

**International East Asia Regional  
Activities of Inter-Academy Panel  
(IAP) for **Water Programme****

*Given by **Professor J. Xia***

*Director, Center for Water Resources Research,*

*Chinese Academy of Science (CAS)*

*Key Lab. of Water Cycle & Related Surface Process, CAS*



FEDERATION OF ASIAN  
SCIENTIFIC ACADEMIES AND  
SOCIETIES (FASAS)

# **International East Asia Regional Workshop of International Academy Panel (IAP) on the Water Security to Climate Change and Human Activity**

**12-15, June 2006**

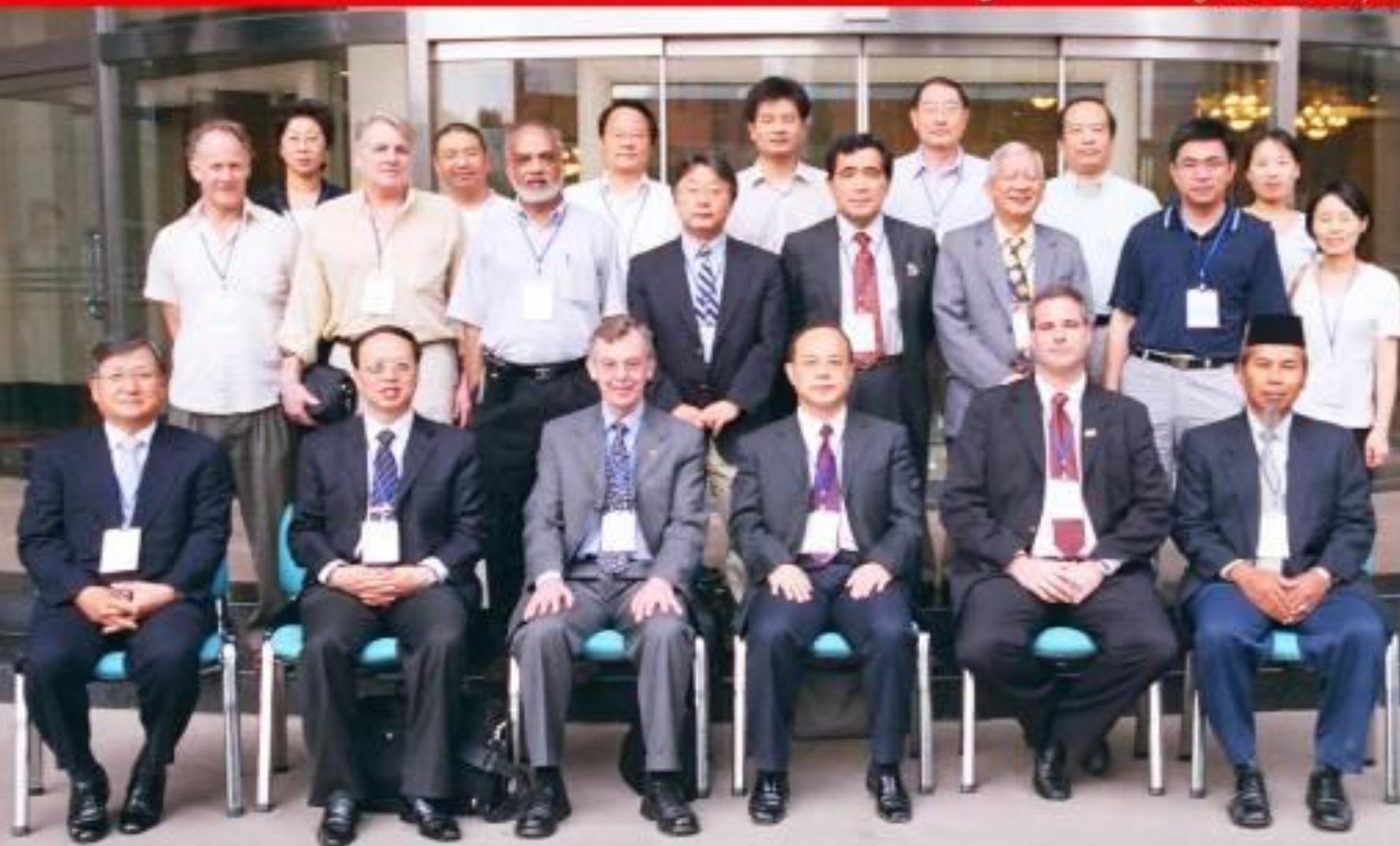
**Beijing, China**

**Sponsored by:** Chinese Academy of Sciences (CAS)  
International Academy Panel–Water Program (IAP–WP)  
Federation of Asian Scientific Academies and Societies  
The Association of Academies of Sciences in Asia

**Organized by:** Key Laboratory of Water Cycle and  
Related Land Surface Processes,  
Institute of Geographic Sciences and  
Natural Resources Research,  
Chinese Academy of Sciences

# International East Asia Regional Workshop of IAP on Water Security

Beijing- China  
June 12-15, 2006





# Participants from different countries

China	21
Australia	2
New Zealand	1
Japan	2
Korea	1
Philippine	1
Malaysia	1
Brazil	1







International East Asia Regional Workshop  
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on the Water Security to Climate Change and  
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June 2008  
China

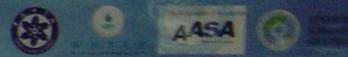
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Marcos Cortes

John Langston

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Organized by:

