

# INTERNATIONAL SEDIMENT INITIATIVE NEWSLETTER

*Reporting ISI news to you quarterly*

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## NEWS

### IRTCES Delegation visited the UNESCO Beijing Office



On November 21, 2023, an IRTCES Delegation visited the UNESCO Beijing Office for discussions and exchanges. Mr. Shahbaz Khan, Director of the UNESCO Beijing Office and Director of the Multisectoral Regional Office for East Asia, and Ms. Ai Sugiura, Program Officer of the Natural Sciences Division, attended the meeting. Prof. Zhang Jianli, Deputy Director of IRTCES, and relevant persons in charge of the IRTCES Divisions of Secretariat, Research and Training, and International Exchange and Information, and the Department of International Cooperation of IWHR attended the meeting.

Prof. Zhang thanked UNESCO for its strong support and assistance to both IWHR and IRTCES. He introduced the achievements of IRTCES and the progress of the preparation of the 40th anniversary series of activities. In recent years, focusing on the development strategy of UNESCO, IRTCES has undertaken a large number of consulting and service projects in the fields of soil erosion and sediment management, hosted academic conferences and training courses, and promoted the distribution of academic journals, data collection and dissemination, popularization of science as well as capacity building, etc., involving close cooperation with UNESCO.

Director Shahbaz Khan congratulated IWHR and IRTCES on its achievements in water-related international cooperation, made suggestions on

the positioning and development of IRTCES, expressed his full support for the preparatory work related to the 40th anniversary series of activities, and looked forward to IWHR and IRTCES playing a leading role in the development of UNESCO's Intergovernmental Hydrological Programme (IHP).

Ms. Ai Sugiura introduced the overall operation of UNESCO category II water-related centers, congratulated IRTCES on its fruitful achievements, and expressed the hope that communication and cooperation would be further strengthened within the framework of UNESCO's medium- and long-term strategic priorities.

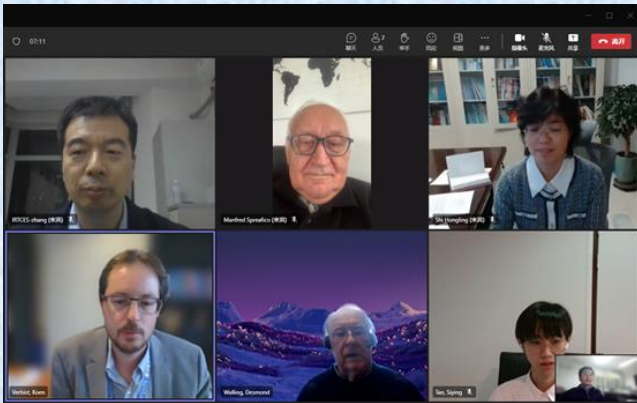
Prof. Liu Cheng introduced previous achievements, such as the case studies, education and capacity building carried out by the International Sediment Initiative (ISI), one of the IHP Flagship Initiatives, and reported the latest progress in updating the ISI objectives and its strategy for the IHP IX, and further steps in implementation planning, and updating the governance structure to align with the new Framework for Flagship Initiatives.

Prof. Du Pengfei introduced the progress and next step plans for the collection of global soil erosion and river sediment data collection from the perspectives of data sources, data processing and data display.

Dr. Meng Yuan introduced the cooperation of IWHR with UNESCO in the field of youth water science education. Using the multilingual publication of the Water Knowledge Reader as an opportunity, a series of activities have been undertaken to bring high-quality water science popularization education resources to more than 50 teachers and 200 primary education students in Kenya, Cambodia and other countries.

Both sides had in-depth exchanges on the strategic position of IHP Phase IX, the role played by ISI, open science and open data, data collection and publication channels, water science education outreach and preparation for the series of activities for the IRTCES 40th anniversary.

## ISI Advisory Group online meeting on selecting candidates for Regional and Thematic Coordinators



On November 16, 2023, an ISI Advisory Group online meeting was organized using Microsoft Teams, to review the nominations and self-applications received for the roles of Regional and Thematic Coordinators within the new ISI Scientific Advisory Board (SAB). Prof. Manfred Spreafico (ISI Advisory Group Chair), Prof. Des. Walling (ISI Advisory Group Member), Prof. Cheng Liu (ISI Advisory Group Member), Prof. Hongling Shi (ISI Technical Secretariat), Dr. Koen Verbist representing UNESCO-IHP Secretariat, Prof. Jianli Zhang representing IRTCES, and Ms. Siying Tan from UNESCO-IHP participated in the meeting.

As a result of a recent appraisal of the role of Flagship Initiatives within the IHP, the IHP Council has provided new guidelines for their governance, which required the establishment of a Scientific Advisory Board (SAB) comprising both Thematic Working Group Leads and Regional Coordinators, in order to strengthen their alignment with the Strategy of IHP Phase IX. To support this development, ISI launched a call for candidates for Regional Coordinators and Thematic Working Group Leads in September 2023, with a closing date of 15 October 2023. The applications and nominations received provided a total of 24 persons from 15 Countries covering 5 regions, expressing interest in such roles.

