



# INTERNATIONAL SEDIMENT INITIATIVE

## NEWSLETTER

*Reporting ISI news to you quarterly*

No. 49 Dec. 5, 2018

### IN THIS ISSUE

#### News

- ✧ ISI International Training Workshop on Integrated Sediment Management in River Basins held in Beijing 1
- ✧ ISI Advisory Group Meeting held in Beijing 2
- ✧ The Sixth International Conference on Estuaries and Coasts held in Caen, France 2
- ✧ China promotes global water resources management 3
- ✧ 2018 Great Rivers Forum: Converging Rivers Civilizations for a Sustainable Future 3
- ✧ IWHR organizes Forum on Modern Water Governance and Technological Innovation to celebrate its 60th anniversary 4
- ✧ Round-Table Meeting of Leaders of Water-related International Organizations held in Beijing 5
- ✧ The second International Youth Forum on Soil and Water Conservation held in Moscow 5
- ✧ Global Soil Erosion Research Forum held 5

#### Publications

- ✧ Papers published in IJSR Vol.33, No 3 & 4, 2018 6
- ✧ Contents of ISWCR (Vol. 6, No 3 & 4, 2018) 7

#### Coming Events

- ✧ International Conference on Silk-roads Disaster Risk Reduction and Sustainable Development (Beijing, May 11-12, 2019) 9
- ✧ 2019 World Hydropower Congress (France, May 14 -16, 2019) 9
- ✧ 7th International Conference on Debris Flow Hazards Mitigation (USA, June 10 -13, 2019) 9
- ✧ 38th IAHR World Congress (Panama, Sep. 1-6, 2019) 9
- ✧ 14th International Symposium on River Sedimentation (Chengdu, China, Sept. 16-19, 2019) 10
- ✧ 10th International Conference on Asian and Pacific Coasts (Vietnam, September 25-28, 2019) 10

### UNESCO“国际泥沙计划”简报

#### 本期内容

#### 新闻

- ✧ 国际泥沙中心承办联合国教科文组织“流域综合泥沙管理国际培训班” 1
- ✧ 国际泥沙计划(ISI)顾问委员会会议在京召开 2
- ✧ 第六届河口海岸国际研讨会在法国卡昂召开 2
- ✧ 中国促进全球水资源管理 3
- ✧ 2018“大河对话”：汇聚大河文明 探索可持续未来 3
- ✧ 中国水科院在京举办现代治水与科技创新高端论坛 4
- ✧ 水国际组织领导人圆桌会议在京召开 5
- ✧ 第二届国际水土保持青年论坛在莫斯科举办 5
- ✧ “全球土壤侵蚀研究高层论坛”在杨凌召开 5

#### 出版物

- ✧ 《国际泥沙研究》期刊 2018 年第 33 卷第 3 期/第 4 期 6
- ✧ 《国际水土保持研究》期刊 2018 年第 6 卷第 3 期/第 4 期 7

#### 会议信息

- ✧ 一带一路国际减灾和可持续发展国际研讨会(北京, 2019 年 5 月 11-12 日) 9
- ✧ 世界水电大会 2019(法国, 2019 年 5 月 14-16 日) 9
- ✧ 第七届泥石流灾害防治国际学术讨论会(美国, 2019 年 6 月 10-13 日) 9
- ✧ 第三十八届 IAHR 世界大会(巴拿马, 2019 年 9 月 1-6 日) 9
- ✧ 第十四次河流泥沙国际学术讨论会(成都, 2019 年 9 月 16-19 日) 10
- ✧ 第十届亚太海岸国际学术研讨会(越南, 2019 年 9 月 25-28 日) 10



## NEWS

### ISI International Training Workshop on Integrated Sediment Management in River Basins held in Beijing



The ISI International Training Workshop on Integrated Sediment Management in River Basins organized by ISI and the International Research and Training Center on Erosion and Sedimentation (IRTCES) was held in Beijing, China from November 5-10, 2018. About 50 participants, including 20 women, attended the training workshop, including lecturers, representatives from UNESCO, the International Centre for Water Resources and Global Change (ICWRGC), the International Association of Hydropower (IHA), the China Institute of Water Resources and Hydropower Research (IWHR) and IRTCES, and trainees from Indonesia, Iran, Kenya, Malaysia, Mongolia, Morocco, Sudan, Uganda and China.

The opening ceremony of the training workshop was held in the morning of November 6. Chaired by the Deputy Director of IRTCES, Prof. Liu Guangquan, opening remarks were made by Prof. Manfred Spreafico, Chairperson of UNESCO-ISI Advisory Group; Dr. Anil Mishra and Dr. Hans Thulstrup, Programme Specialists of UNESCO. Prof. Ning Duihu, Deputy Director of IRTCES, delivered a welcome speech, and this was followed by a brief introduction to the training workshop and the local arrangements made by Prof. Liu Cheng, Deputy Division Chief of IRTCES and a member of UNESCO-ISI Advisory Group.

The training workshop included lectures, seminars, and a one-day field visit. Topics included river basin management, soil and water conservation technology, ecology and restoration in integrated river basin management, reservoir sedimentation and sediment management technology. Participants also contributed to a seminar involving guided discussion of national case studies presented by participants.

