

The background of the entire page is a photograph of a river scene. On the left, several small boats are on the water. On the right, there are traditional Chinese buildings with tiled roofs and balconies, some with people on them. The scene is set in a valley with hills in the background. The text is overlaid on this image.

# THE 3RD WATER SECURITY & SUSTAINABILITY FORUM

One of  
The ESTDS Forums sponsored by  
The Chinese Academy of  
Engineering

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## ANNOUCEMENT 1

March 2020





# Background

Water lies at the heart of life and well-being, yet it is a finite resource which is quickly outpaced by the global demand in rapid growth. The UN SDG 6 aims at "availability and sustainable management of water and sanitation for all", prioritising the importance of water security and sustainability in the societal and environmental welfare. However, such welfare is challenged by the current water availability. On a global scale, more than two billion people live in countries experiencing high water stress. In China, 30% of its land area is suffering from high or extremely high water stress. About two thirds of Chinese cities are having problems sustaining sufficient water supply. Therefore properly managed water has a major stake in the future.

Global changes are bringing immensely profound impacts to the earth system and hence the future. Under a warming climate, extreme events like floods and droughts are staged at an increased intensity and frequency. The rising sea level poses major threat of coastal flooding, and impacts estuary systems drastically. These changes also stagger the ecological systems with symptoms such as biodiversity loss and rapid degradation. The success and resilience of water management is highly dependant on our technical innovations and institutional capacities. We need to change our ways of thinking, living and managing to adapt to such global changes.

In 2015 and 2017, two Forums on water security and sustainability have been held in Nanjing, attracting attention of researchers both in China and around the world. Hence, YICODE, HHU and NHRI, sponsored by the Chinese Academy of Engineering, are proudly announcing the 3rd Forum of the series in 2020 to continue our discussion on water security and sustainability. We sincerely hope this could provide an open, frank, productive and multi-disciplinary forum for researchers and practitioners in the field. Researchers and practitioners around the globe are welcome to take part in the two-day discussion from cross-cutting perspectives.



## ESTDS Forums

The Water Security and Sustainability Forum is one of the International Top-level Forums on Engineering Science and Technology Development Strategy (ESTDS) sponsored by the Chinese Academy of Engineering. The ESTDS Forums of the Chinese Academy of Engineering could date back to 2011 when the Academy started to vision the future development of engineering science in the upcoming 20 years and even further through strategic discussions and studies. ESTDS Forums are best-known for their inter-disciplinary and international ways of thinking. They try to break disciplinary boundaries for synergy in innovation and bridge the physical distances between world's leading experts for international cooperation. ESTDS Forums focus on themes that are macro-scale, strategically significant, and forward-looking.

## Theme & topics

### Theme

- Water security and sustainability

### Topics

- Climate change and adaptation
- Flooding and flood risk management
- Water saving and water security
- Aquatic eco-systems and rehabilitation
- Groundwater protection and sustainable development
- River conservation and green development
- Safety and resilience of water infrastructures

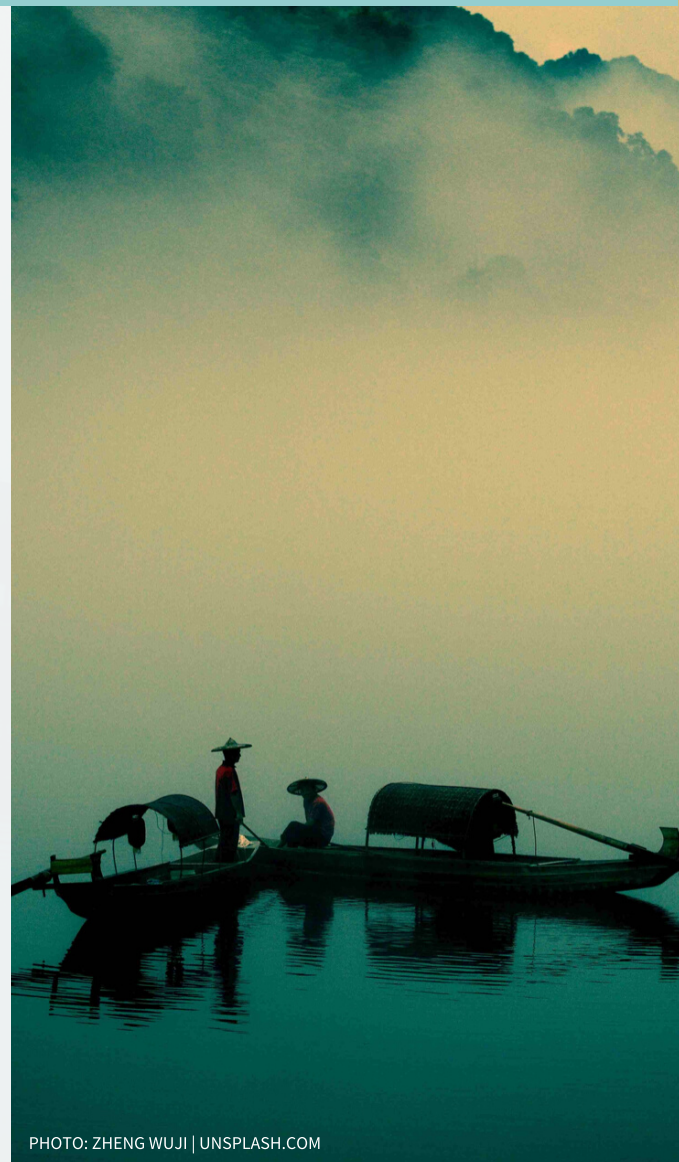


PHOTO: ZHENG WUJI | UNSPLASH.COM





# Partnerships

## Sponsors

- Chinese Academy of Engineering
- Hohai University
- Nanjing Hydraulic Research Institute
- Chinese Hydraulic Engineering Society

## Co-hosts

- Yangtze Institute for Conservation and Development
- CAE Division of Civil, Hydraulic and Architectural Engineering
- State Key Laboratory of Hydrology-Water Resources and Hydraulic Engineering
- JRC Water Science and Engineering
- MWR Research Center for Climate Change

## Partners

- China Three Gorges Corporation
- State Key Lab of High-Performance Civil Engineering Materials
- UNESCO-IHP
- International Association of Hydrological Sciences
- Key Lab of Water Science and Hydraulic Engineering of MWR
- Key Lab of Failure Mechanism and Safety Control Techniques of Earth-rock Dam of MWR
- (To be continued)



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David Zhou  
Aifeng Tao  
Dawei Guan

# Time & venue

The Forum will be held in Nanjing, China on 16 to 19 November 2020.  
More details of venue and programmes will be announced later.

# Call for abstracts

We are inviting researchers and practitioners around the world in the water sector to submit abstracts for presentation (in English, no less than 500 words). Please see the official website for more guidelines for submission. The submission system will be open until 15 July 2020. A collection of abstracts will be published at the Forum. Based on public presentation and expert review, excellent papers will be published by the following high-profile journals:

- Engineering (journal in English)
- Advances in Water Science (journal in Chinese and special issue in English)
- Chinese Journal of Geotechnical Engineering (journal in Chinese)
- Water Science and Engineering (journal in English)

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