In the meeting, Dr. Koen Verbist firstly introduced the requirements for the setting up of the new ISI SAB and the selection procedure and Prof. Hongling Shi subsequently reviewed the applications received. The participants then evaluated the candidates and produced a preliminary list of nominees to be forwarded to the IHP Paris Office for further consideration.

## The Director of ICHARM visited IWHR and IRTCES

Prof. Koike Toshio, the Director of the International Centre for Water Hazard and Risk Management (ICHARM), a UNESCO Category 2 Centre, visited IWHR and IRTCES on October 19, 2023..

Deputizing for Prof Peng Jing, President of IWHR, Prof. Liu Yi, Vice President of IWHR, presided over the meeting, while relevant senior persons and experts from the International Cooperation Department, Flood Control, Drought Mitigation and the Disaster Prevention Research Center and IRTCES took part in the meeting.

Prof. Liu Yi reviewed the history of successful cooperation between IWHR and ICHARM, and expressed his appreciation of ICHARM, as a UNESCO Category 2 Centre, for its active role in international cooperation on water-related disaster mitigation. He introduced the new concept of disaster prevention, mitigation and relief of "two persistence, three transformation" put forward by General Secretary Xi Jinping, and the "four-point initiative" put forward by Minister Li Guoying at the UN Water Conference. He said that IWHR is willing to participate in the platform of the affiliated international organizations, to further strengthen the dialogue and cooperation with ICHARM and other United Nations agencies, and to collaborate in implementing the United Nations Water Action Agenda, the Sendai Framework and other international initiatives, so as to jointly promote sustainable water-related disaster risk management.

Prof. Koike Toshio expressed his appreciation of the scientific research achievements and international partnership network of IWHR, and supported China's concept and practice of coordinating the development of water conservancy and the elimination of water-related hazards. He pointed out that mitigating water-related disasters involves multidisciplinary and cross-sectoral collaboration, and that raising public awareness of disaster prevention and preparedness is also a key part of water disaster risk management. In the face of the challenge of more frequent and stronger extreme weather events brought about by climate change, industry-wide and multi-disciplinary cooperation in disaster prevention and mitigation is imperative. He expressed his hope that the two sides would make

use of domestic and international resources and work together to promote joint research, exchange and cooperation on international water hazards.



Group photo from the visit to IWHR

Subsequently, Prof. Koike Toshio visited IRTCES. As members of the family of UNESCO Category 2 Centres, the two parties reviewed their cooperation since the signing of the Memorandum of Cooperation in 2009, and had in-depth exchanges on the implementation of UNESCO IHP Flagship Initiatives, project cooperation in areas of interest to UNESCO, organization of international conferences, international training, developing international journals, open science and open data, and so on.



Group photo from the visit to IWHR

Prof. Koike Toshio also gave a lecture on "An Integrated Challenge for Research, Education, and Information Networking" at the Global Vision Forum of IWHR.



Prof. Koike Toshio giving a lecture

### ***IJSR Associate Editor Prof. Charles Melching visited IRTCES and gave a seminar***

On November 16th, at the invitation of the International Research and Training Center on Erosion and Sedimentation (IRTCES), Prof. Charles Steven Melching, Associate Editor of the International Journal of Sediment Research, gave a seminar on "The Superfund Program and Clean-Up of Contaminated Sediment in the Fox River in Wisconsin, U.S.A" at the China Institute of Water Resources and Hydropower Research (IWHR). IWHR Vice President Ding Liuqian chaired the seminar, which was attended by experts and students from IWHR and IRTCES.

In his seminar, Prof. Melching introduced the clean-up program for contaminated sediment in the Fox River. Several clean-up technologies, including natural attenuation, dredging, capping, and in-situ treatment were analyzed and compared. The clean-up programme took 16 years and further environmental monitoring is still ongoing.



After his presentation, Prof. Melching and the participants had a lively discussion on the advantages and disadvantages of the dredging and capping method, point-source and non-point source pollution, and environmental impact assessment.

