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Intergovernmental Hydrological Programme
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iSi
INTERNATIONAL SEDIMENT INITIATIVE

NEWSLETTER

Reporting ISI news to you quarterly

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IN THIS ISSUE

UNESCO"国际泥沙计划"简报

本期内容

NEWS

UNESCO-ISI Online Training Workshop on Sediment Transport Measurement and Monitoring, July 5-9, 2021, successfully held

The UNESCO-ISI Online Training Workshop on Sediment Transport Measurement and Monitoring was held from July 5-9, 2021, and represents a key activity of the International Sediment Initiative (ISI) of UNESCO for 2021. It meets the objectives of the new strategy of ISI, which in turn is a contribution to the 8th phase of the IHP (2014-2021), focuses on “Water security: responses to local, regional and global challenges”, and addresses the wide-ranging environmental, social and economic impacts of erosion, sediment transport and sedimentation processes. Measurement and monitoring of sediment transport are of critical importance for managing and mitigating these impacts.

The Online Training Workshop was sponsored by UNESCO-IHP, and the Ministry of Water Resources, P.R. China; organized by the UNESCO-IHP International Sediment Initiative (ISI), the International Research and Training Center on Erosion and Sedimentation (IRTCES), the China Institute of Water Resources and Hydropower Research (IWHR), and the UNESCO Beijing Office; and co-sponsored by the World Association for Sedimentation and Erosion Research (WASER), the International Association for Hydro-Environment Engineering and Research (IAHR), and the Jingjiang Bureau of Hydrology and Water Resources Survey. The workshop had been designed for, and was open to, young engineers, scientists and managers, who were based in developing countries and working in fields such as river basin/reservoir management, water and soil conservation, sediment management and control etc. and who wished to improve their knowledge and understanding of fluvial sediment measurement and monitoring.

A total of 223 participants from 61 countries and regions, including the 15 lecturers/organizers and 208 registered trainee participants, attended the workshop, among them 176 (85%) of the trainee participants, were from developing countries. The geographic distribution was Asia and the Pacific – 99 (48%), Latin America and the Caribbean – 46 (22%), Africa – 38 (18%), Europe and North America – 21 (10%), and Arab States – 4 (2%). Female participants accounted for 41%.of the total. Over 870 persons including unregistered participants joined in the online training.

The opening of the training workshop on July 5 was chaired by Prof. Manfred Spreafico, Chairman of ISI. Prof. Shahbaz Khan, Director of the UNESCO Office in Beijing and UNESCO Representative to the Democratic People’s Republic of Korea, Japan, Mongolia, People’s Republic of China, and the Republic of Korea; Ms. Xinyang Chi, Deputy Director of the Department of International Cooperation, Science and Technology, Ministry of Water Resource, P.R. China; Prof. Guangquan Liu, Deputy Director of IRTCES; and Mr. Harald Koethe, Director of the International Centre for Water Resources and Global Change (ICWRGC), gave welcome speeches.

Five training lectures and one perspective lecture were delivered over 5 days. The Lectures included:

Lecture-1, Collecting sediment data for studying sediment-based ecological problems (Dr. Mengzhen Xu);

Lecture-2, Sediment measurement for the Three Gorges Project (Prof. Dr. Guanglei Duan);

Lecture-3, Online monitoring of suspended sediment at the Zhicheng Gauging Station on the Yangtze River (Mr. Dibing Xu);

Lecture-4, Field survey and monitoring methods for river flow, sediment transport and river beds in mountain regions (Dr. Zhiwei Li);

Lecture-5, Measuring erosion and sediment yields on slopes and In small catchments (Prof. Dr. Baoyuan LIU & Dr. Yaxian Hu); and

Perspective Lecture, Measurement and monitoring techniques concerning suspended load and bedload (Prof. Helmut Habersack)

Prof. Manfred Spreafico and Prof. Desmond E. Walling, well-known experts in the field of erosion and sedimentation, served as Chairpersons to chair the lecture and discussion sessions.

The appraisal of the online training workshop by the participants was highly positive. Their assessments indicated that:

‘ the presentation was excellent and the topic was very informative’,

‘organized at the highest level’

‘knowledge acquired during the workshop exceeded our expectations’, and

‘ we hope more such courses to be organized’.

According to the responses to the questionnaire evaluating the workshop returned by the participants, the assessments relating to the ‘quality of the workshop’ falling into the ‘good’, 'very good’ and ‘excellent’ categories exceeded 94%. Assessments relating to the ‘quality of the documents provided for participants’ falling into these three categories exceeded 97%, and assessments relating to the ‘quality of the training staff/lecturers’ falling into these three categories exceeded 97%.

The training materials, including lecture notes, PPT files, and video replay, can be downloaded or viewed via the workshop website at: http://isi-unesco.iahr.org/.

