

INTERNATIONAL SEDIMENT INITIATIVE NEWSLETTER

Reporting ISI news to you quarterly

No. 68 October 8, 2023

IN THIS ISSUE

News

- ◇ President Xi meets with UNESCO director-general 1
- ◇ UNESCO IHP Secretary Mr. Abou Amani visits IRTCES 2
- ◇ International Sediment Initiative (ISI): Call for Regional and Thematic Coordinators 2
- ◇ IRTCES Governing Board Meeting successfully held 3
- ◇ The 15th International Symposium on River Sedimentation held in Florence, Italy 4
- ◇ Sustainable Erosion Control and Sediment Management in a Changing Climate 5
- ◇ Water for All: 18th World Water Congress begins in Beijing 6
- ◇ The 9th FRIEND-Water Global Conference held in Dakar, Senegal during September 25 - 29, 2023 7

Publications

- ◇ Papers Published in IJSR, Volume 38, No. 5, 2023 9
- ◇ Contents of ISWCR (Vol. 11, No.3, 2023) 10

Coming Events

- ◇ The 1st IAHR and 4th CAE International Conference on Global Water Security and Sustainable Development (China, October 30-November 3, 2023) 11
- ◇ 9th Conference on Physical Modelling in Coastal Engineering - Coastlab24 (the Netherlands, May 13-26, 2024) 11
- ◇ The 15th International Conference on Hydroinformatics (China, May 27-31, 2024) 12
- ◇ The 10th International Symposium on Environmental Hydraulics (Scotland, June 25-27, 2024) 12
- ◇ River Flow 2024 (UK, Sep. 2-6, 2024) 12
- ◇ The 8th International Conference on Estuaries and Coasts (Canada, August 27 to 29, 2024) 13

UNESCO “国际泥沙计划” 简报 本期内容

新闻

- ◇ 习近平会见联合国教科文组织总干事 1
- ◇ 联合国教科文组织水科学司司长阿布·阿曼尼访问国际泥沙研究培训中心 2
- ◇ 国际泥沙计划科学咨询委员会区域协调员及专题组带头人招募 2
- ◇ 国际泥沙研究培训中心理事会会议召开 3
- ◇ 第15次河流泥沙国际学术讨论会在意大利佛罗伦萨举办 4
- ◇ 全球气候变化下的泥沙管理与水土保持高质量发展 5
- ◇ 李国英出席第18届世界水资源大会中国专场会议，分享中国治水经验 6
- ◇ 第9届FRIEND-Water全球水资源讨论会在塞内加尔达喀尔召开 7

出版物

- ◇ 《国际泥沙研究》2023年第38卷第5期论文目录 9
- ◇ 《国际水土保持研究》2023年第11卷第3期论文目录 10

会议/培训信息

- ◇ 第一届IAHR和第四届CAE全球水安全与可持续发展国际会议（中国，2023年10月30日-11月3日） 11
- ◇ 第九届海岸工程物理建模学术会议（荷兰，2024年5月13-26日） 11
- ◇ 第十五届国际水文信息学会议（中国，2024年5月27-31日） 12
- ◇ 第十届环境水力学国际学术研讨会（苏格兰，2024年6月25-27日） 12
- ◇ 第十二届国际河川水力学会议（美国，2024年9月2-6日） 12
- ◇ 第八届河口海岸国际研讨会（加拿大，2024年8月27-29日） 13

NEWS

President Xi meets with UNESCO Director-General

Xinhua | Updated: 2023-09-28



President Xi Jinping meets with Director-General of the United Nations Educational, Scientific and Cultural Organization Audrey Azoulay in Beijing on Thursday, Sept 28, 2023. [Photo/Xinhua]

President Xi Jinping met with Director-General of the United Nations Educational, Scientific and Cultural Organization (UNESCO) Audrey Azoulay in Beijing on Thursday.

China has always supported the work of UNESCO, and together with UNESCO, has made positive contributions to safeguarding world peace and promoting global development, Xi said, adding that the valuable China-UNESCO cooperation should be maintained.