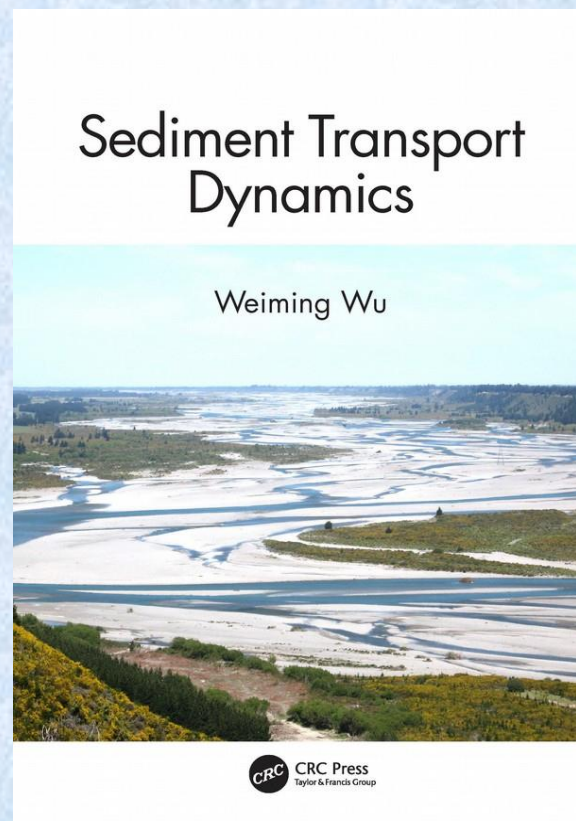


**WASER Vice President Prof. Weiming Wu published a new book *Sediment Transport Dynamics***

A new book “*Sediment Transport Dynamics*” authored by Prof. Weiming Wu was published by Taylor & Francis/CRC Press on Nov. 21, 2023. This book focuses on the fundamentals of sediment transport in surface waters. Besides the primary context of river sedimentation, this book extensively covers sediment transport under coexisting waves and currents in coasts and estuaries, as well as turbidity currents in lakes, reservoirs, channels, and the ocean. It also includes special topics that have emerged in recent years, such as the transport of mixed cohesive and noncohesive sediments, biofilm-coated sediments, and infiltrated sand within gravel and cobble beds. It has 15 chapters: introduction, sediment properties, open channel flows, sediment particle settling, incipient motion, bed forms, bed load, suspended load, total load, cohesive sediments, water-sediment two-phase flows, hyperconcentrated/debris flows, coastal sediment transport, turbidity currents, and physical modelling. It has 646 pages and cites about 1500 references. The text merges classical and new knowledge of sediment transport from various sources in English and non-English literature and refers to important contributions made by many scientists and engineers from all over the world.

Dr. Weiming Wu is James K. Edzwald Professor of Water Engineering at Clarkson University, NY, USA. Dr. Wu earned his PhD from Wuhan University of Hydraulic and Electric Engineering, China in 1991. He was Lecturer/Associate Professor at his alma mater in 1991–1995; Research Fellow of the Alexander von Humboldt Foundation at the Institute for Hydromechanics, University of Karlsruhe, Germany in 1995–1997; and a faculty member at the National Center for Computational Hydrosience and Engineering of the University of Mississippi in 1997–2013. His research interests include fundamental sediment transport; hydro- and morphodynamics in rivers, estuaries, coastal waters and uplands; surge and wave attenuation by vegetation; interaction between surface and subsurface flows; free surface flow and sediment transport modelling; dam/levee breach and flood modelling; and water quality and aquatic ecosystem/ecotoxicology modelling. He authored the book “*Computational River Dynamics*”, published through Taylor &

Francis, UK in November 2007. He received a Best Paper Award in 2007 from the World Association for Sedimentation and Erosion Research (WASER). He is a fellow of American Society of Civil Engineers (ASCE) and a member of the International Association for Hydro-Environment Engineering and Research (IAHR). He served as Associate Editor for the International Journal of Sediment Research in 2008–2010 and for the ASCE Journal of Hydraulic Engineering in 2010–2019, and was Chair of the ASCE Computational Hydraulics Committee (2010–2012), the ASCE Task Committee on Dam/Levee Breaching (2009–2012), and the ASCE Sedimentation Committee (2016–2018). He currently serves as Vice President for WASER.



**The 13<sup>th</sup> International SedNet Conference held in Portugal**

The 13<sup>th</sup> International SedNet Conference was held 6-8 September 2023 in Lisbon, Portugal. It attracted close to 150 participants, including sediment scientists, policy makers and managers. The Conference theme was: “Sediment continuum: applying an integrated management approach”.

Oral presentations and posters were presented in 5 sessions:

- 1) Sediment quality guidance and sediment quality assessment;
- 2) Circular economy – sediment as a resource;
- 3) Sediment in coastal and marine management;
- 4) Climate change and sediments: direct and indirect consequences and opportunities; and
- 5) Sediment management concepts and sediment policy.



The conference was preceded by 3 workshops:

- 1) Measurements and good practice on sediment management: challenges and opportunities for Portugal;
- 2) SedNet Working Group meeting: Sediment Quality; and
- 3) SedNet Working Group meeting: Circular Economy.