UNESCO-ISI Online Expert Meeting on Global Databases of Sediment Loads in Rivers held on May 25 and June 10, 2021

Many social challenges which are related to the Sustainable Development Goals (SDGs) are intrinsically linked to the sediment topic and therefore require a sound data basis and understanding of sediment erosion, transport and deposition. The compilation of a global database of suspended sediment loads could provide valuable information to solve sediment related challenges in the context of i) climate change, ii) the global water and carbon cycles, iii) human pressure on river systems (including eutrophication and pollution) and iv) freshwater ecosystem restoration.

To discuss the added value of a global database of suspended sediment loads, the International Centre for Water Resources and Global Change (ICWRGC, Germany), the German Federal Institute of Hydrology (BfG) and UNESCO ISI, supported by the International Research and Training Centre on Erosion and Sedimentation (IRTCES, China), organized an expert meeting on global sediment flux data, which took place online on 25th of May and 10th of June 2021. 24 people from 8 countries participated in the expert meeting, including scientists and members of governmental and non-governmental organizations (inter alia from several universities as well as FAO Land and Water Division, UNEP GEMS/Water, European Commission’s Joint Research Centre, UNESCO category 2 centres, GEO Aquawatch, International Commission on the Hydrology of the Rhine). The meeting aimed to bring together users (scientist, environmental managers, remote sensing community) and providers of global sediment data from various international organizations to discuss i) the current quality and availability of global sediment data, and ii) what would be required from the scientific and management perspective.

Therefore, the participants discussed the state of the art on global river sediment datasets during the first day of the meeting based on the following questions:

- Which global databases with (suspended/bedload) sediment data are available?
- In which countries are (suspended/bedload) sediment monitoring data (e.g. national monitoring programs) available?
- Where are major white spots (data gaps) on the globe, where good quality sediment data are lacking?
- How are in-situ observations connected to satellite Earth observations?
- What are the spatial and temporal scales (resolution and extent) of available sediment data?
- What are quality ensured sediment data?

The relevance and the demand for a global sediment database was discussed on the second day of the meeting. Therefore, the participants aimed to answer the following questions:

- What are the scientific demands on a global sediment database?
- What are the demands on (global) sediment data from a sediment management perspective?
- What are the benefits of a global sediment database?
- Which information (meta data / parameters) should be included in a global sediment database?
- How to deal with uncertainties when upscaling to load calculations?

The presentations from various participants indicated that substantial efforts have been made by various groups to compile data on global sediments loads. These groups were facing similar problems arising i) from the scatter of global distributions of available data and ii) the variable quality of the data and the variable length of sediment load records. These issues demand a coordinated initiative at the global scale. It was

argued by the participants that a major obstacle to such an initiative is the harmonization of the available data. To reduce the complexity of the topic the workshop attendees decided to concentrate on suspended sediment only, however recognizing the importance of bed load and sand transport. Currently, the comparability of suspended sediment loads between various river systems is in many cases limited by variable measurement techniques, variable spatial integration of the cross-section of the river and variable sampling intervals that can lead to very different load estimates given the strong accentuation of suspended sediment transport during short-term floods. Issues related to divergent load estimates require i) global standards on measuring and processing riverine sediment fluxes (and how best to share data with quality check / uncertainty indication), ii) metadata standards (including the definition of minimum metadata requirements) to evaluate data quality, and iii) data formatting standards, to facilitate data exchange and reduce barriers to provide and use suspended sediment data.

To successfully proceed towards a global suspended sediment database, an official mandate for long-term maintenance of the database is required. The participants collectively agreed that a coordinated initiative under the umbrella of an international organization is beneficial to improve the access to and value of a global suspended sediment dataset. It was suggested by the experts of the meeting that a strong involvement of professional international organizations (such as FAO, WMO, UNEP, or UNESCO-IHP) would increase the willingness of many countries to support the initiative and provide suspended sediment data, which are the heart of this initiative. Such a global dataset has many potential uses in the scientific context, supporting management in the context of agricultural systems, rivers, freshwater environments, reservoirs, coastal regions and water resources in general. The workshop participants are now working on a technical brief to summarize the workshop outcomes.

The organizers thank the experts, who participated the meeting for their great support and will build on the results of the expert meeting to evaluate further steps to successfully implement a global suspended sediment database.

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(by ICWRGC and BfG)

ISI – Training Workshop on ‘River Basin Sediment Monitoring and Management’, Sept. 6-10, 2021, held

Promoting capacity building: UNESCO Centres ICWRGC and IRTCES organized a joint UNESCO Training Workshop on Sediment Monitoring for Sustainable River Management in collaboration with the BfG

From 6th to 10th September 2021, the International Centre for Water Resources and Global Change (ICWRGC), the International Research and Training Center on Erosion and Sedimentation (IRTCES, Beijing) and the German Federal Institute of Hydrology (BfG) hosted the five-day training workshop “River Basin Sediment Monitoring and Management”. Held as a virtual event, many sediment experts from 25 countries attended the workshop under the umbrella of the UNESCO’s International Sediment Initiative (ISI). The focus was on empowering developing countries to help themselves.