The lecture presentations included:

- The impact of Global Change on the sediment loads of the world's rivers (Prof. Des. Walling, member of ISI Advisory Group; Past President of WASER; Emeritus Professor of the University of Exeter, U.K.);
- Overview of Soil and Water Conservation in the World (Prof. Li Rui, WASWAC President; Professor of the Institute of Soil and Water Conservation, Chinese Academy of Sciences and Ministry of Water Resources, China); Soil and Water Conservation in China (Prof. Li Rui);

- Reservoir sedimentation and sediment management (Prof. Manfred Spreafico, Chairperson of ISI Advisory Group; Emeritus Professor of the University of Berne, Switzerland);
- Integrated Sediment Management –with the Yellow River as an example (Prof. Wang Zhao-Yin, member of ISI Expert Group; WASER President; Professor of Tsinghua University, China); Vegetation-Erosion Dynamics and Application in China (Prof. Wang Zhao-Yin);
- Sediment-related ecological problems and their control (Prof. Xu Mengzhen, (Ms.), Professor of Tsinghua University, China);
- Sediment monitoring in Germany: implications for managing sediment-related ecological problems in developing countries (Dr. Thomas Hoffmann, member of ISI Expert Group; Head of Sediment Laboratory, German Federal Institute of Hydrology, Koblenz, Germany); and
- 2030 Development Agenda and International Hydrological Program (IHP) (Dr. Anil Mishra, member of ISI Advisory Group; Programme Specialist, UNESCO/Division of Water Sciences).

Coordinated by Prof. Des. Walling, a seminar of country presentations and discussions was held and 8 presentations were made by participants from Sudan, Morocco, Kenya, Uganda, Iran, Indonesia, Mongolia and China.

In the late afternoon of November 8, the closing ceremony was organized chaired by Prof. Liu Cheng. Prof. Manfred Spreafico, Prof. Des. Walling and Dr. Anil Mishra made brief closing remarks. The participants were awarded certificates by Prof. Manfred Spreafico, Prof. Des. Walling, Dr. Anil Mishra, Prof. Ning Duihu, Prof. Liu Guangquan, and Prof. Liu Cheng.



Certificates awarding

On November 9, a study tour visited the Daxing Experimental Base of IWHR. Participants visited the laboratories for sediment research, hydraulics and hydraulic mechanisms and had discussions with engineers of IWHR.

The ISI International Training Workshop on Integrated Sediment Management in River Basins was organized by ISI and the International Research and Training Center on Erosion and Sedimentation (IRTCES); sponsored by UNESCO, the Ministry of Water Resources, P.R. China, the UNESCO Offices in Beijing and Jakarta, and co-sponsored by the China Institute of Water Resources and Hydropower Research (IWHR), the International Centre for Water Resources and Global Change (ICWRGC), the World Association for Sedimentation and Erosion Research (WASER), and the World Association of Soil and Water



Conservation (WASWAC). It represented a major ISI activity for 2018 aimed at fulfilling the objectives of the new strategy of ISI, which in turn contributes to the 8th phase of the IHP (2014-2021) which focuses on "Water security: responses to local, regional and global challenges", by addressing the wide-ranging social, economic and environmental impacts of erosion, sediment transport and sedimentation processes with due consideration of gender perspectives.

### ISI Advisory Group Meeting held in Beijing



An ISI Advisory Group Meeting was held at the Ziyu Hotel in Beijing on November 6, 2018. The meeting reviewed past ISI activities and achievements, received information on recent developments associated with IHP-UNESCO and the ISI Technical Secretariat, and discussed future programme, activities and priorities. Future cooperation with the International Centre for Water Resources and Global Change (ICWRGC, Koblenz, Germany), as well as collaboration with the International Hydropower Association (IHA) in co-convening a Sediment Session in the 2019 IHA Congress were discussed. In addition to the members of the ISI Advisory Group, Prof. Manfred Spreafico, Prof. Des Walling, Dr. Anil Mishra and Prof. Cheng Liu, the meeting was attended by two members of the ISI Expert Group, Prof. Zhaoyin Wang and Dr. Thomas Oliver Hoffmann, and by Mr. Stephan Dietrich from ICWRGC and Ms. Maria Ubierna Aparicio from IHA who participated as observers.

### The Sixth International Conference on Estuaries and Coasts held in Caen, France



The Sixth International Conference on Estuaries and

Coasts (ICEC-2018), organized by the University of Caen Normandy and the Group of Scientific Interests on Hydraulics for the Environment and for Sustainable Development (GIS HEDD), was successfully held in Caen, France from August 20-23, 2018. About 150 participants from more than 20 countries and regions around the world participated in the conference. The ICEC-2018 was sponsored by the International Research and Training Center on Erosion and Sedimentation (IRTCES) and co-sponsored by the French Society of HydroTechnics (SHF), the International Association for Hydro-Environment Engineering and Research (IAHR), the World Association for Sedimentation and Erosion Research (WASER), the Chinese Hydraulic Engineering Society Estuary Regulation and Protection Commission (CHES-ERPC), and the city of Caen la mer.

The conference was opened on the morning of August 20, chaired by Prof. Dan Nguyen, the Chairman of the LOC, speeches were delivered by following representatives:

- Mr. Pierre Denise, President of the University of Caen Normandie;
- Prof. Liu Guangquan, Deputy Director of IRTCES;
- Prof. Lu Zhongmin, Director of the CHES-ERPC;
- Prof. Liu Cheng, Executive Secretary General of WASER; and
- Mr. Jean-Michel Tanguy, President of GIS HEDD.