The world is made up of diverse civilizations, and China is among the countries with the longest histories and oldest cultures, he said.

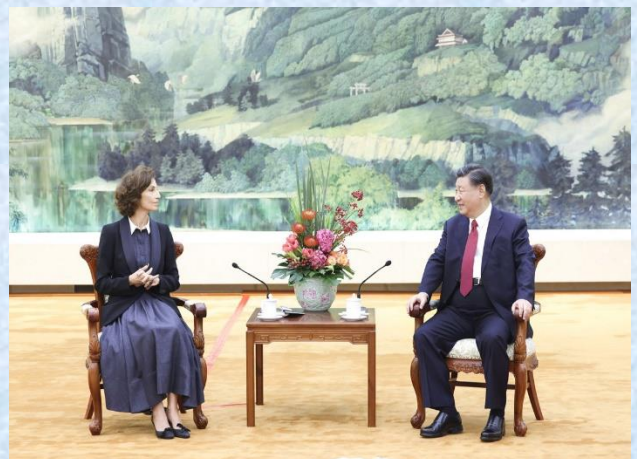
China is willing to work more closely with UNESCO to continuously improve the capacity for and level of heritage protection, and promote exchanges, mutual learning and cooperation among different civilizations, in order to contribute to world peace and facilitate the building of a community with a shared future for humanity, he said.

Xi said that China is committed to building itself into a great, modern socialist country in all respects by the middle of the century, and to advancing the rejuvenation of the Chinese nation through a Chinese path to modernization.

To this end, China adheres to the strategy of invigorating the country through science and education; promotes the development of education, science, technology and culture; and attaches importance to international exchanges and cooperation with all parties including UNESCO, he said.

Azoulay said that the Chinese government has always attached great importance to and actively supported UNESCO's work, and that the UNESCO Prize for Girls' and Women's Education -- established with China's support -- plays an important role in promoting the education of girls and women around the world.

Azoulay said that UNESCO is satisfied with its important consensus and cooperation with China in a wide range of fields, and hopes to strengthen exchanges and cooperation with China further in the fields of cultural heritage protection, science, culture and technology to achieve further international consensus and contribute to safeguarding world peace and development.



President Xi Jinping meets with Director-General of the United Nations Educational, Scientific and Cultural Organization Audrey Azoulay in Beijing on Thursday, Sept 28, 2023. [Photo/Xinhua]

UNESCO IHP Secretary Mr. Abou Amani visits IRTCES



Mr. Abou Amani, Director of the Division of Water Science and Secretary of the Intergovernmental Hydrological Programme (IHP), UNESCO, visited the International Research and Training Center on Erosion and Sedimentation (IRTCES) on September 13, 2023. Prof. PENG Jing, Director of IRTCES and President of the China Institute of Water Resources and Hydropower Research (IWHR) welcomed him and chaired a meeting for discussion on collaboration between UNESCO and IRTCES/IWHR on the IHP Flagship Initiatives and activities contributing to the strategies of the Ninth Phase of the IHP (2022-2029). Participants of the meeting included: Prof. PAN Qingbin, Deputy Director, IRTCES; Prof. ZHANG Jianli, Deputy Director, IRTCES; Ms. MENG Yuan, Deputy Director, International Cooperation, IWHR; Prof. LIU Cheng, Division Chief, Division of Research and Training, IRTCES; Prof. LIU Xiaoying, Division Chief, Division of International Exchange and Information, IRTCES; Mr. QI Chunyu, Division Chief, Division of the Secretary.



International Sediment Initiative (ISI): Call for Regional and Thematic Coordinators (Regional and Thematic Coordinators)

Background

Established in 2002, the International Sediment Initiative (ISI) is a global initiative to assess erosion and sediment transport to marine, lake or reservoir environments aimed at the creation of a comprehensive approach for the remediation and conservation of surface waters, intricately linking science with policy and management needs.