Channelizing rivers, deepening fairways and constructing dams – human activities in and along rivers have brought about fundamental changes in water discharge and sediment balances. Sustainable sediment management helps to adjust sediment surpluses or deficits of a disturbed sediment balance, thus reducing negative impacts on the ecosystem, water management, flood protection and navigation. The BfG can draw on its long-standing experience in national sediment and erosion research and advice, gained in collaboration with other agencies and organizations, in particular in the fields of sediment management and river bed development. On the international level, this issue is addressed by the UNESCO’s International Sediment Initiative whose secretariat is hosted by the International Research and Training Center on Erosion and Sedimentation (IRTCES, Beijing). The ICWRGC is committed to global exchange of water data, including data on sediment.

The five-day workshop was aimed at sharing this expertise to support developing countries, in particular, in building up their own capabilities in these areas, an approach called “capacity building” in technical language, commonly known as the idea of “helping people to help themselves”. BfG and ICWRGC staff also seized the opportunity to enter into direct dialogue with other researchers, taking advantage of their experience and skills. Co-initiator Renee van Dongen says: “We are delighted at the positive response within the expert community. In total, 36 participants from academic, governmental and non-governmental organizations and businesses, mainly from Africa and Asia, followed our invitation.”

Challenges for international sediment management

Three interactive keynote speeches provided insights into the challenges of sediment monitoring and sediment management in large river basins. Representing the IRTCES in Beijing, Professor Liu Cheng highlighted the challenging conditions along China’s major river courses. Professor Helmut Habersack of the University of Natural Resources and Life Sciences, Vienna, reported on sediment strategies on the European Rhine and Danube rivers. The third keynote presentation, delivered by Professor Juan Restrapo of the Colombian School of Administration, Finance and Technological Institute, pointed out human pressures on sediment loads in Latin America with a focus on the Magdalena river in Colombia.

Following the keynote input, the event offered opportunities for the participants to deepen their knowledge of suspended sediment and bedload monitoring and sediment balancing, as well as working with global sediment data, guided by internationally renowned specialists, including BfG and ICWRGC experts. “We have many years of experience in sediment monitoring and management, and this workshop provides an opportunity to share this expertise with our international partners”, says Thomas Hoffmann, one of the co-initiators at the BfG. The participants also discussed the results of the ongoing joint BfG/ICWRGC research project URSACHEN.

Hybrid learning

Initially planned as a face to face event in Koblenz in 2020, the Coronavirus pandemic prompted the organizers to switch to a blended-learning workshop held in collaboration with Professor Heribert Nacken’s UNESCO Chair at RWTH Aachen University and with the UNESCO International Sediment Initiative (ISI). The presentations and topical sessions had been recorded as interactive videos, followed by “personal” conference calls offering a platform for discussion and exchange on the learning contents.

At a later stage, the lectures and tutorials recorded, including the three keynote presentations, are due to be made freely available as Open Educational Resource (OER) material in the form of an online webinar. “The training workshop thus constitutes a contribution to the UNESCO’s Intergovernmental Hydrological Programme and an early example of the use of OER approaches that are set to become increasingly relevant in the IHP’s ninth phase adopted last July,” underlines Stephan Dietrich of the ICWRGC.

The workshop revealed that the BfG’s and ICWRGC’s expertise in the fields of sediment monitoring and sediment management is in demand. In this context, digital learning offerings, such as OER, are a strategic option to enhance the quality of learning and knowledge sharing as well as political dialogue and capacity building – i.e. helping others to help themselves – in the field of research on a global scale.

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Further information

- Project “URSACHEN” (https://www.waterandchange.org/wp-content/uploads/2020/07/2020.06_URSACHEN-Flyer_210x297_lowres.pdf)
- Open Educational Resources of RWTH Aachen University (https://oer-hydro.de)

(by ICWRGC and BfG)

Prof. Shahbaz Khan, Director of UNESCO Beijing Office, met with Prof. KUANG Shangfu, President of IWHR

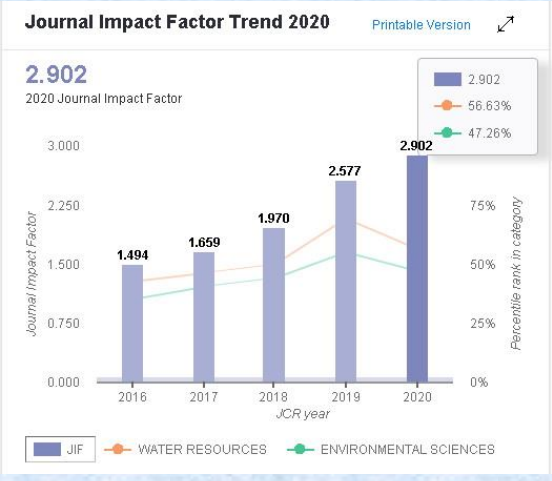
On August 5, 2021, Prof. Shahbaz Khan, Director of UNESCO Beijing Office visited China Institute of Water Resources and Hydropower Research (IWHR) and met with Prof. KUANG Shangfu, President of IWHR as well as his team, to discuss future cooperation between UNESCO and IWHR.