The conference included 8 keynote, 85 oral and 16 poster presentations and extended over 4 days, including a one day technical visit to the Couesnon dam. Papers with the main theme "Estuaries and Coasts in times of Global Change" were presented and discussed. The keynote presentations included:

- Port and coastal structures' resilience and climate change: about some of the French and PIANC's experiences (by Prof. Geoffroy Caude);
- The Mississippi River Delta Plain as a basis for understanding low gradient coastal land margin systems and how we may engineer our response to climate change (by Prof. Scott Hagen);
- Towards understanding the dynamics of intertidal ecosystems in times of global change: towards linking fundamental and application (by Prof. Tjeerd Bouma);
- Challenges and opportunities of tidal energy conversion: tidal asymmetry and tidal phasing (by Prof. Neil Simon);
- Efficient modelling of complex coastal evolution at monthly to century time scales (by Prof. Roelvink Dano);
- Extreme waves: Their measurement, generation, modelling and impact (by Prof. Frédéric Dias);
- Coastal development under the threat of floods and climate change: risk assessment and sustainable decision making (by Prof. Barbara Zanuttigh); and
- Interactions of Waves, Current and Vegetation (by Prof. Weiming Wu).

The ICEC is a triennial technical event initiated by IRTCES and its Permanent Secretariat is hosted by IRTCES. The 7th ICEC will take place in 2021 and will be hosted by East China Normal University and held in Shanghai, China.



Technical visit to the Couesnon dam



## China promotes global water resources management



China is willing to promote sustainable development in global water resources management by sharing its water-control technologies and experiences, a senior official said this week.

Ye Jianchun, vice-minister of water resources, made the comment at the opening ceremony for the 8th Global FRIEND-Water Conference, which was held in Beijing from November 6-9, 2019. FRIEND is an acronym for *Flow Regimes from International Experimental and Network Data*.

He emphasized that water safety problems, including floods and droughts, water shortages and pollution, and damage to aquatic ecology, have become more pronounced in countries around the world, including China, and are hindering global sustainable development.

In response, the Chinese government has been endeavouring to promote ecological protection and a water-saving society and has established the largest system for river governance and water resources development in the world,

He highlighted that with only 6 percent of the world's fresh water and 9 percent of the world's farmland, China manages to support 20 percent of the world's population. The country has also managed to provide safe drinking water to 500 million rural residents, he said.

"China would like to make use of the important platform of the conference to discuss water-control experiences, share water-control technologies, and promote the capability of safeguarding water safety with countries across the world to promote the sustainable global development of water resources management," Ye said.

Cai Jianyuan, Director-General of hydrology at the Ministry of Water Resources, also addressed the Conference and indicated that it was the first time that China had hosted the event.

He highlighted that the country had seen great developments in water resource management, especially in the past decade, and that the country's green development philosophy was in accordance with international society's call for better water resources management.

However, he said many foreign experts were unaware of these developments due to a lack of communication, and the Conference offered them an opportunity to learn more about them.

UNESCO Assistant Director-General for Natural Sciences Ms. Flavia Schlegel informed in her speech that FRIEND scientific conference is organized within the framework of the UNESCO International Hydrological Programme. UNESCO-IHP will continue to support

countries to address the local, national, regional and global challenges towards achieving water security by promoting and leading international hydrological research, facilitating education and capacity development and enhancing governance for sustainable and peaceful water resources management. She further indicated that the Conference focuses on the theme of hydrological processes and water security in a changing world.

Andras Szollosi-Nagy, chair of the planning committee for the Sustainable Water Future Program, a platform facilitating international scientific collaboration in addressing the world's water problems, highlighted China's contributions to addressing the water safety issue.

China boasts the only university in the world devoted to water science and education, Hohai University in Jiangsu's provincial capital Nanjing, which "has become a powerful and leading intellectual force in water science in the whole world", he said.

"And particularly now, as climate change has become an important political issue and as water is the most important component of the climate system, China has already played a very important role in looking at how water resources management strategies can be adapted to climate change," he said.

He also indicated that China has been undertaking large-scale water ecosystem restoration programmes unmatched elsewhere in the world.

Abou Amani, chief of the Section on Hydrological Systems and Water Scarcity of the UNESCO Division of Water Sciences emphasized that the conference was important as it had gathered many scientists together to share knowledge and scientific research and identify key issues so that water management can be improved around the world. (Source: China Daily)



Vice Minister Ye Jianchuan of the Ministry of Water Resources of China met with UNESCO Assistant Director-General for Natural Sciences Ms. Flavia Schlegel.

## 2018 Great Rivers Forum: Converging Rivers Civilizations for a Sustainable Future





From October 28 to 30, the 2018 Great Rivers Forum (GRF) was held at the Changjiang Civilization Museum in Wuhan, China, on the theme of “Confluence: Great Rivers Civilizations—High Quality Development for a Sustainable Future”. This forum was organized jointly by the Municipal Government of Wuhan and the United Nations Educational, Scientific, and Cultural Organization (UNESCO) through its Beijing Office. It was hosted by the Cultural Bureau of Wuhan, the Foreign Affairs Office of the Municipal Government of Wuhan, and the Changjiang Civilization Museum, and was supported by the Great Rivers Civilization Research Center.

The Great Rivers Forum offers itself as an open international platform for experts and managers from various fields. The involvement of sister cities and UNESCO networks (World Heritage sites, Creative Cities, Biosphere Reserves and Ecohydrology Pilot Sites) in this cooperative effort will contribute to pushing forward high-quality development along Great Rivers, with particular attention to their ecological and cultural environment.

#### Expert Perspectives on Rivers Civilizations and Sustainable Development

The 2018 GRF programme comprised one high-level round-table and three parallel expert sessions. At the high-level round-table, heads and officials of relevant institutions and river basin authorities discussed “The Integration of River Culture and Environment in the Management of Great River Basins”, from the perspective of managers.

The three expert sessions focused on: “River Culture: preserve and let evolve natural and cultural heritages”, “Visualizing Water Worlds along Great Rivers – Water Museums, Heritage, Memory and Sense of Place”, and “Urban development along great rivers – re-connecting the city with its river”.

