

**IWHR Newsletter 2018-01 Spring Edition**

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 **IWHR Newsletter**  
China Institute of Water Resources and Hydropower Research · 中国水利水电科学研究院

No. 1 of 2018, Spring Edition

**INTERNATIONAL COOPERATION**



**IWHR at 8th World Water Forum**

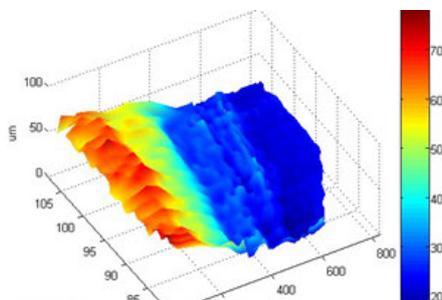
IWHR has been actively and extensively involved in the 8th World Water Forum, which was kicked off on March 19, 2018 in Brasilia, Brazil, organizing, coordinating and attending sessions, water expo and side events...



**IAHR president visits and lectures**

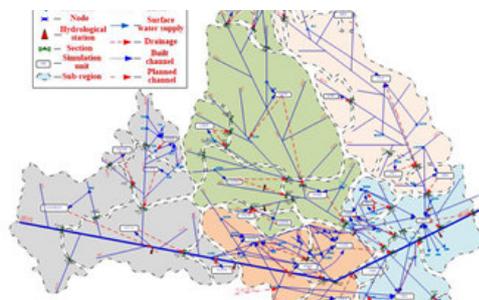
IAHR President Peter Goodwin visited IWHR on January 18, 2018, attending IAHR Executive Board Meeting held at IWHR, lecturing at IWHR's Global Vision Forum, and was warmly received by IWHR President Kuang Shangfu...

**RESEARCH PROGRESS**



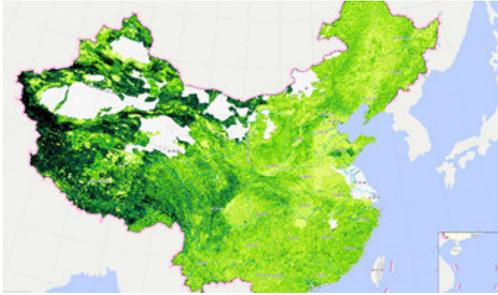
**Intelligent hydropower unit diagnosis**

Testing start-up and trial operation of hydropower units and the full-head operation stability and energy characteristics; analyzing and studying the coupling relationship; Investigating the health assessment, performance degradation mechanism and degradation trend prediction...



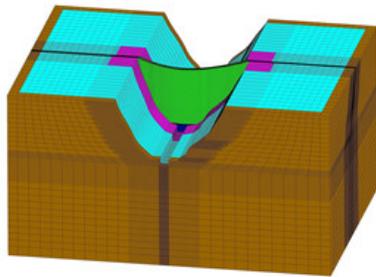
**Instream eco-environmental flow**

Investigating water-ecology-economy dynamic interaction mechanism; developing coupling simulation model; identifying natural eco-hydrological base of rivers; analyzing multi-source disturbance attribution; presenting holistic analysis of multi-level instream eco-environmental flow...



### Flash flood assessment

Designing technical system and specifications; clarifying technical requirements; performing fine division and attribute extraction of small river basins in a large scope; analyzing runoff production characteristics of underlying surfaces; developing base map and software tools; proposing solutions...



### Seismic safety of high dams

Researching ground motion at the dam site; investigating damage and failure mechanism of high dams and aseismic capacity to prevent catastrophes under extreme earthquakes; examining dynamic properties of dam concrete; probing into strategies of preventing seismic catastrophes in high dams...



### Hydraulic elevator dam

Optimizing product structure; selecting and improving the key components of the hydraulic system; innovating and integrating the features of electronic control system for safer and smarter operation...



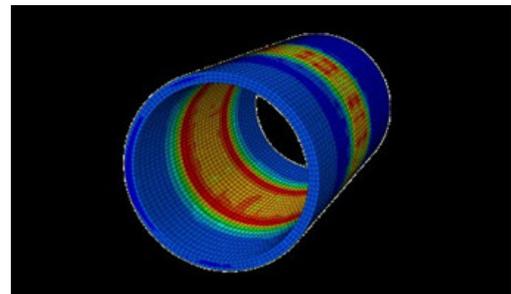
### Sprinkler and micro irrigation

Researching precision application and variable control of water and fertilizer in sprinkler irrigation; performance enhancement of drip irrigation system and integrated regulation of water, fertilizer, gas and heat; assessing the regional adaptability of water-saving irrigation technology...



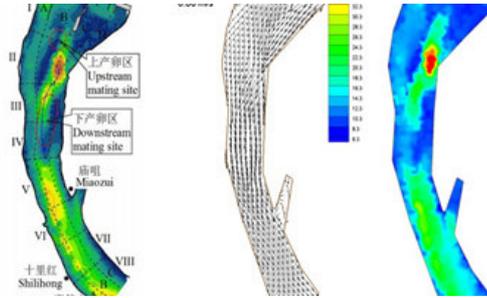
### Gravel bed load transport

Investigating gravel bed load quantity and its longitudinal variation in the lower Jinsha River; revealing the law of gravel bed load transport; investigating gravel bed load transport in the tributaries...



### Carbon Fiber Reinforced Polymer

Performing prototype tests with interior loads and external loads according to different layers; numerically simulating whole process of PCCP failure; developing CFRP protective materials; establishing a complete set of construction processes and quality control standards...



### Habitat and eco-water for fishes

Investigating key habitat factors and eco-hydrological requirements; proposing technical scheme for ecological scheduling; examining regulation of ecological water requirements by cascade reservoirs; analyzing environmental characteristics and main influencing factors...



### Degraded grassland restoration

Analyzing the soil erosion status of degraded grassland; Researching technologies of soil erosion control, irrigation regulation, soil conservation, artificial planting stability, ecological compensation mechanism; developing integrated model and demonstration...

## EVENT PROMOTION


**The 8th Global FRIEND-Water Conference**  
**BEIJING CHINA**  
 November 6-9, 2018