2006 6 13



# Wednesday

**9:00—12:00 Workshop and Panel Discussion on IAP activity at Wuhan University**

**14:00—17:00 A Trip to Yichang, Three-Gorge Dam**

**15 June 2006 : Yichang,**

**8:30- 15:00 Technical Trip to visit Three-Gorge Dam**

**15:00-17:00 Take Bust to Wuhan**

**20:30 Take Express Train to Beijing**



International Asia-Pacific Regional Workshop of International Academy Panel (IAP) on Water Security & Groundwater Sustainability  
7-9 March, 2008, Beijing



# Participants from different countries

Japan	3
Philippine	1
New Zealand	1
Malaysia	1
Brazil	1
Poland	1
Russia	1
Australia	1
China	34

# **Workshop Themes & Academic discussion issues**

- Water cycle and interaction between ground water and surface water related to its quality & quantity ;***
- Ground water and eco-system ;***
- Driving forces to ground water use by water policy ;***
- Integrated watershed and aquifer modeling & management of ground water;***
- Strategies & policy for ground water sustainability***

Responsible Editors: LI Taiyu  
SUI Keke  
LIN Xuedong  
ZHANG Chengchang

Water Security to Climate Change and Human  
Activity in East Asia & Pacific Region



**WATER**  
Research and Management  
IAP Programme



FEDERATION OF ASIAN  
SCIENTIFIC ACADEMIES AND  
SOCIETIES (FASAS)

# Water Security to Climate Change and Human Activity in East Asia and Pacific Region

Edited by  
XIA Jun and LIU Suxia

China Meteorological Press

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China Meteorological Press

# Regional Workshop for IAC /IAP Water Study on *Climate Change and Water Sustainability*, Beijing, 21-22 Nov., 2009



**-Co-Chair of IAC, President Lu Yongxiang, CAS, hold this reception dinner.**

**- IAC ED, John P. Campbell and 6 International experts from Netherlands, USA, SA, Malaysia, Poland, and 42 Chinese water experts from Chinese Working Group of IAC Water Study, attend the workshop, and give fruitful presentation and discussions.**



2007 5 29

# 2010's IAP/IAC WP in Beijing



# Summary

Major issues of IAP regional Workshop in Beijing focus on

- ☞ *Water cycle and ground water sustainability to climate change & human activity in the Asia-Pacific region;*
- ☞ *Science role & facing challenges in front domains of water security problem in the Asia-Pacific region*

- ☞ *Synthesis & interdisciplinary approaches on natural science, social science, economics applied to solve water security problem in the Asia-Pacific region*
- ☞ *Case studies in the Asia-Pacific region to close the gap between water management requirement & water science development to support water sustainable use & management*
- ☞ *Building linkage and exchanges platform of Asia IAP network, including link with related NGOs, such as Asia regional office of GWSP , IAC etc.*

# Role of Science & Technology

## ● *Addressing Water Problems*

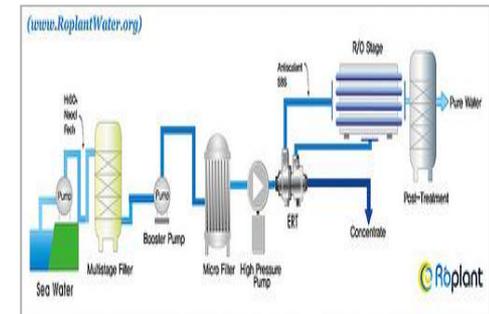
### – **Success story**

such as water management in Singapore,

- Large-scale storm water harvesting
- recycling of water (low cost membranes)
- Desalination
- Water Demand Management (engaging consumers)

and **Lessons in the world**

## ● *Innovations on Knowledge & Technology* – such as on Pollution Control & Treatment, Sea water desalination, Agriculture, Water Storage...



# ROLE OF SCIENCE

e.g., the Rapid Development of Seawater Reverse Osmosis.

The cost of a m<sup>3</sup> sea water could reduce into **\$1.40 per m<sup>3</sup>** from original **\$2.4 per m<sup>3</sup>**



## ● *Social Sciences in Environmental Management & Integrated Water Management*

- Environmental Humanities Approach
- Relevance of EH to provide effective solutions to environmental disasters etc.
- Changing Behavior ( New Water Policy “Building Society of Saving Water” in China)

- ...



# IAP/IAC Water Study

- ➡ A review of the challenges in providing sustainable water resources for the world, at both the global & regional scales.
- ➡ Understanding of the causes of and the science behind water problems, including the impacts of climate change and human activities
- ➡ The identification of adaptation and mitigation measures and capacity to environmental impact
- ➡ The identification of innovation and promising new opportunities to solve the water crisis and ensure sustainable water resources to the world

# Three Key Issues

- It is important to define a proper niche for IAP/ IAC Water study avoiding an overlap with other ongoing initiatives.
- The intention is to add value of Science & Technology to knowledge about water by looking sufficiently into the future.
- The horizon adopted is 2020 and beyond

# Major think and approaches

(1) The main focus of the IAP/IAC Water Study will be on **global water problems and its solution** by **Sciences & Technology** and their support to good water governance.

However, **important regionally specific water problems** in 2020 and beyond could also be the object of some attention, possibly to be presented as **case studies**.

# Major think and approaches

(2) There is a considerable body of available literature on the nature of world's water problems and the main challenges and issues related to water.

However in most cases , for the key role of *Science & Technology*, and *horizon of 2020-2050 existing studies* are scarce and often of a futuristic qualitative nature.

# Major approach & methodology

- (3) IAP/IAC Water Study should not spend too much effort re-describing work already undertaken.
- It should prepare a ***summary of the main problems***, using material from existing assessments, including *the World Water Development Reports* and other major literature.
  - It should emphasize ***new solution by efforts of Science & Technology to the global water crisis*** in 2020 and beyond.

*Suggestion and Comments  
are welcome!*

*Thank you !*

