support from Guangdong Provincial Bureau of Water Resources, Guangzhou Zhongda Industry Group Corporation, Natural Science Foundation of China, Pearl River Water Resources Commission, Hydrology Bureau of Guangdong Province, Shenzhen Municipal Water Authority, Dongguan Water Conservancy Office. We are grateful to all the sponsors for their financial assistance. Last but not least, our deepest gratitude goes to Hydrology Bureau, Ministry of Water Resources, China and Zhongshan University for its tremendous support in various ways without which the conference would not be possible.

Xia Jun  
Conference Chairman

Chen Xiaohong and Chen Yongqin  
Co-chairmen, Organizing Committee

# Introduction

Asia is the most heavily populated continent in the world and over one-third of global inhabitants live in China and India. Although the region is characterized by enormous diversities in culture and language within the region, almost all Asian countries face many similar difficulties and challenges for socio-economic development. The majority of them are developing countries under tremendous pressure of ever-increasing populations, and as a matter of fact, the global population growth has largely occurred in the developing world. Moreover, in their path to modernity and prosperity, these countries have been inevitably experiencing massive urbanization and industrialization. Therefore, no matter what natural conditions exist, population pressure and societal transformations have brought numerous resource and environmental problems to Asian countries, among which water is one of the biggest issues across the region. Besides the human factors, the Asian Monsoon climate also makes water problems even more complicated and challenging. Finding solutions for managing water resources plays a vital role in putting Asia's development on a sustainable track.

This international conference aims to offer a multi-disciplinary platform for water experts and professionals, within and outside of the region, to exchange their views and research findings on a wide range of water problems in Asia. It will be an excellent opportunity for hydrologists from developed and developing countries around the globe to meet and jointly search for more effective and science-based solutions for water management in Asian countries.

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## **Organizers**

Sun Yat-sen University

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Institute of Geographic Science and Nature Resources, Chinese Academy of Sciences

Wuhan University

Water Resources Department of Guangdong Province

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# Conference Modules and Themes

Module I: Hydrological science and engineering for solving water problems

- Floods and other water-related hazards in humid and coastal regions
- Drought and water shortages in arid and semi-arid regions
- Agricultural hydrology and human-induced hydrological alternation
- Hydrological impacts of global climate change
- Development and application of new technologies

Module II: Management of water environment

- Water quality monitoring and modeling
- Water supplies for urban and rural areas
- Health and protection of aquatic ecosystems

Module III: Sustainable water resources management

- Regional water resources planning
- Integrated watershed management
- Groundwater assessment and management
- Water management experiences of developing and developed countries

# Conference Publications

Conference publications will be produced in two steps. Before the event, an abstract book of all accepted papers will be made available for distribution to all conference participants. After the event, conference papers will be selected and peer-reviewed for publication in an **IAHS Red Book** (indexed in EI). In addition, selected papers of the highest quality, subject to the availability of sufficient selections which reach the standards of journal publication, will be published in one or two special issue(s) of **Hydrological Sciences Journal** of IAHS and **Water International** of IWRA (both SCI journals).

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