All presentations are publicly available at: <https://sednet.org/events/sednet-conference-2023-presentations/>

The book of abstracts is available at: <https://sednet.org/events/sednet-conference-2023-book-of-abstracts/>

(Source: <https://sednet.org/>)

### **Invitation for proposals to host the 9<sup>th</sup> ICEC to be held in 2027**

The International Research and Training Center on Erosion and Sedimentation (IRTCES) is inviting interested parties to submit proposals for hosting the 9<sup>th</sup> International Conference on Estuaries and Coasts (9<sup>th</sup> ICEC) in 2027.

As you may already know, the 8<sup>th</sup> International Conference on Estuaries and Coasts (8<sup>th</sup> ICEC) will be held in Quebec City, Canada from August 27 to 29, 2024. We are looking forward to meeting with you there. Although it might seem far away, it is important to begin planning for the 9<sup>th</sup> ICEC, which is scheduled to be held in 2027.

The ICEC Series, organized by IRTCES since 2003, has become the leading international forum for dissemination of research and industrial practice on estuaries and coasts. IRTCES in Beijing has served as the permanent secretariat of ICEC since its inception. This conference will continue the success of its previous conferences held in Hangzhou and Guangzhou (China, 2003; 2006), Sendai (Japan, 2009), Hanoi (Vietnam, 2012), Muscat (Oman, 2015), Caen (France, 2018) and Shanghai (China, 2021). The 8<sup>th</sup> ICEC is scheduled to be held in Quebec City, Canada from August 27 to 29, 2024. With support from related international associations and the participation of experts and scholars worldwide, the ICEC has become an important and popular event. The conference provides an opportunity for scientists, engineers, researchers, and decision-makers to exchange ideas, research results and advanced techniques, and share their experiences and information across the broad field of estuaries and coasts.

IRTCES is currently in the process of selecting a venue for the 9<sup>th</sup> ICEC that is scheduled to be announced in Quebec City in 2024. Several universities and institutes have already shown interest in hosting the event. However, IRTCES is still open to more proposals for hosting the 9<sup>th</sup> ICEC in 2027. If you are interested, please submit your proposals to Prof. Hongling Shi, IRTCES (see addresses below) before January 31, 2024. The final decision regarding the venue and organizer will be made by the permanent secretariat of ICEC (IRTCES).

### **Contacts:**

Prof. Hongling Shi (E-mail: [shihl@iwhr.com](mailto:shihl@iwhr.com))

Prof. Jianli Zhang (E-mail: [zhangjl@iwhr.com](mailto:zhangjl@iwhr.com)).

## River Sediment Study Published in *Science*

The first continent-wide study of its kind, Joanne Halls' research sheds new light on the impact of river sediment on the U.S. coastline.



UNCW Professor Joanne Halls uses Global Positioning Systems (GPS) to create map boundaries for different wetland species as well as upland habitats on Masonboro Island, a coastal site within the National Estuarine Research Reserve System (NERRS). NERRS is a network of 30 coastal sites designated to protect and study estuarine systems.

Courtesy: Joanne Halls/UNCW

As sea level continues to rise, threatening ecosystems, communities and infrastructure, experts are searching for ways to better understand how coastal environments may change in the future. A new research breakthrough published in *Science* reveals a novel way to study these changes by measuring how much sediment from the nation's rivers makes it to the coastline.

### Measuring, Mapping and Modeling

After testing many approaches in many different watersheds, UNCW Department of Earth and Ocean Sciences Professor Joanne Halls and co-authors Scott Ensign (Stroud Water Research Center) and Erin Peck (Northeast Climate Adaptation Science Center and USGS Woods Hole Coastal and Marine Science Center) developed a solution to measure the rate of river sediment accumulation across all watersheds of the contiguous United States.

Using her expertise in Geographic Information Science (GIS), Halls developed a new web application called Sediment Pancakes. The app uses publicly available geospatial data to create digital models and interactive maps of the entire continental U.S. coast, including 4,972 rivers and streams. This is the first continent-wide examination of its kind.

“We tend to know much more about our large rivers and very little about the amount of river sediment in the smaller creeks and tributaries, even though these smaller systems are the majority of the landscape,” Halls said. “To our knowledge, this new web application is the only tool that provides local estimates of riverine sediment for all rivers of the contiguous U.S.”



Salt marsh ponding in Barnstable, MA

Courtesy: Erin K. Peck

The published paper, “Watershed Sediment Cannot Offset Sea Level Rise in Most US Tidal Wetlands,” concluded that 72% of all rivers do not provide adequate sediment, on an annual basis, to keep up with current estimates of sea level rise. In other words, river-borne sediment alone is insufficient to provide the elevation gain needed to offset increasing sea levels found in tidal wetlands like marshes, swamps and bogs.

### Planning for the Future

As many local government agencies are building coastal resilience plans, and researchers nationwide are designing monitoring strategies to study and protect the coastal environments, the Sediment Pancakes app is a tool they can use to inform their planning.

