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CNRD - SWINDON - AIT
Conference

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Concept Note

WATER SECURITY AND CLIMATE CHANGE:
CHALLENGES AND OPPORTUNITIES IN ASIA

Dates: 29 November-01 December, 2016
Venue: Asian Institute of Technology, Thailand

1. Background

The Asian region has been facing many water security challenges since decades because of multiple drivers such as increasing population, socio economic development, urbanization, migration, among others. Key concerns include quality and quantity of available water supplies, overpopulation, wastewater disposal and sanitation, environmental degradation, and water-induced disaster risks, especially in the context of climate change, among others.

As of 2015, 260 million people in Asia still did not have access to improved water supply, while 1.46 billion did not have access to improved sanitation facilities (WHO and UNICEF, 2015). This situation is likely to be compounded by the increasing rate of urbanization in Asia. Asia is one of the most rapidly urbanizing regions in the world, with a 2.4% annual growth of the urban population. By 2015, it was estimated that 2.7 billion people would live in urban areas placing considerable stress on the water resource base of the region's cities (UN Water Report, 2015).

Climate change is also creating an additional threat to water security in the region. Changing weather conditions are likely to increase the incidence and severity of extreme events. Some projections show an increase in the number of years with above normal monsoon rainfall or extremely low rainfall (IPCC, 2014). Melting glaciers will affect water supplies, creating risks of glacial lake outburst floods and downstream flooding for some regions. This will lead to an overall reduction in water supplies from snow cover and glacial runoff in the long run (World Bank, 2013). Droughts will also become an even more serious concern, particularly given the already strained water access issues (IPCC, 2013).

From a governance point of view, there have been significant efforts made by Governments in Asia to make their countries and societies more resilient. However, much more work is needed. In many countries, national policies are not well implemented, measures to protect the most vulnerable are often lacking, and institutional capacity to handle disasters are at times still weak. There is, thus, a need for robust water security enhancement strategies that are grounded in sound scientific evidence, and that will stand the test of time.

2. Objective of the Conference

The overall goal of this joint conference is to create a platform for engaging leading experts in the region and beyond in discussions on water security issues in Asia in order to facilitate the path towards water-secure societies. Specific objectives include:

- Identify emerging challenges and research gaps in water security related topics that will be need to be addressed.
- Forge regional partnerships to jointly undertake research/developmental projects.

3. Thematic Areas for the Conference

The thematic areas for the conference are oriented to the sustainable development goals with special attention to goal 6 ("Ensure availability and sustainable management of water and sanitation") and goal 13 ("Take urgent action to combat climate change and its impacts"). In view of this context, the following areas and corresponding and sub-areas will be covered:

Water and Human Well-Being

- Water supply (sources, distribution, and treatment)
- Sanitation
- Wastewater treatment

Water-Related Hazards

- Extreme events
- Protection of individuals and agricultural areas
- Protection of habitats and urban areas
- Climate change impacts on extreme events

Ecosystems

- Water quality
- Vulnerable ecosystems
- Intelligent use and replenishing natural water resources
- Displacement of nutrient-rich and contaminated sediments

Economic Water Security

- Water for agriculture
- Water for industries
- Process-integrated water management
- Water infrastructure development (water supply, wastewater)
- Water economics
- Hydropower

Crosscutting Themes

- Water governance / policy
- Management of river basins
- Transboundary water challenges and potential
- Water crimes
- Gender and water
- Citizen science
- Information and communication technology

4. Structure of the Conference

The conference will have three types of sessions:

- **Scientific sessions**: These will include platform presentations by participants in line with the thematic areas of the conference.
- **Round table discussions:** These will be special sessions dedicated to addressing specific problems related to the thematic areas, from a practice point of view. The goal is arrive at

practice-oriented solutions to the problem discussed. These shall be documented in a final presentation.

- **Special sessions:** Will comprise of keynote speeches, panel discussions, poster presentations.

5. Target Participants for the Conference

The conference aims to have almost 100 participants, from different backgrounds—scientists, practitioners, and decision makers / politicians.

6. Expected Outputs of the Conference

- A volume of the conference proceedings containing all papers.
- A white paper on the outcomes of the round table discussions.
- At least 3 project proposal ideas developed with different partners (through bilateral /trilateral agreements).
- Selected papers will be submitted for a special issue in an appropriate journal (e.g. CLEAN, IWA Journals, etc.)

7. Important Dates

Call for abstracts announced :	15 June, 2016
Deadline for receiving abstracts :	31 July, 2016 (07 July, if extension required)
Authors notified of selection by :	15 August, 2016
Deadline for full paper submission :	30 September, 2016