ISI is one of the fifteen Flagship Initiatives approved by the Intergovernmental Council of IHP, based on the needs of UNESCO Member States. Flagship Initiatives work on long-term crosscutting themes related to hydrology and water management issues and their global aim is to enhance the management of water resources through science-based recommendations, education, and capacity building. From this inception, ISI has the aim to increase awareness and understanding of erosion and sedimentation dynamics and sediment issues in all spheres of water management. The initiative promotes sustainable management of soil and sediment resources at local, regional, and global scales.

Call for Regional and Thematic Coordinators

As approved by the IHP Council in 2022, all Flagship Initiatives are required to setup an Advisory Board, with regional representation, as well as thematic scientific advisors, and to align their new strategies with the Strategy of the IXth Phase of the IHP. A call is therefore launched for candidates for 1) Regional Coordinators 2) Thematic Working Group Leads for the ISI Programme. Detailed Terms of Reference for the assignments are available in the Annex below. The draft ISI Strategy is provided as a separate document.

Application procedure

Interested candidates are invited to send their CV and application letter by 15 October 2023 to Dr Hongling Shi (shihl@iwhr.com; ISI Secretariat), with copy to Dr Koen Verbist (k.verbist@unesco.org). Candidacies will be assessed by the current ISI Steering Committee in consultation with the IHP Secretariat.

URL: <http://isi.irtces.org/isi/NewsEvents/news/webinfo/2023/09/1694019883573817.htm>

IRTCES Governing Board Meeting successfully held



The Governing Board Meeting of the International Research and Training Center on Erosion and Sedimentation (IRTCES) was held on 27 July 2023. The meeting was conducted both in-person in Beijing and online. Mr. Tian Xuebin, Vice Minister of the Ministry of Water Resources of China (MWR) and the President of the IRTCES Governing Board, was present at the meeting and gave a speech. Mr. Shahabaz Khan, Representative and Director of the UNESCO Multisectoral Regional Office for East Asia, Ms. Cui Ying, Deputy Secretary-General of the Chinese National Commission for UNESCO, Mr. Jin Hai, Director General of the Department of International Cooperation, Science and Technology of MWR, Mr. Shu Qingpeng, Director General of the Hydrology Department of MWR, Mr. Zhang Xinyu, Director General of the Department of Soil and Water Conservation of MWR, Ms. Peng Jing, President of the China Institute of Water Resources and Hydropower Research (IWHR) and Director of IRTCES, Mr. Hu Chunhong, academician of the Chinese Academy of Engineering (CAE) and Professor of IWHR, Mr. Cui Peng, academician of the Chinese Academy of Sciences (CAS) and Researcher of the Institute of Mountain Hazards and Environment of CAS and MWR, Mr. Helmut Habersack, President of the World Association for Sedimentation and Erosion Research (WASER), Mr. Miodrag Zlatic, the former President of the World Association of Soil and Water Conservation (WSWAC), and other representatives were present at the meeting.

Tian Xuebin emphasized that sustainable development has become a shared objective among the global community. Water plays a crucial role in supporting this goal and has cross-cutting linkages. The problem of sedimentation and soil erosion is a universal challenge that is closely linked to various objectives of the UN's 2030 Agenda for Sustainable Development. It is also a critical component of the ninth phase of the UNESCO IHP's strategy (2022-2029). IRTCES has a solid foundation and has made significant

achievements. It should capitalize on new opportunities to further its contributions in promoting global sediment management development and soil conservation, implementing UNESCO's priority development programs, and achieving relevant goals of the UN's 2030 Agenda for Sustainable Development. To achieve this, IRTCES should conscientiously implement the Council-approved work plan and carry out various tasks. It should also leverage its technological advantages and serve as a bridge and link to promote international exchanges, focus on sustainable water development, and strengthen its global leading and driving role. Finally, it should prioritize self-construction and consolidate the foundation of its development.



During the meeting, the board members reviewed and approved several reports, including the "IRTCES Activity Report (2020-2022)", "IRTCES Financial Report (2020-2022)", "IRTCES Long-Term Plan (2023-2030)", and "IRTCES Work Plan (2023-2024)". They also made suggestions on IRTCES's future development, such as responding to UNESCO's strategy, analyzing scientific research hotspots, improving cooperation among UNESCO Category II Centres, and enhancing promotion and publicity efforts.