These sessions gathered experts, scholars, and officials from different fields to exchange and learn from each other, and to explore the sustainable development of rivers and basins from different angles.

#### Future Development of Rivers

Over 150 delegates participated in this forum, including more than 80 delegates from China and over 70 international delegates. .

The Forum attracted the participation of experts and officials from international organizations such as UNESCO, the International Council of Museums, and the Global Network of Water Museums; senior researchers from Great River areas; researchers from academic institutions such as Columbia University, the Russian Academy of Sciences, Wuhan University, UNESCO Centres and Chairs; and well-known Chinese academicians. They shared their expertise on the sustainable development of Great Rivers, their basins and cities.

GRFs aim to provide a venue for ongoing collaboration and International Influence.

The GRF is held every two years. Following the first successful meeting in 2016, the 2018 GRF was improved in several respects. The contribution of UNESCO to its organization has brought a broader and more international perspective, considering in particular the number of overseas participants, the size of the Forum, the fields covered and the themes addressed.

At the “Water Confluences Ceremony” of this Forum,

representatives from different river basins poured water from their respective rivers into the same container, symbolizing the spirit of the 2018 GRF—“integrating the open and inclusive Chinese spirit into the great process of building the shared future of mankind, via dialogues, in the context of the world’s great river basins.”

GRF will uphold this spirit and continue to bring together cutting-edge development experiences, environmental management approaches, economic wisdom, and the cultural appeal of the rivers, to become a forum of international relevance and influence. (Source: UNESCO Office Beijing)

### IWHR organizes Forum on Modern Water Governance and Technological Innovation to celebrate its 60th anniversary



On October 18, 2018, the day of IWHR’s 60th anniversary, the Institute organized the Forum on Modern Water Governance and Technological Innovation. This was attended by the Minister of Water Resources of China, Mr E Jingping, who delivered a speech stressing the new Chinese water governance principles of “prioritizing water conservation, balancing spatial distribution, taking systematic approaches and giving full play to the roles of both government and market”.

Minister E conveyed the comments from Mr Hu Chunhua, vice premier of the State Council, who said that the fruitful achievements that IWHR has made in the past 60 years in scientific and technological research and human resources training have significantly pushed forward the leapfrog development of the water and hydropower sectors in China.

In his speech, Mr E Jingping emphasized the importance of scientific and technological innovation, which he said is the main engine giving key impetus to the development of water resources. For a long time, Chinese researchers have focused on the national demands and made tremendous progress in a variety of fields, including sedimentation research, damming technologies, water allocation, hydrological forecasting, etc. The rate of contribution of scientific and technological progress to water resources development has reached 53.5%. IWHR, as the leading and major force, has made enormous and untiring efforts, while evolving for 6 decades, significantly contributing to the progress and development of modern water governance.

Lu Guihua, Vice Minister of the Ministry of Water Resources, attended the meeting and read the speech of Qian Zhengying, former vice chairman of the National Committee of the Chinese People’s Political Consultative Conference. Yan Zhiyong, Chairman of China Electric Power Construction Group, and Benedicto Braga, President of the World Water Council, also delivered speeches at the meeting.



Kuang Shangfu, President of the China Institute of Water Resources and Hydropower Research, comprehensively reviewed the development history of the Institute, and summarized the achievements in personnel training, discipline development, infrastructure and platform construction, scientific research, scientific and technological support, cooperation and exchanges, and the prospects for new achievements.

Keynote reports on "Smart Dam", "Water-Food-Energy Trilogy" and "Nature-Human Coupled Water Cycle: Theory, modelling and Regulation" were delivered by Zhong Denghua, Academician of the Chinese Academy of Engineering and President of Tianjin University; Felix Reinders, President of the International Irrigation and Drainage Committee (ICID); and Wang Hao, Academician of the Chinese Academy of Engineering and Director of the State Key Laboratory of Simulation and Regulation of Water Cycle in River Basin. (Source: IWHR)

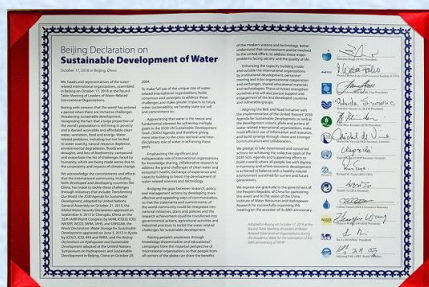
### Round-Table Meeting of Leaders of Water-related International Organizations held in Beijing



The Round-Table Meeting of Leaders of Water-related International Organizations was held by the China Institute of Water Resources and Hydropower Research (IWHR) in Beijing on October 17, 2018. Leaders from over 10 important water-related international organizations and associations, such as the World Water Council, the Global Water Partnership, the International Association for Hydro-Environment Engineering and Research, the International Commission on Irrigation and Drainage, the International Commission on Large Dams, the International Conference on Flood Management, the International Hydropower Association, the World Association for Sedimentation and Erosion Research, and the World Association of Soil and Water Conservation, and about 60 Chinese and foreign representatives attended the meeting. Three topics, Topic 1 - Innovation R&D to support decision-making in water governance and promote sustainable development goals, Topic 2 - Role of International organizations in facilitating dialogues among stakeholders, and Topic 3 - International collaboration and capacity building, were discussed, and a Beijing Declaration on Sustainable Development of Water was signed.

Declaration on Sustainable Development of Water was signed.

The Vice Minister of Water Resources of



China, Tian Xuebin attended the closing ceremony and delivered a speech.