“The more we leverage the enormous amount of map data toward principles of ‘smart growth,’ the better we can make our local communities,” Halls said. “My goal is to deliver map tools that assist local residents and planners so that we empower people to be engaged, exchange ideas in a meaningful and equitable way, and inspire students to be creative problem-solvers.”

(Source: <https://uncw.edu/news/2023/12/joanne-halls-watershed-sediment-study>)

## PUBLICATIONS

### Papers Published in the International Journal of Sediment Research Volume 38, No. 6, 2023



Volume 38, No.6, 2023  
Pages 781-910 (December 2023)

#### Local scour around submerged angled spur dikes under ice cover

*Guowei Li, Jueyi Sui, Sanaz Sediqi, Mauricio Dziedzic n*  
Pages 781-793

#### A two-dimensional double layer-averaged model of hyperconcentrated turbidity currents with non-Newtonian rheology

*Yining Sun, Ji Li, Zhixian Cao, Alistair George Liam Borthwick*  
Pages 794-810

#### Scour hole reduction at a diversion channel junction using different entrance edge shapes

*Ahmed Yahya Abdulhafedh, Nashwan Kamalaldeen Alomari, Ahmed Mohammed Sami Al-Janabi*  
Pages 811-820

#### Experimental study on the effect of hydrodynamic conditions on flocculation and settling properties of fine-grain sediment

*Bismark Odum, Chunyang Xu, Yongping Chen, Yinpeng Yao, Yan Zhou*  
Pages 821-833

#### Assessment of ecological risk for heavy metals in surface sediment of an urban river in a developing country

*Md Saiful Islam, Md Humayun Kabir, Mir Mohammad Ali, Md Towhidul Islam, ... Abubakr M. Idris*  
Pages 834-846

#### Ensemble and optimized hybrid algorithms through Runge Kutta optimizer for sewer sediment transport modeling using a data pre-processing approach

*Enes Gul, Mir Jafar Sadegh Safari, Omer Faruk Dursun, Gokmen Tayfur*  
Pages 847-858

#### Robust low-rank learning multi-output regression for incipient sediment motion in sewer pipes

*Mir Jafar Sadegh Safari, Shervin Rahimzadeh Arashloo*  
Pages 859-870

#### Characterization of the micro-interfacial interactions of heterogeneous particulate matter (fine-grained sediment and microplastics) with copper ions

*Jing Ou, Zhihe Chen, Tung-Chiung Chang*  
Pages 871-879

#### Experimental study on flocculation and sedimentation characteristics of cohesive fine sediment measured using ultrasound in the Pearl River Estuary

*Qinqin Liu, Xiaojian Liu, Jian Chen, Peng Hou, Huan Gao*  
Pages 880-890

#### Index model equation analysis: A case study of the risk and source of inorganic contaminants in roadside uncontaminated soil of the Egi oil producing area, Niger Delta

*Elechi Owhoeke, Asmat Ali, Okorundu Justin Nnaemeka, Kingsley John Orie, ... Abdur Rashid*  
Pages 891-900

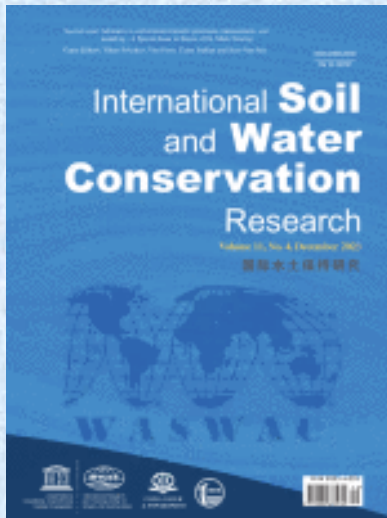
#### Establishment and development of the World Association for Sedimentation and Erosion Research

*Cheng Liu, Zhaoyin Wang, Des E. Walling*  
Pages 901-909

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 International Soil and Water  
Conservation Research Volume 11, No.4, 2023**



Volume 11, Issue 4  
Pages 589-764 (December 2023)

[Advances in soil erosion research: Mechanisms, modeling and applications - A special issue in honor of Dr. Mark Nearing](#)

*Viktor Polyakov, Claire Baffaut, Vito Ferro, Scott Van Pelt*  
Pages 589-591

[Roles of raindrop impact in detachment and transport processes of interrill soil erosion](#)

*Xunchang John Zhang*  
Pages 592-601

[Plot investigation on rill flow resistance due to path tortuosity](#)

*Francesco G. Carollo, Costanza Di Stefano, Alessio Nicosia, Vincenzo Palmeri, ... Vito Ferro*  
Pages 602-609

[Gully internal erosion triggered by a prolonged heavy rainfall event in the tableland region of China's Loess Plateau](#)

*Jiayi Wang, Yan Zhang, Kunheng Li, Ziqing Zhang, Chang Chen*  
Pages 610-621

[Performance evaluation of a water erosion tracer using plot-scale experiments and process-based modeling](#)