Peng Jing emphasized that IRTCES, as a member of the global network of UNESCO Category II Centres and a global academic group, should focus on strategic positioning, strengthen its own capacity building, and act as a bridge and link to promote international academic exchanges and cooperation. Furthermore, the Center should actively participate in global governance, contribute to the water-related goals of UN's sustainable development agenda, and strive to become a model of cooperation between the Chinese Government and the United Nations.



The 15th International Symposium on River Sedimentation held in Florence, Italy

The 15th International Symposium on River Sedimentation (ISRS) was held in Florence, Italy, from September 5 to 8, 2023, with more than 200 delegates from more than 20 countries and regions around the world. The International Symposium on River Sedimentation is a triennial series of academic activities sponsored by the International Research and Training Center on Erosion and Sedimentation (IRTCES) and the World Association for Sedimentation and Erosion Research (WASER), with the permanent secretariat of the meeting located in IRTCES. The 15th ISRS was jointly organized by the University of Florence and the University of Padua, Italy. The theme of the conference was "Sustainable Sediment Management in a Changing Environment", which included topics such as sediment and pollutant transport; morphodynamics; ecohydraulics; sediment related disasters and climate change; reservoir sedimentation, interactions between sediment and hydraulic structures; sustainable sediment management at the river-coastal basin scale, and social, economic & political issues related to sediment and water management.



15th International Symposium on River Sedimentation



Welcome speeches at the Opening Ceremony

The 15th International Symposium on River Sedimentation was officially opened on September 6 in Florence. Seven welcome speeches were made by Prof. Claudio Lubello, Director of the Department of Civil and Environmental

Engineering at the University of Florence, Prof. Luca Solari also from the same Department, Prof. Helmut Habersack, University of Natural Resources and Life Sciences, Vienna, President of WASER, Prof. Guangquan Liu, IRTCES Professor, Secretary General of WASER, Prof. Isabella Bonamini, Northern Apennines River Basin District Authority, Prof. Sara Di Maio, Italian National Association of Land Reclamation in Tuscany, and Prof. Leonardo Rossi, water management company Publiacqua SpA. They welcomed experts, scholars and young researchers from all over the world to meet, exchange experience, share knowledge, and jointly promote the progress of research and management practices for addressing river sediment problems in the world under a changing environment. The opening ceremony was chaired by Prof. Luca Solari, Department of Civil and Environmental Engineering, University of Florence.

Keynote reports at the conference

The conference included 5 keynote reports and more than 120 technical presentations. The conference keynote reports included:

- Prof. Zhaoyin Wang and Prof. Mengzhen Xu (China): Delta development and artificial land creation with sediment;
- Prof. Enrica Viparelli (USA): Role of bed level variability on tracer dispersal in an equilibrium bed;
- Prof. Marcelo H. Garcia (USA): Entrainment, transport and mixing of fine iron mine tailings in the Paraopeba River, Brazil;
- Prof. Junke Guo (USA): Modelling river bedform evolution;
- Research Engineer Alain Recking (France): Accounting natural variability in 1D bed load prediction: a field case study.



Prof. Enrica Viparelli



Prof. Junke Guo



Prof. Mengzhen Xu



Research Engineer Alain Recking

WASER Honorary Membership Awards and the Best Paper Awards of the International Journal of Sediment Research (IJSR) were presented at the meeting on September 7th. Prof. Giampaolo Di

Silvio of Italy, Academician Chunhong Hu and Prof. Zhaoyin Wang of China were awarded Honorary Membership, and three papers published by scholars from China, Saudi Arabia, and New Zealand in IJSR received Best Paper Awards. Prof. Guangquan Liu, Secretary General of WASER, announced that the 16th ISRS will be hosted by the University of Nebraska-Lincoln, in Omaha, USA in 2025. Prof. Guangquan Liu received the banner of the Symposium from Prof. Luca Solari, the representative of the Local Organizing Committee, and then handed it over to Prof. Junke Guo, the representative of the next organizer.