Prof. Khan appreciated the contribution of IWHR in the field of water development in China and the world. He emphasized that UNESCO Beijing Office, as a cluster office with five units: Education, Culture, Natural Sciences, Social and Human Sciences, and Communication & Information, will strengthen the cross-disciplinary cooperation and popularization of water science and education with IWHR, enrich and improve the international sediment research platform, enhance the impact of IWHR's affiliated Category II Centre's influence, and explore opportunities of international water culture exchange.

Prof. Kuang expressed his congratulations to Prof. Khan on his appointment as Director of UNESCO Beijing Office in March this year and welcomed his team. He recalled the cooperation between Prof. Khan and IWHR in previous activities, introduced the operation of UNESCO Category II Centre (International Research and Training Centre on Erosion and Sedimentation), and put forward ideas on strengthening international water science education, increasing the influence of the UNESCO Category II Centre, and expanding international water culture exchange.

Members of UNESCO Beijing Office and IWHR also discussed in depth topics including the achievements of China's water ecological civilization, medium and long-term water science education, and promoting the water community of shared future. (Source: UNESCO Beijing Office)

Journal Impact Factor of the International Journal of Sediment Research increases to 2.902



The 2020 Journal Citation Reports (JCR) were released by Clarivate Analytics on June 30, 2020. The International Journal of Sediment Research (IJSR) Journal Impact Factor for 2020 is 2.902. Within all the journals in the category of Water Resources and Environmental Science, IJSR was ranked Q2 and Q3, respectively.

The IJSR is the official journal of the World Association for Sedimentation and Erosion Research (WASER). The journal is under the administration of the Ministry of Water Resources (MWR), PRC and is co-owned and sponsored by the International Research and Training Center on Erosion and Sedimentation (IRTCES), the China Institute of Water Resources and Hydropower Research (IWHR).and Tsinghua University. It is an international, peer reviewed journal, focusing on publication of original contributions related to theoretical advances, numerical modelling, field observational and laboratory studies and reviews dealing with processes, products and techniques in the field of sedimentation and erosion. Of particular importance are contributions covering topics linked to geography, geomorphology, soil erosion, watershed management, sediment transport, sedimentology, fluvial processes, fluvial geomorphology, reservoir sedimentation, coastal sedimentation and estuarine processes, sediment-related ecological and environmental problems, river management, and the social and economic effects of sedimentation.

All researchers in the sediment field are encouraged to submit their important papers to the International Journal of Sediment Research.

The Journal website can be found at：https://www.journals.elsevier.com/international-journal-of-sediment-research.

ISWCR received its second IF of 6.027

Clarivate officially released the 2020 Journal Citation Reports (JCR) on June 30, 2021. For each SCIE indexed journal, the JCR presents a rich array of citation metrics, including the Journal Impact Factor (JIF), alongside descriptive data about a journal's open access content and contributing authors.

According to the latest JCR, the 2020 Impact Factor for the official journal of WASWAC - International Soil and Water Conservation Research (ISWCR) is 6.027.

ISWCR was officially indexed by Science Citation Index Expanded in July, 2019, and is classified into three subject areas of Water Resources, Soil Science, and Environmental Sciences. ISWCR received its first official Impact Factor of 3.770 in June 2020. The impact factor of 6.027 is the second official IF for ISWCR.

Amongst the total of 98 journals in the categories of Water Resources, ISWCR was ranked 6, which rises 3 place compared to that for last year. In the categories of Soil Science and Environmental Science, it is ranked as 4 out of 37 (Q1) and 45 out of 274 (Q1), that indicates a rise of 3 and 31 places, respectively, compared to those for last year. ISWCR is now a Q1 journal in all three categories of Water Resources, Soil Science, and Environmental Sciences. (Source: WASWAC)

PUBLICATIONS

Papers Published in the International Journal of Sediment Research Volume 36, No. 5, 2021

Pages 567-686 (October 2021)

Self-Organizing Maps for identification of zeolitic diagenesis patterns in closed hydrologic systems on the Earth and its implications for Mars
Gayantha Roshana Loku Kodikara, Lindsay McHenry
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Mechanism of collision model for bedload transport
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Shoreline spatial and temporal response to natural and human effects in Boujagh National Park, Iran
Morteza Karimi, Jamal Mohammad Vali Samani, Mehdi Mazaheri
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Migration rate of river bends estimated by tree ring analysis for a meandering river in the source region of the Yellow River
Cheng Liu, An Liu, Yun He, Yuehong Chen
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Key morphological changes and their linkages with stream power and land-use changes in the Upper Tapi River basin, India
Resmi Saseendran Ramani, Prem Lal Patel, Prafulkumar Vasharambhai Timbadiya
Pages 602-615