*Joao M. Villela, Jamil A.A. Anache, Alex M. Watanabe, Dennis C. Flanagan, ... Silvio Crestana*  
Pages 622-632

[Structure-from-Motion Photogrammetry and Rare Earth Oxides can quantify diffuse and convergent soil loss and source apportionment](#)

*Pia Benaud, Karen Anderson, Mike R. James, Timothy A. Quine, ... Richard E. Brazier*  
Pages 633-648

[Spatial distribution of soil erosion and its impacts on soil productivity in Songnen typical black soil region](#)  
*Yun Xie, Jie Tang, Yan Gao, Zhijia Gu, ... Xiaoyu Ren*  
Pages 649-659

[Comparison and quantitative assessment of two regional soil erosion survey approaches](#)

*Lixia Dong, Suhua Fu, Baoyuan Liu, Bing Yin*  
Pages 660-668

[Calibration, validation, and evaluation of the Water Erosion Prediction Project \(WEPP\) model for hillslopes with natural runoff plot data](#)

*Shuyuan Wang, Ryan P. McGehee, Tian Guo, Dennis C. Flanagan, Bernard A. Engel*  
Pages 669-687

[Saturation-excess overland flow in the European loess belt: An underestimated process?](#)

*Valentin Landemaine, Olivier Cerdan, Thomas Grangeon, Rosalie Vandromme, ... J. Patrick Lacey*  
Pages 688-699

[Streamflow prediction in ungauged catchments by using the Grunsky method](#)

*Bruno K. Marchezepe, André Almagro, André S. Ballarin, Paulo Tarso S. Oliveira*  
Pages 700-712

[Towards a better understanding of pathways of multiple co-occurring erosion processes on global cropland](#)

*Pasquale Borrelli, Christine Alewell, Jae E. Yang, Nejc Bezak, ... Panos Panagos*  
Pages 713-725

[Atlas of precipitation extremes for South America and Africa based on depth-duration-frequency relationships in a stochastic weather generator dataset](#)

*Andrew Fullhart, David C. Goodrich, Menberu B. Meles, Paulo Tarso S. Oliveira, ... Shea Burns*  
Pages 726-742

[Long-term trends of precipitation and erosivity over Northeast China during 1961–2020](#)

*Wenting Wang, Shuiqing Yin, Juan Yu, Zeng He, Yun Xie*  
Pages 743-754

[Legacy earthen berms influence vegetation and hydrologic complexity in the Altar Valley, Arizona](#)

*Mary H. Nichols, Sara E. Duke, Chandra Holifield Collins, Lauren Thompson*  
Pages 755-763

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

## COMING EVENTS

### 9<sup>th</sup> Conference on Physical Modelling in Coastal Engineering-Coastlab24 (Delft, the Netherlands, May 13-26, 2024)

**Date:** May 13-26, 2024

**Venue:** Delft, the Netherlands

**Summary:** The 9<sup>th</sup> Conference on Physical Modelling in Coastal Engineering - Coastlab24 will be held in May 13, 2024 to May, 16 2024. Welcome to join in! The following is the detailed introduction: Coastlab is a conference whose focus is on Physical Modelling in Coastal Engineering and Science. Coastlab is organized under the auspices of and in collaboration with the Coastal and Maritime Hydraulics Committee of the International Association of Hydro-Environment Engineering and Research (IAHR). Coastlab24 builds on the success of previous conferences in Porto (2006), Bari (2008), Barcelona (2010), Ghent (2012), Varna (2014), Ottawa (2016), Santander (2018) and Zhoushan (2020).

**Theme and Topics:** In the coastal zone, many developments are taking place, with much attention to themes like:

- Climate change impacts, adaptation, mitigation
- Multifunctional and nature-inclusive designs
- Development of ports and marine terminals
- Wave, wind and tidal energy
- Industrial outfalls

To cater for these developments continuous development in modelling capabilities is required, in topics such as:

- Coastal hydrodynamics, coastal processes
- Coastal flooding, flood prevention, shore protection
- Coastal and ocean structures, breakwaters, revetments
- Scour, sediment transport, morphology
- Wave-structure interactions, loading, response
- Wave run-up and overtopping
- Laboratory technologies, measurement systems
- Synoptic measurement systems (e.g. laser scanning, imaging, motion tracking, Particle Image Velocimetry)
- Coastal field measurement and monitoring
- Wave synthesis, generation, and analysis
- Scale effects and uncertainty analysis
- Composite modelling and validation (physical, numerical, field, and AI)
- Extreme events – assessment and mitigation
- Tsunami hydrodynamics, impacts, and mitigation
- Mixing, water quality
- Physical modelling case studies
- Navigation, ship motions

Presentations will be given, and discussions will be held about these topics. The programme includes PhD workshops, welcome reception, technical tour plus banquet, and optional post conference tour. Moreover, an exhibition with companies and suppliers will be present.