Presentation of Honorary Membership Awards and IJSR Best Paper Awards

A technical visit was organized on September 8th, where delegates visited the Bilancino Lake in the northwest of the city of Florence, the San Niccolò weir on the Arno River in the city center and the new power plant, where they learned about water supply and hydroelectric power generation in the city of Florence, as well as technologies related to sediment management in urban water landscape design, biodiversity conservation and efficient use of water resources.



ISRS Symposium banner hand over

On the afternoon of September 8th, the 15th ISRS was closed. Prof. Luca Solari, Department of Civil and Environmental Engineering, University of Florence, hosted and summarized the meeting on behalf of the Local Organizing Committee, and Prof. Guangquan Liu, Secretary General of WASER, thanked the University of Florence and the University of Padua for their efforts in making the Symposium a success, and welcomed the delegates to meet again in Omaha, USA, in 2025!



Group photo of the attendees

Sustainable Erosion Control and Sediment Management in a Changing Climate

On July 27, 2023, in conjunction with the Governing Board Meeting of the International Research and Training Center on Erosion and Sedimentation (IRTCES), four distinguished scientists were invited to give lectures on "Sustainable erosion control and sediment management in a changing climate": Prof. Helmut Habersack, the President of the World Association for Sedimentation and Erosion Research (WASER) and Professor at the University of Natural Resources and Life Sciences in Vienna; Prof. Cui Peng, Academician of the Chinese Academy of Sciences (CAS) and Researcher at the Institute of Mountain Hazards and Environment of the CAS and the Ministry of Water Resources of China; Prof. Shahbaz Khan, Representative of UNESCO in China and Director of the Multisectoral Regional Office for East Asia; Prof. Miodrag Zlatic, the former President of the World Association of Soil and Water Conservation (WASWAC) and Professor at the University of Belgrade, Serbia.

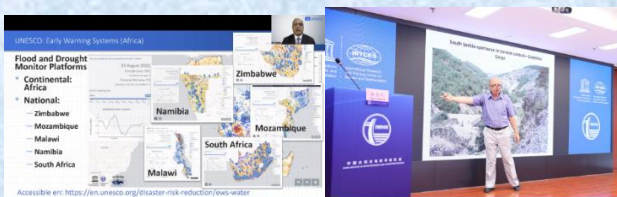


Prof. Helmut Habersack gave a presentation on the World's Large River Initiative. He provided an overview of the initiative's background, five major activities, and how it integrates with the International Plan of Action. Using the Danube, Niger and Mekong rivers as examples, he shared research findings on hydrology, sediment transport and morphology, ecology and water quality, and explained their socio-economic impacts.

Academician Cui Peng gave a presentation on Flash flood and debris flow early warning and risk forecasting. He introduced the great hazards of flash floods and debris flow disasters and analyzed their processes and mechanisms. He also shared practical examples of the data support, parameter setting, algorithm efficiency, multi-scale forecasting and warning systems used for early warning and risk forecasting.

Prof. Shahbaz Khan gave a presentation on the topic of "Open science and open data for a water secure world". He outlined the water-related objectives of the United Nations 2030 Agenda for Sustainable Development, as well as the priority areas of the Ninth phase of the UNESCO Intergovernmental Hydrological Programme. Prof. Shahbaz Khan analyzed the gaps in the fields of science, technology, knowledge and data. He also elaborated the role of new technologies including artificial intelligence. He emphasized the importance and implementation of open science and open data.

Prof. Miodrag Zlatic gave a presentation on the Importance of disaster risk reduction and sustainable land management on the survival of soil and water resources. He introduced the significance of soil and water resources and provided insight into how disaster risk can be reduced and sustainable land management can be developed, based on the successful experiences of organizations such as UNESCO, FAO, the Global Environment Fund (GEF) and the Swedish International Development Cooperation Agency (SIDA).