Adaptive criterion curves describing incipient motion of sediment under wave and current conditions
Shouqian Li, Yongjun Lu, Dano J.A. Roelvink
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Effect of extracellular polymeric substances on the phosphorus adsorption characteristics of sediment particles
Huiming Zhao, Yuefeng Zhang, Liqun Tang, Zhenghui Cui, ... Haochuan Feng
Pages 628-636

Simulation of particles settling in power-law fluids by combined lattice Boltzmann-smoothed profile methods
Hamideh Rouhani Tazangi, Ataallah Soltani Goharrizi, Ebrahim Jahanshahi Javaran
Pages 637-655

Geochemical modeling, fate distribution, and risk exposure of potentially toxic metals in the surface sediment of the Shyok suture zone, northern Pakistan
Liaqat Ali, Abdur Rashid, Seema Anjum Khattak, Xubo Gao, ... Asif Javed
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Erosion-control mechanism of sediment check dams on the Loess Plateau
Zhaoyin Wang, Zuyu Chen, Shu Yu, Qiang Zhang, ... Jianwei Hao
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Critical shear stress approach for self-cleansing design of a rectangular channel
Charles Hin Joo Bong, San Chuin Liew, Fang Yenn Teo, Tze Liang Lau, Aminuddin Ab Ghani
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Papers Published in the International Journal of Sediment Research Volume 36, No. 6, 2021

Pages 687-770 (December 2021)

Preface
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Use of Large-Eddy Simulation for the bed shear stress estimation over a dune
Adrien Bourgoin, Sylvain S. Guillou, Jérôme Thiébot, Riadh Ata
Pages 687-695

Impact of the blockage ratio on the transport of sediment in the presence of a hydrokinetic turbine: Numerical modeling of the interaction sediment and turbine
Fatima Khaled, Sylvain Guillou, Yann Méar, Ferhat Hadri
Pages 696-710

3D numerical simulation of seagrass movement under waves and currents with GPUSPH
Anne-Eléonore Paquier, Thibault Oudart, Caroline Le Bouteiller, Samuel Meulé, ... Robert A. Dalrymple
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Numerical modeling of bedload and suspended load contributions to morphological evolution of the Seine Estuary (France)
Baptiste Mengual, Pierre Le Hir, Aurélie Rivier, Matthieu Caillaud, Florent Grasso
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Two-dimensional modeling of fine sediment transport with mixed sediment and consolidation: Application to the Gironde Estuary, France
Sylvain Orseau, Nicolas Huybrechts, Pablo Tassi, Damien Pham Van Bang, Fabrice Klein
Pages 736-746

Key drivers of changes in the sediment loads of Chinese rivers discharging to the oceans
Cheng Liu, Yun He, Zhongwu Li, Jia Chen, Zhijing Li
Pages 747-755

Modeling of climate change impacts on Lake Burullus, coastal lagoon (Egypt)
A. Shalby, M. Elshemy, B.A. Zeidan
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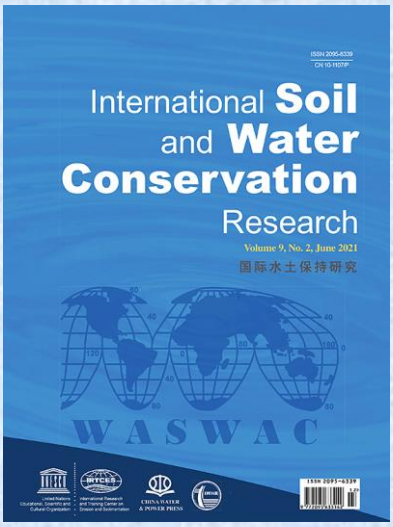
Full papers are available at ScienceDirect: https://www.sciencedirect.com/journal/international-journal-of-sediment-research with free access to the paper abstracts.

Contents of ISWCR (Vol. 9, No.3, 2021)



Pages 305-484 (September 2021)