### The second International Youth Forum on Soil and Water Conservation held in Moscow



The second International Youth Forum on Soil and Water Conservation (2nd IYFSWC) with the title of Climate Change Impacts on Sediment Dynamics: Measurement, Modelling and Management was successfully held in beautiful Moscow during August 26-31, 2018.

This Forum was sponsored by WASWAC, and organized by the Lomonosov Moscow State University (MSU). It is the second Forum with this theme, following the first Forum held in Nanchang, China in October 2015. It is a global Forum focusing on young scientists and managers who are contributing to soil and water conservation. A total of 137 participants from 14 countries including China, Iran, Morocco, Russia, Austria, Egypt, Italy, Nigeria, Serbia, Belgium, Germany, Japan, Poland and Ukraine attended this forum. (Source: WASWAC)

### Global Soil Erosion Research Forum held



The Global Soil Erosion Research Forum was successfully held in Yangling, China during September 12 to 14. This forum was jointly sponsored by the World Association of Soil and the Water Conservation, DesertNet International and the Chinese Society of Soil and Water Conservation, and organized by the Institute of Soil and Water Conservation of CAS & MWR and the State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau. 274 experts, young researchers, and students involved in soil erosion from 10 countries, including China, the United States, Australia, Switzerland, Spain, Italy, Czech Republic, Japan, Serbia and Ethiopia, attended this forum. (Source: WASWAC)

### More News on ISI Website

(<http://www.irtces.org/isi/>)



## PUBLICATIONS



### Papers Published in the International Journal of Sediment Research Volume 33, No. 3, 2018

Pages 221-370  
(September 2018)

Towards a universal optimization of the performance of sand storage dams in arid and semi-arid areas by systematically minimizing vulnerability to siltation: A case study in Makueni, Kenya

Josep de Trincheria, Walter Filho Leal, Ralf Otterpohl  
Pages 221-233

Analytical approach for sheet flow transport in purely acceleration-skewed oscillatory flow

Xin Chen, Fujun Wang, Xuelin Tang  
Pages 234-242

Effect of thickness of planar nozzles on erosion depth of levee soils subjected to plunging water

Chung Rak Song, Jinwon Kim, James Tyler Kidd, Alexander Cheng, David Admiraal  
Pages 243-249

Phosphorus fractionation and release characteristics of sediment in the Saemangeum Reservoir for seasonal change

Dong-Heui Kwak, Young-Tae Jeon, Young Duck Hur  
Pages 250-261

Multigene genetic programming for sediment transport modeling in sewers for conditions of non-deposition with a bed deposit

Mir Jafar Sadegh Safari, Ali Danandeh Mehr  
Pages 262-270

Wide river or narrow river: Future river training strategy for Lower Yellow River under global change

Xiaonan Li, Deyu Zhong, Y. Joseph Zhang, Yanjun Wang, Hongwu Zhang  
Pages 271-284

An isotopic model for the origin of autochthonous organic matter contained in the bottom sediments of a reservoir

Piotr Koszelnik, Renata Gruca-Rokosz, Lilianna Bartoszek  
Pages 285-293

Assessment of heavy metal pollution from the sediment of Tupilipalem Coast, southeast coast of India

Sreenivasulu Ganugapenta, Jayaraju Nadimikeri, Sundara Raja Reddy Balam Chinnappolla, Lakshmana Ballari, Lakshmi Prasad Tella  
Pages 294-302

Characteristics and influencing factors of sediment deposition-scour in the Sanhuhekou-Toudaoguai Reach of

the upper Yellow River, China

Bo Yao, Qingquan Liu  
Pages 303-312

Sheet flow hydrodynamics over a non-uniform sand bed channel

Anurag Sharma, Bimlesh Kumar  
Pages 313-326

Enhanced bed load sediment transport by unsteady flows in a degrading channel

Zhijing Li, Honglu Qian, Zhixian Cao, Huaihan Liu, Penghui Hu  
Pages 327-339

Soil and onsite nutrient conservation potential of aromatic grasses at field scale under a shifting cultivated, degraded catchment in Eastern Ghats, India

Partha Pratim Adhikary, Hunsur Chikkanarasimhaiah Hombegowda, Dhananjay Barman, Madegowda Madhu  
Pages 340-350

Flow fields and particle trajectories beneath a tidal bore: A numerical study

Adrien Berchet, Bruno Simon, Anthony Beaudoin, Pierre Lubin, . Serge Huberson  
Pages 351-370

Full papers are available at ScienceDirect:

<https://www.sciencedirect.com/journal/international-journal-of-sediment-research> with free access to the paper abstracts.



### Papers Published in the International Journal of Sediment Research Volume 33, No. 4, 2018

Pages 371-524 (December 2018)

Water balance prediction in stormwater infiltration basins using 2-D modeling: An application to evaluate the clogging process

Patrice Cannavo, Anaïs Coulon, Sylvain Charpentier, Béatrice Béchet, Laure Vidal-Beaudet  
Pages 371-384

The quantity of sand fraction sediment in reservoirs as the basis of an assessment of the bedload transport from a reservoir catchment

Szczepan Ludwik Dąbkowski, Łukasz Bąk  
Pages 385-394

Experimental study on blocking and self-cleaning behaviors

of beam dam in debris flow hazard mitigation  
Hao Sun, Yong You, Jinfeng Liu  
Pages 395-405

Sediment geochemistry of the urban Lake Paulo Gorski  
Marcelo Bevilacqua Remor, Silvio César Sampaio, Sacha de Rijk, Marcio Antônio Vilas Boas, ... Fábio Augusto Schardong  
Pages 406-414

Linear and non-linear approaches to predict the Darcy-Weisbach friction factor of overland flow using the extreme learning machine approach  
Kiyomars Roushangar, Saba Mirza Alipour, Dominique Mouaze  
Pages 415-432