#### Key dates:

Early-bird registration deadline 15 January 2024

Abstract submission deadline 1 September 2023

Notification acceptance 15 October 2023

Full paper submission deadline 15 December 2023

Conference 13-16 May 2024

**URL:** <https://coastlab24.dryfta.com/>

### Centennial Celebration and Congress of the International Union of Soil Sciences (Italy, May 19-21, 2024)

**Date:** 19-21 May, 2024

**Venue:** Florence, Italy

**Summary:** The custodian of soil science will celebrate its centennial contribute to the nature and human wellbeing in 2024.

The event will also empower the linkages with different disciplines, policy makers, stakeholders, institutions, and associations to effectively address civil society needs within agriculture, forestry, environment, urban planning, energy, education, and other societal issues.

The celebration will occur on May 19<sup>th</sup> and will be followed by two intense days of congress, with plenary and parallel scientific sessions. Both soil scientists and specialists from other disciplines will participate to each session, focusing on past achievements and future challenges.

The congress will be followed by technical/scientific excursions that will range from short local to long trips, spanning from Alps to Sicily.

A pre-congress visit to Villa Lubin in Rome, the historical place where the IUSS was founded, is scheduled on May 18<sup>th</sup>.

#### Sessions:

1. Equity, diversity, and inclusivity in soil sciences
2. Soil and humanity
3. Soil Governance
4. Soil health in achieving the Sustainable Development Goals
5. Soil in the circular economy
6. Soil in the digital era
7. Soil sciences impact on basic knowledge
8. Other

**URL:** <https://centennialiu2024.org/>

#### Contacts:

Organizing secretariat

**Email:** [centennialiu2024@aimgroup.eu](mailto:centennialiu2024@aimgroup.eu)

### The 15<sup>th</sup> International Conference on Hydroinformatics (Beijing, China, May 27-31, 2024)

**Date:** May 27-31, 2024

**Venue:** Beijing, China

**Organizer:** Ministry of Water Resources (MWR) of People's Republic of China & China Institute of Water Resources and Hydropower Research (IWHR)

**Invitation:** Ministry of Water Resources (MWR) of People's Republic of China and China Institute of Water Resources and Hydropower Research (IWHR) are pleased to invite the international Hydroinformatics community to the 15<sup>th</sup> International Conference on Hydroinformatics – HIC 2024, held in Beijing, China, on 27 – 31 May 2024. Hydroinformatics is defined as the study of the flow of information and the generation of knowledge related to the dynamics of water in the real world, through the integration of modelling, information technologies and artificial intelligence considering sustainability and social implications for decision support and smart management of water-based systems. International Conference on

Hydroinformatics (HIC) has a long tradition, dating back to 1994 for its first edition. The next 15th HIC 2024 will celebrate its 30th anniversary and the development of a vivid Hydroinformatics community. The conference will serve as a perfect venue and platform for practitioners, engineers, researchers, scientists, managers and decision makers from Europe, Oceania, and Americas to meet their Asian counterparts to exchange the most recent developments in the Hydroinformatics field and the urgent water related issues.

**Theme and Topics:** From Nature to Digital Water: Challenges and Opportunities

**List of main topics:**

- Technologies for water management and monitoring
- Big-data, knowledge, and water data management
- Emerging solutions in modelling methods (AI, high performance computing, cloud computing).
- Digital transformation of urban water systems
- Hydraulic and hydrological modeling
- Climate change impacts
- Environmental and coastal hydroinformatics
- Complex water systems, remote sensing and control
- COVID-19 pandemic reflected in hydroinformatics
- Water – Energy – Food nexus
- Innovation in education and training in hydroinformatics

**URL:** <https://hic2024.scimeeting.cn/>

**Contacts:** Ms. Jenny LU

**Address:** A-1 Fuxing Road, Haidian District, Beijing, China

**Tel:** +86 10 68781345

**E-mail:** [contact@hic2024.org](mailto:contact@hic2024.org)

### The 10<sup>th</sup> International Symposium on Environmental Hydraulics (Aberdeen, Scotland, June 25-27, 2024)

**Date:** 25 – 27 June 2024

**Venue:** Aberdeen, Scotland

**Invitation:**

We are pleased to announce that the 10th International Symposium on Environmental Hydraulics (ISEH) will be held in Aberdeen, Scotland on the 25 – 27 June 2024. Sponsored by the International Association of Hydro-Environment Engineering and Research (IAHR), the 10th ISEH will build on the success of previous ISEH symposia in bringing together international experts to present and discuss new research, technical innovations and case studies relating to the symposium's theme "environmental hydraulics for a sustainable and resilient future". The Fluid Mechanics Research Group at the University of Aberdeen are proud to host the event, bringing the symposium to the UK for the first time in its history, and to Europe for the first time since the 6th ISEH held in Athens in 2010. It will be held within the University's historic Old Aberdeen campus, providing an ideal setting in which to share knowledge and to meet old and new friends. We very much look forward to extending a warm Scottish welcome to you in June 2024.