Recent advances in assessment of soil erosion vulnerability in a watershed
Shachi Pandey, Parmanand Kumar, Miodrag Zlatic, Raman Nautiyal, Vijender Pal Panwar
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A hillslope version of the revised Morgan, Morgan and Finney water erosion model
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Advantages and disadvantages of terracing: A comprehensive review
Chuxiong Deng, Guangye Zhang, Yaojun Liu, Xiaodong Nie, ... Damei Zhu
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Soil conservation and sustainable development goals(SDGs) achievement in Europe and central Asia: Which role for the European soil partnership?
Hakk? Emrah Erdogan, Elena Havlicek, Carmelo Dazzi, Luca Montanarella, ... Ronald Vargas
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How to model the effect of mechanical erosion control practices at a catchment scale?
Elizeu Jonas Didoné, Jean Paolo Gomes Minella, Daniel Gustavo Allasia Piccilli
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Small dams/reservoirs site location analysis in a semi-arid region of Mozambique
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Seasonal changes of soil erosion and its spatial distribution on a long gentle hillslope in the Chinese Mollisol region
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Characteristics of unsaturated soil slope covered with capillary barrier system and deep-rooted grass under different rainfall patterns
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The soil configuration on granite residuals affects Benggang erosion by altering the soil water regime on the slope
Xiaoqian Duan, Yusong Deng, Yu Tao, Yangbo He, ... Jiazhou Chen
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Soil erosion assessment by RUSLE with improved P factor and its validation: Case study on mountainous and hilly areas of Hubei Province, China
Pei Tian, Zhanliang Zhu, Qimeng Yue, Yi He, ... Muxing Liu
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Generation of a long-term daily gridded precipitation dataset for the Upper Indus Basin (UIB) through temporal Reconstruction, Correction & Informed Regionalization-“ReCIR”
Asim Jahangir Khan, Manfred Koch
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In-depth analysis of soil management and farmers’ perceptions of related risks in two olive grove areas in southern Spain
José A. Gómez, Ana Sánchez Montero, Gema Guzmán, María-Auxiliadora Soriano
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Rainfall partitioning in young clonal plantations Eucalyptus species in a subtropical environment, and implications for water and forest management
Décio Oscar Cardoso Ferreto, José Miguel Reichert, Rosane Barbosa Lopes Cavalcante, Raghavan Srinivasan
Pages 474-484

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

Special issue in ESPL: Advanced methods to investigate hydro-morphological processes in open-water environments

The Journal Earth Surface Processes and Landforms (ESPL) published a virtual special issue on "Advanced methods to investigate hydro-morphological processes in open-water environments" in 2021.

Natural river systems and landforms are shaped by hydro-morphological processes that describe the interactions between the hydraulic properties of the water body and the available sediments across all spatial and temporal scales. Therefore, understanding processes such as entrainment, transport and deposition that influence river channel morphology and river bed composition is an important feature of different research disciplines such as geomorphology, hydraulics and river engineering.

Stefan Haun (University of Stuttgart, Germany) and Stephan Dietrich (International Centre for Water Resources and Global Change (ICWRGC), Germany) co-edited this special issue with 15 articles based on submitted papers collected from the meetings of the General Assembly of the European Geosciences Union (EGU).

The virtual special issue can be found at the ESPL website: https://onlinelibrary.wiley.com/doi/toc/10.1002/(ISSN)1096-9837.Advanced-methods-to-investigate-hydro-morphological-processes-in-open-water-environments

COMING EVENTS

The 7th International Conference on Estuaries and Coasts (Shanghai, China, October 18-21, 2021)

Date: October 18-21, 2021
Venue: East China Normal University, Shanghai, China
Organizers:
East China Normal University
Sponsors: International Research and Training Center on Erosion and Sediment Research (IRTCES); World Association for Erosion and Sediment Research (WASER)
Co-sponsors: International Association for Hydro-Environment Engineering and Research (IAHR).
Secretariat: East China Normal University
Summary: The International Conference on Estuaries and Coasts (ICEC) is a triennial event initiated by the International Research and Training Center on Erosion and Sedimentation (IRTCES). Six such conferences have now been held in Hangzhou and Guangzhou, China; Sendai, Japan; Hanoi, Vietnam; Muscat, Oman, and Caen, France in 2003, 2006, 2009, 2012, 2015 and 2018. With support from related international associations, and with the participation of experts and scholars worldwide, the ICEC has attracted wide attention and has become an important and popular event. The ICEC provides an opportunity for scientists, engineers, researchers and decision-makers to exchange ideas, research results and advanced techniques, and develop collaboration and friendships. The 7th International Conference on Estuaries and Coasts (ICEC-2021) will be held in the East China Normal University, Shanghai, China during October 18-21, 2021.
Overall Theme:
Anthropocene Coasts
Topics of the Conference (tentative)**:**
1. Hydrodynamics in estuaries and coasts: tides, waves, circulations, and their interactions;
2. Sediment transport dynamics: sand, mud and their mixture;
3. Multi-scale morphodynamics: tidal flats, estuaries, deltas, beaches, dunes, eco-morphodynamics…;
4. Coastal management: flood defense, ecosystem conservation, human-nature interactions…
URL: http://icec2021.ecnu.edu.cn/
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UNESCO Global Conference "Climate-Resilient Water Management Approaches: Application Towards Climate Action and 2030 Agenda" (Online, Oct. 26-28, 2021)