Time-averaged sub-layer concentration profiles in oscillatory sheet flows  
Yuhai Wang, Wenhong Cao, Wen Lu, Huifeng Liu, ... Fei Liu  
Pages 433-440

Issues in Eulerian-Lagrangian modeling of sediment transport under saltation regime  
Reza Barati, Seyed Ali Akbar Salehi Neyshabouri, Goodarz Ahmadi  
Pages 441-461

A depth-averaged two-phase model for debris flows over fixed beds  
Ji Li, Zhixian Cao, Kaiheng Hu, Gareth Pender, Qingquan Liu  
Pages 462-477

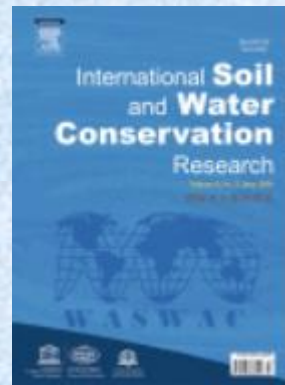
Countermeasure of river bend scour using a combination of submerged vanes and riprap  
Piya Biswas, Abdul Karim Barbhuiya  
Pages 478-492

Hydrometeorological assessments and suspended sediment delivery from a central Himalayan glacier in the upper Ganga basin  
Amit Kumar, Akshaya Verma, Anupam Anand Gokhale, Rakesh Bhambri, ... Naval Kishore  
Pages 493-509

A study on zinc speciation of Tungabhadra River sediments, Kurnool, south India: A tool in metal pollution monitoring  
Madakka Mekapogu, Jayaraju Nadimikeri, Pramod Kumar Madri, Sowjanya Devi  
Pages 510-517

Optimizing the dataset size of a topo-bathymetric survey for Hammam Debagh Dam, Algeria  
Djamel Bengora, Lotfi Khiari, Jacques Gallichand, Noureddine Dechemi, Silvio José Gumiere  
Pages 518-524

Full papers are available at ScienceDirect:  
<https://www.sciencedirect.com/journal/international-journal-of-sediment-research> with free access to the paper abstracts.



## Contents of ISWCR (Vol. 6, No.3, 2018)

International Soil and Water Conservation Research  
Volume 6, Issue 3  
Pages 203-264  
(September 2018)

Estimation of water balance and water yield in the Reedy Fork-Buffalo Creek Watershed in North Carolina using SWAT  
Frederick Ayivi, Manoj K. Jha  
Pages 203-213

Effect of water conservation measures on soil moisture and maize yield under drought prone agro-ecological zones in Rwanda  
Dieudonne Uwizeyimana, Stephen M. Mureithi, George Karuku, Geoffrey Kironchi  
Pages 214-221

Assessment of sediment inflow to a reservoir using the SWAT model under undammed conditions: A case study for the Somerville reservoir, Texas, USA  
Dagbegnon Clement Sohoulade Djebou  
Pages 222-229

Electrical conductivity method for predicting yields of two yam (*Dioscorea alata*) cultivars in a coarse textured soil  
Mutair A. Akanji, Suarau O. Oshunsanya, Abdulrasoul Alomran  
Pages 230-236

Land use impact on clay dispersion/flocculation in irrigated and flooded vertisols from Northern Cameroon  
Simon Djakba Basga, Désiré Tsozue, Jean Pierre Temga, Jules Balna, Jean Pierre Nguetnkam  
Pages 237-244

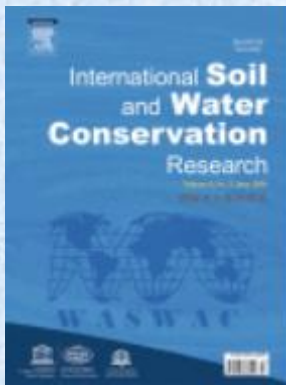
Variation and driving factors of nitrous oxide emissions from irrigated paddy field in the arid and semiarid region  
Qingwen Zhang, Hui Zhang, Xingren Liu, Aiping Zhang, ... Zhengli Yang  
Pages 245-252

Aeration and sawdust application effects as structural material in the bioremediation of clayey acid soils contaminated with diesel oil  
Gabriela Menta Alvim, Patrícia Procópio Pontes  
Pages 253-260

Repeated and random components in Oklahoma's monthly precipitation record  
Jurgen D. Garbrecht, David P. Brown, X.C. John Zhang  
Pages 261-263

Free full papers and open access are available at ScienceDirect :  
<https://www.sciencedirect.com/journal/international-soil-and-water-conservation-research>





## Contents of ISWCR (Vol. 6, No.4, 2018)

International Soil and  
Water Conservation  
Research  
Volume 6, Issue 4  
Pages 265-340  
(December 2018)

Runoff and losses of nutrients and herbicides under long-term conservation practices (no-till and crop rotation) in the U.S. Midwest: A variable intensity simulated rainfall approach

Javier M. Gonzalez  
Pages 265-274

Influence of freeze-only and freezing-thawing cycles on splash erosion

Seyed Hamidreza Sadeghi, Mohammad Bagher Raeisi, Zeinab Hazbavi  
Pages 275-279

Assessment of soil quality indicators under different agricultural land uses and topographic aspects in Central Vietnam

Tung Gia Pham, Hung Trong Nguyen, Martin Kappas  
Pages 280-288

Effect of spatial scale on runoff coefficient: Evidence from the Ethiopian highlands

Tesfaye Mebrate Lemma, Gizaw Desta Gessesse, Asfaw Kebede Kassa, Desalegn Chemed Edossa  
Pages 289-296