**URL:** <https://abdn.eventsair.com/iseh2024/>

**Contacts:**

For general enquiries please contact the event administrators, CPD & Events Services Research and Innovation, Room 28, University Office, King's College, Aberdeen, AB24 3FX, Scotland

**Call Us:** +44(0)1224 272523

**Email:** [iseh2024@abdn.ac.uk](mailto:iseh2024@abdn.ac.uk)

### 8<sup>th</sup> International Conference on Estuaries and Coasts (Canada, August 27-29, 2024)

**Date:** August 27-29, 2024

**Venue:** Quebec City, Canada

**Organizers:** Hydraulic and Environmental Research Groups of INRS (Canada); Clarkson University (USA)

**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:** Hydraulic and Environmental Research Groups of INRS (Canada)

**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). Seven such conferences were held in Hangzhou and Guangzhou, China; Sendai, Japan; Hanoi, Vietnam; Muscat, Oman; Caen, France; and Shanghai, China in 2003, 2006, 2009, 2012, 2015, 2018 and 2021, respectively. 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 8th International Conference on Estuaries and Coasts (ICEC 2024) will be held in Quebec City, Canada during August 27-29, 2024. The ICEC 2024 will provide a venue for intellectual and enlightening discussions of ideas. The conference program will be broad with topics. The local program and advisory committees are working to prepare an exciting and outstanding conference. Academics, government organizations, industrial partners and interested citizens are invited to attend this conference. We look forward to welcoming you for our next conference in the beautiful city of Quebec! -The ICEC organizing committee

**Theme:**

Resilient Estuaries and Coastal Zones under Global Challenges

**Topics of the Conference:**

1. Saline intrusion and sea level rise: measurements, modelling and forecasting;
2. Waves, storm surges and tsunamis: measurements, modelling, forecasting and warning systems;
3. Estuarine and coastal flows and their evolution by climate change;
4. Sediment transport and morphological change in estuaries and coastal zones;
5. Megacity developments under the threat of sea level rise and climate change;
6. Environment and ecosystem changes in estuaries and coastal zones;
7. Integrated coastal zone management for sustainable developments in the context of global change;
8. Impacts of watershed developments on estuaries and coastal zones;
9. Shoreline protection and beach nourishment;

10. Interactions between estuarine and coastal systems;
11. Resilient engineering solutions in estuaries and coastal zones.

**URL:** <https://icec2024.org/en>

**Contacts:**

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Conferium2828 Laurier Blvd.

Quebec City, Quebec

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Canada

**Phone:** +1 418 522 8182

Toll free (Canada and U.S.): +1 800 618 8182

Monday to Friday - 09:00 to 16:00 U.S. / Canadian Eastern Time

**Email:** [icec2024@conferium.com](mailto:icec2024@conferium.com)

### River Flow 2024 (Liverpool, UK, Sep. 2-6, 2024)

**Date:** 2-6 September 2024

**Venue:** Liverpool, UK

**Summary:** The 12<sup>th</sup> Conference on Fluvial Hydraulics under the auspices of IAHR, River Flow 2020, will be held 2-6 September 2024 in Liverpool, UK. Organized since 2002 under the auspices of the Fluvial Hydraulics Committee of the International Association for Hydro-Environment Engineering and Research (IAHR), the River Flow Conference Series has become one of the main international forum for dissemination of research and

industrial practice on fluvial hydraulics and river engineering. Following on the tradition and success of previous editions of River Flow conferences, River Flow 2024 will feature a day devoted to Master Classes for young researchers, daily keynote lectures, ample time for the presentation and discussion of accepted contributions (full papers and extended abstracts), and the presentation of the Stephen E. Coleman Award distinguishing the best paper first authored by a young researcher.

**Topics:**

The conference will as well cover issues related, but not limited to:

1. River morphodynamics and management
2. Hydraulic structures and impacts on local and catchment sediment transport, flow regime and ecology
3. Sediment, pollutant and microplastic dynamics in rivers
4. Fluid Mechanics, numerical modelling and two-phase flow
5. Climate change and adaptation
6. Monitoring techniques and AI?

**URL:** <https://www.ljmu.ac.uk/conferences/river-flow>

**Contacts:**

If you have questions, please do not hesitate to e-mail or call: [RF2024@ljmu.ac.uk](mailto:RF2024@ljmu.ac.uk).

Dr Iacopo Carnacina

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Intergovernmental  
Hydrological Programme



**INTERNATIONAL SEDIMENT INITIATIVE (ISI)**  
Intergovernmental Hydrological Programme (IHP)  
UNESCO

**ORGANISATION: UNESCO**

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(to be confirmed)	UNESCO, Beijing
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**ISI URL:** <http://www.irtces.org/isi/>

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