Date: 26-28 October 2021
Venue: Online via Zoom
Organizer: UNESCO's Division of Water Sciences, the Alliance for Global Water Adaptation (AGWA) and the International Center for Integrated Water Resources Management (ICIWaRM)
Summary: The focus of this three-day conference, organized on 26-28 October 2021 just ahead of the next UN Climate Change Conference (COP26), is to raise awareness and build capacity around new approaches to assessing and addressing Climate-Resilient Water Management Approaches, including their vast potential within global climate policy and sustainable development agendas. It will combine expert panels and high-level policy discussions to provide concrete inputs to COP26, and for the implementation of the next phase of UNESCO's Intergovernmental Hydrological Programme (IHP-IX, 2022-2029) focused on "Science for a water secure world in a changing environment".
URL: https://en.unesco.org/news/climate-res-water-management
Contact: a.mishra@unesco.org

Climate vulnerability and water resilience in Small Islands Developing States (SIDS) (Online, Nov. 10&16, 2021)

Date: 10 November 2021 (COP 26), 16 November 2021
Venue: Online via Zoom
Organizer: UNESCO's Division of Water Sciences, Southampton University
Summary: SIDS have been particularly affected by climate change through hydro-climatic hazards which are the most devastating and the biggest threat to water security in SIDS. Pathways to respond to those threats through water resilience approaches are needed which include the identification of the main hydro-climatic hazards in SIDS, assessing the vulnerability of the population, pointing out governance gaps and outlying policy recommendations. This methodological framework will be presented in the form of a side event in the Water Pavilion (blue zone) at the COP 26 the 10th of November 2021 and during the 41st General Conference of UNESCO the 16th November 2021.
These side events aim to raise awareness of the high vulnerability of SIDS to climate change and to contribute to the multiplication of synergies between decision and policy makers of the water sector, climate negotiators, climate adaptation planners, relevant stakeholders, specialists of water risk reduction and water risk managers.
Contact: a.mishra@unesco.org

The 14th International Conference on Hydroscience and Engineering (Turkey, May 26-27, 2022)

Date: May 26-27, 2022
Venue: Cesme, Turkey
Invitation: We are pleased to announce that 14th International Conference on Hydroscience & Engineering, ICHE 2022, will be held on May 26-27, 2022 through face-to-face sessions at IZTECH, Urla, Turkey.
Due to the health and safety concerns, and prospective uncertainties regarding the global travel situation, we had to postpone ICHE 2022 conference which was originally planned in September, 2020.
If you haven't submitted an abstract yet, you can directly submit an extended abstract/full paper to participate ICHE 2022 by December 15, 2021.
We look forward to seeing you in İzmir. Until then, we hope that you stay safe and well.
ICHE 2022 LOC
URL: https://www.iche2020.org/
Contact
info@iche2022.org

The 39th IAHR World Congress (Spain, June 19-24, 2022)

Date: June 19-24, 2022
Venue: Granada, Spain
Invitation: On behalf of the Congress Organising Group (COG) of the 39th IAHR World Congress and the International Association for Hydro-Environment Engineering and Research (IAHR), we are delighted to invite you to join the 39th IAHR World Congress in 2022 in Granada, Spain.
Spain is a leading country in Hydro-Environment Engineering, strongly involved with IAHR. We are also a hub for Europe, Asia, Africa and the Americas, a gateway to the world. Customs procedures for coming to Spain are very easy for the majority of countries around the world, with no visa needed for over 100 nationalities. Granada has superb transportation connections – there are more than 70 international flights (destinations) from Malaga Airport and over 200 through the Madrid and Barcelona Airports – and incredible accessibility from all parts of the world.
Granada is unique: there are few places in the world where one can see so many hydro-environment engineering processes in such a small area: snow, desert, pristine rivers, spectacular reservoirs, and traditional cultural techniques alongside ultra-modern technologies. Granada is a modern city but with an impressive historical legacy. Not too large, nor too small; very well connected and affordable for everybody.
The University of Granada is the leader in Europe in international student exchanges and has vast experience organizing large-scale events. The Granada Congress Centre with its unique auditorium capable of welcoming 2.000 delegates and its modern audio-visual facilities offers a state of the art conference experience in the heart of the city. PCO Kenes Spain has the experience, knowledge and reliability that the IAHR World Congress needs.
This Congress will bring together the enthusiasm of a whole country to organize a high-level event in the field of water. For us it's not just another event, but the event of the year. The central theme of the Congress will be "From Snow to Sea", linking past with present and focusing attention on the importance of considering the integral water cycle to address present and future challenges.
Specific topics including Human-water relationships, Snow, river and sediment management, Environmental hydraulics and urban water cycle, Hydraulic structures, Water resources management, valuing and resilience, Computational and experimental methods, Coasts, estuaries and shelves and Extreme events: from droughts to floods will be covered in regular sessions. Special Sessions will also be organized in collaboration with worldwide experts in the different fields.
The Congress will provide a platform for science and practice to meet. A lively exhibition alongside the congress will present the latest developments in equipment, software and instrumentation as well as enhance relevant achievements from practice. Workshops and training events will be offered as well throughout the event. (Prof. Joseph Hun-wei Lee, IAHR President)
URL: https://iahrworldcongress.org/
Contact
Congress Secretariat
+34 913612600
Llámanos iahr2022@kenes.com