A GIS-based approach for identifying potential sites for

harvesting rainwater in the Western Desert of Iraq  
Ammar Adham, Khamis Naba Sayl, Rasha Abed, Mohamed Arbi Abdeladhim, ... Coen J. Ritsema  
Pages 297-304

Integrated soil, water and agronomic management effects on crop productivity and selected soil properties in Western Ethiopia

Teklu Erkossa, Timothy O. Williams, Fanuel Laekemariam  
Pages 305-316

Effect of plastic mulch on crop yield and land degradation in south coastal saline soils of Bangladesh

Mohammad Asadul Haque, Muhammad Jahiruddin, Derek Clarke  
Pages 317-324

Features of selected benchmark soils along an elevational transect of the northeastern part of the Moldavian Plateau (Romania)

Geanina Bireescu, Carmelo Dazzi, Giuseppe Lo Papa  
Pages 325-330

Conserving natural resources through food loss reduction: Production and consumption stages of the food supply chain

Shahla M. Wunderlich, Natalie M. Martinez  
Pages 331-339

Free full papers and open access are available at ScienceDirect :

<https://www.sciencedirect.com/journal/international-soil-and-water-conservation-research>

## Publications in ISI Information System

More .....

(<http://www.irtces.org/> )



## COMING EVENTS

### International Conference on Silk-roads Disaster Risk Reduction and Sustainable Development (Beijing, May 11-12, 2019)

**Date:** May 11-12, 2019

**Venue:** Beijing, China

**Summary:** The Silk Road, beginning in the Han Dynasty (207 BC-220 BC), crosses more than 70 countries and affects some 4.4 billion people (63% of the world). For centuries, the Silk Road has played an essential role in connecting the East and the West, through the exchange of trade, science technology and civilization. However, due to active underlying geological structures, including rapid tectonic uplift, climate change, and natural hazards (e.g., earthquakes, landslides, floods, typhoons, tsunamis, etc.) that occur frequently, these conditions place threats on both social development and livelihoods along the Silk Road. Furthermore, numerous challenges related to disaster risk reduction exist in this area, including a lack of background information and data sharing mechanism, as well as an absence of a scientific risk assessment method, and mitigation countermeasures, etc. As a result of this serious situation, and integrated with the Sendai Framework for Disaster Risk Reduction and the Sustainable Development Goals 2030, there is an urgent need to promote international cooperation in disaster risk reduction and sustainable development along the Silk Road. Resilience against natural hazards must be improved and an international platform for joint research and information sharing relevant to disaster risk reduction and sustainable development is needed. Therefore, an international research program for the disaster risk reduction along the Silk Roads is being implemented under the umbrella of SiDRR (Silk-roads Disaster Risk Reduction) by Chinese Academy of Sciences. The implementation of this program will enhance disaster prevention and will contribute to our ability to guarantee the security of livelihood of the affected countries. Based on this understanding, the Chinese Academy of Sciences (CAS), China Association for Science and Technology, and United Nations Environment Programme (UNEP) and International Scientific Partners will jointly host the International Conference on Silk-roads Disaster Risk Reduction and Sustainable Development in Beijing, on May 11-12, 2019.

**Hosts:** Chinese Academy of Sciences (CAS); China Association for Science and Technology; United Nations Environment Programme (UNEP)

**Conference website:** <http://www.sidrr.com/>

**Contacts:**

E-mail: [sidrr@imde.ac.cn](mailto:sidrr@imde.ac.cn)

Contact persons:

Dr. Xiaoqing Chen

Email: [xqchen@imde.ac.cn](mailto:xqchen@imde.ac.cn)

Tel: 13008104468

Dr. Chaojun Ouyang

Email: [cjouyang@imde.ac.cn](mailto:cjouyang@imde.ac.cn)

Tel: 15928089209

Dr. Gordon G. D. Zhou

Email: [gordon@imde.ac.cn](mailto:gordon@imde.ac.cn)

Tel: 13980660182

### 2019 World Hydropower Congress (France, May 14 -16, 2019)

**Date:** 14-16 May 2019

**Venue:** Paris, France

**Summary:** The World Hydropower Congress brings together industry, government, finance, academia and civil society to set priorities for the future direction of the hydropower sector. The seventh Congress, organised by the International Hydropower Association (IHA), is to be hosted in partnership with UNESCO's International Hydrological Programme. With the theme of 'The Power of Water for a Sustainable World', the biennial event in May 2019 will focus on hydropower's role in delivering on the Paris Agreement and the Sustainable Development Goals. Up to 100 countries are expected to be represented at the Congress. Details on registration, the agenda and speakers will be announced in the coming months. Contact us to express your interest in participating in or sponsoring the Congress.

**Conference**

**website:**

<https://www.hydropower.org/congress/>

### 7th International Conference on Debris Flow Hazards Mitigation (USA, June 10 -13, 2019)

**Date:** 10 June 2019 - 13 June 2019

**Venue:** Golden, Colorado USA

**Summary:** We are pleased to announce that the 7th International Conference on Debris-Flow Hazards Mitigation will be held June 10 - 13, 2019 in Golden, Colorado, USA on the campus of Colorado School of Mines. With the beautiful Rocky Mountains covering half the state, Colorado shares the problem of debris-flow hazards with other mountainous areas of the world. Against this backdrop, scientists, engineers, and policy makers from around the world will be able to share new research and ideas in the field of debris flows. This website provides initial details of the conference and venue. Additional information will be added as the conference date approaches.

**Conference website:** <http://dfhm7.csmospace.com/>

### 38th IAHR World Congress (Panama, Sep. 1-6, 2019)

**Date:** 01 September 2019 - 06 September 2019

**Venue:** Panama City, Panama

**Summary:** Global interest in water has increased rapidly in recent years. Many water issues are high on the political agenda, whether it concerns the lack of access to safe water and sanitation or the increase in water-related disasters due to floods and droughts. This challenge must be addressed by management and policy decisions informed by science and engineering knowledge that is relevant, credible, legitimate and delivered in a timely manner. Therefore the discipline of hydro-environment engineering and research is more important than ever. The 38th IAHR World Congress will bring together the key players in the sector from around the globe in "Water – Connecting the World", from 1-6 September 2019 in Panama. We look forward to meeting you there! (Peter Goodwin, IAHR President)

**Conference website:** <http://iahrworldcongress.org/>



## 14th International Symposium on River Sedimentation (Chengdu, China, Sep. 16-19, 2019)

**Date:** September 16 – 19, 2019

**Venue:** Chengdu, China

**Organizer:** Sichuan University

**Sponsors:** International Research and Training Center on Erosion and Sediment Research (IRTCES); World Association for Erosion and Sediment Research (WASER)

**Co-sponsors:** IHAR, IAHS, International Sediment Initiative (ISI)-IHP-UNESCO....(to be invited)

**Summary:** China's water-related infrastructure has developed by leaps and bounds leading to further advances in scientific and technical research. Consequently, the role of sediment research is becoming more challenging than ever before. In the midst of these advances, the International Symposium on River Sedimentation (ISRS) will return to China after the successful Yichang Symposium 12 years ago. On behalf of the 14<sup>th</sup> ISRS Organizers, we would like to warmly invite you to join us in Chengdu, China for the 14<sup>th</sup> International Symposium on River Sedimentation (ISRS-2019). The Symposium will be held with the theme of "Integrated Sediment Management in Rivers and Coasts". We look forward to welcoming you to Chengdu in September 2019 and we are confident that this symposium will be one of the most successful in the ISRS series. . (Weilin Xu, Chairperson of the LOC)

### Symposium Theme and Topics:

The theme of the symposium is:

Integrated Sediment Management in Rivers and Coasts

Under this theme, the symposium topics include:

- A. Sediment yield and erosion processes;
- B. Sediment transport;
- C. Sedimentation in estuarine and coastal areas;
- D. Reservoir sedimentation;
- E. Erosion processes;
- F. Environmental and ecological sediment;
- G. Sediment related disasters;
- H. Modelling and measurement techniques;
- I. Integrated sediment management.

### Technical Tours:

- Ancient Dujiangyan irrigation project, one of the oldest water projects in the world (2270 years old), which is still working today for flood control and irrigation, due to its success in dealing with problems caused by sediment deposition and scour.

### Post Symposium Tours:

Two of post-symposium tours (3-5 days each) will be organized:

- Jiuzhaigou valley (UNESCO world heritage);
- Three Gorges Project.

**URL:** <http://www.isrs2019.cn/>

### Contacts:

Email: [isrs2019@126.com](mailto:isrs2019@126.com)

Telephone: +86-28-85403957

Fax: +86-28-85401807

Mailing add.: State Key Laboratory of Hydraulics and Mountain River Engineering, Sichuan University, No.24 South Section 1, Yihuan Road, Chengdu, P.R. China, 610065

## 10th International Conference on Asian and Pacific Coasts (Vietnam, September 25-28, 2019)

**Date:** September 25-28, 2019

**Venue:** Thuyloi University, Hanoi, Vietnam

**Summary:** The International Conference on Asian and Pacific Coasts (APAC) is an international conference to promote academic and technical exchange on coastal related studies that include coastal engineering and coastal environmental problems, among the Asian and Pacific countries/regions. A wide range of organizations from Asian and Pacific countries/regions are its active participants or sponsors. The Conference is held once every two years.

The 10th International Conference on Asian and Pacific Coasts (APAC2019) will extend the series of biennial conference with the first one being held in Dalian, China in 2001 by the name of Asian and Pacific Coastal Engineering (APACE). To reflect a broader scope, the conference was renamed to Asian and Pacific Coasts (APAC) and it was subsequently held every two years in different countries and regions including Japan (2004), Korea (2005), China (2007), Singapore (2009), HongKong SAR (2011), Indonesia (2013), India (2015), and the Philippines (2017). These conferences have acted as a welcome forum to report and discuss the latest advancements in Coastal, Ocean and Port Engineering and as such, have always been highly valued by all participants.

### Organizers:

- The Chinese Ocean Engineering Society (COES)
- The Coastal Engineering Committee of the Japan Society of Civil Engineers (JSCE)
- The Korean Society of Coastal and Ocean Engineers (KSCOE).

**Theme of the Conference:** Living with nature, coping with coastal changes

### Topics of the Conference:

1. Ocean wave, tides, storm surge and tsunamis
2. Beach erosion and coastal sediment transport
3. Coastal and estuarine hydrodynamics
4. Lowland development and reclamation
5. Beach development and coastal protection
6. Marine ecology and coastal environments
7. Marine and offshore renewable energy
8. Climate change and coastal adaptation
9. Coastal hazards and risk assessment
10. Mekong Delta, beach erosion and saltwater intrusion

### Conference website:

<http://apac2019.tlu.edu.vn/>

### Contacts:

Assoc.Prof. Nguyen Cao Don

Thuyloi University,

175 Tay Son Str., Dong Da, Hanoi, Vietnam

Email: [apac2019@tlu.edu.vn](mailto:apac2019@tlu.edu.vn)

Phone: +84 24 3654 1053

Fax: +84 243 653 3351

## More Coming Events in ISI Website

More .....

(<http://www.irtces.org/isi/>)