The 15th International Symposium on River Sedimentation (Florence, Italy, Sept. 6-9, 2022)

Date: September 6-9, 2022
Venue: Florence, Italy
Organizer: University of Florence and University of Padua
Sponsors: International Research and Training Center on Erosion and Sedimentation (IRTCES); World Association for Erosion and Sediment Research (WASER)
Co-sponsors: International Association for Hydro-Environment Engineering and Research (IAHR).....(to be invited)
Secretariat: University of Florence, Italy
Permanent Secretariat: IRTCES
Summary: The triennial International Symposium on River Sedimentation (ISRS) was initiated in 1980. Since its foundation, IRTCES has served as the permanent secretariat of ISRS. WASER was inaugurated at the 9th ISRS in 2004, and the ISRS has since become the official Symposium of WASER. The objective of the ISRS is to provide a forum for scientists, engineers, researchers and decision makers to exchange ideas, research results and technical advances, , and to share experience and information relating to the study of sediment and its management.
Symposium Theme and Topics:
The theme of the symposium is
Sustainable Sediment Management in a changing Environment (tentative)
The symposium topics include (tentative):
1. Sediment transport
2. Reservoir sedimentation
3. River morphodynamics
4. Coastal morphodynamics
5. Ecomorphodynamics
6. Sediment related disaster
7. Plastic in river and coastal systems
8. Interaction between sediment dynamics and hydraulic structures
9. Integrated Sediment Management at the River Basin Scale
10. Social, economic & political problems related to sediment and water management
URL: https://www.isrs2022.it/
Organisation & Contacts:
Organized by the Department of Civil and Environmental Engineering, University of Florence, Italy
Organizing Committee Co-Chairs
Stefano Lanzoni, Department of Civil, Environmental and Architectural Engineering, University of Padova, Italy
Luca Solari, Department of Civil and Environmental Engineering, University of Florence, Italy
Contacts
Costanza Carbonari, Department of Civil and Environmental Engineering, University of Florence, info@isrs2022.it

The 2022 International Symposium on Ecohydraulics (Nanjing, China, October 10-14, 2022)

Date: October 10-14, 2022
Venue: Nanjing, China
Invitation: On behalf of the International Association for Hydro-Environment Engineering and Research and the local organizing committee, we cordially invite you to the 14th International Symposium on Ecohydraulics that will be held from October 10th to 14th 2022 in Nanjing, China, an ancient capital of ten dynasties in Chinese history, boasting numerous historic sites, splendid cultural heritage, beautiful cityscape and sceneries.
Ecohydraulics is a rapidly developing inter-discipline of ecology and hydraulics brought about by the ever-growing concern of aquatic and riparian ecology. Since its first edition in 1994, the International Symposia on Ecohydraulics have provided platforms for scientists and engineers worldwide to discuss cutting-edge scientific progress, compared and

evaluated state-of-the-art technical methods, and recommended them to the end-users.

ISE 2022 covers a wide spectrum of topics related to ecohydraulics in theory and in practice, including the hydrological, hydraulic, morphodynamic, structural, ecologic, biologic, and technical aspects of the discipline. Six high-profile keynote speeches will be presented. We are expecting you to present at the symposium and share the latest advancement of your research with the international scientific community. Both oral and poster presentations are welcome. A special issue of Environmental Science & Ecotechnology focusing on this conference will be published. Traditionally, ISE features an ECoENet pre-conference workshop which helps early career researchers (ECR) working in ecohydraulics find opportunities and overcome challenges. Starting from the current edition, ISE plans to provide an interactive lecture of a helpful technical tool applied in one of these three topics (1) fieldwork, (2) lab experiments (3) numerical simulation, and rotate among them in the future. (ZHANG Jianyun, Yangtze Institute for Conservation & Development, China, Nanjing Hydraulic Research Institute, China)

URL: https://ise2022.org/

Contact

ISE2022 Secretariat
sec@ise2022.org
+86-25-85828956

United Nations Educational, Scientific and Cultural Organization · Intergovernmental Hydrological Programme

International Sediment Initiative

INTERNATIONAL SEDIMENT INITIATIVE (ISI)

Intergovernmental Hydrological Programme (IHP) UNESCO

ORGANISATION: UNESCO

Mr. Abou Amani	UNESCO, Paris
Philippe Pypaert	UNESCO, Beijing
Anil Mishra	UNESCO, Paris

ISI URL: http://www.irtces.org/isi/

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Bank protection, Yangtze River, China (by Dr. Li Zhiwei)