This meeting was hosted by IRTCES, and more than 50 researchers, postgraduates and international students in related fields attended the meeting. In-depth discussions between the presenters and participants were developed on the issues of soil and water resources management, early warning and prediction of water hazards, etc.



Water for All: 18th World Water Congress begins in Beijing

By Hou Liqiang | China Daily | Updated: 2023-09-12



Li Guoying, Minister of Water Resources, speaks at the 18th World Water Congress in Beijing, Sept 11. [Photo/Chinanews.com]

China's water resources management strategy, that prioritizes water conservation, offers viable solutions for countries around the world, as they strive to cope with mounting water-related challenges amid climate change.

Li Guoying, Minister of Water Resources, made the remarks on Sept. 11 (Monday), as the 18th World Water Congress, themed "Water for All: Harmony between Humans and Nature", kicked off in Beijing.

As one of the world's largest Congresses linking water policymakers and researchers with policy practitioners globally, the congress has been organized every three years by the International Water Resources Association since 1973. Co-hosted by China's Ministry of Water Resources, the congress continued for a week.

"We are now in an era full of challenges. Due to climate change and human activities, countries around the globe are facing common water-related problems such as frequent flooding, water shortages, damage to aquatic ecosystem and water pollution," Li said.

More than 2 billion people still live in countries with highly stressed water resources. The world is not on track to reach water-related goals as envisaged in the United Nations'2030 Agenda for Sustainable Development, he said.

The minister, however noted that the current era is one full of hope, as public awareness about building a shared future for mankind is growing, and there is also a strong willingness among countries to enhance exchange and cooperation over water governance.

"The nations are all proactively exploring and seeking water governance strategies and solutions that can be used for reference," he said.

Under the guidance of President Xi Jinping's water management strategy of "prioritizing water conservation, balancing spatial distribution, taking systematic approaches, and giving full play to the roles of both government and market", Li said, China has made historical achievements in water resources management and solved many long-standing water management challenges that had previously remained unresolved.

Water management projects across China have a combined capability to supply almost 900 billion cubic meters of water annually, compared to 700 billion cubic meters in 2012, he said. At the end of last year, 87 percent of China's rural population had access to tap water.

Highly consistent with the water-related goals in the UN's 2030 Agenda for Sustainable Development, President Xi's water management strategy has proven to be effective in China's water governance practices, Li stressed.

Considering the risks and challenges the world faces in ensuring water security and China's experiences in water management, Li proposed that the world follows the strategy to tackle the common challenges in water governance.

The available freshwater resources on the Earth only accounts for about 3 percent of the world's total water resources, he said. According to a global water resources report released by the World Meteorological Organization, currently, 3.6 billion people worldwide face water shortages for at least one month each year, and it is estimated that this number will increase to over 5 billion by 2050.

"We must fully recognize the limited and irreplaceable characteristic of freshwater resources, and jointly fulfill our obligations and responsibilities to sustainably use them," he said.

Loic Fauchon, president of the World Water Council, called on countries to reach a political water deal that can help promote balance between water for humans and water for nature, against the backdrop of climate change and population increase.

"We should feel responsible to define a new relationship between humankind and water. I deeply believe it. And I believe that we need to lay the foundations for a political water deal. Because we all know that water is under threat," he said.

The 9th FRIEND-Water Global Conference held in Dakar, Senegal during September 25 - 29, 2023



The 9th FRIEND-Water Global Conference

The 9th FRIEND-Water Global Conference was held from September 25 to 29, 2023 in Dakar, Senegal at the University Cheikh Anta Diop. About 150 academics, researchers, and students gathered in Dakar from across the subregion and around the world to share their knowledge, results, ideas and discussions about hydrological sciences. The scientific program included symposia, workshops, lectures and special events. Totally 131 presentations were made on 5 topics, which included: Ecohydrology, Climate change and water resources resilience, Bridging the data-knowledge gaps in hydrology, Spatial hydrology, and Large rivers management. The FRIEND IHP-IX workshop was held on September 28 for discussion on the future of the FRIEND-Water programme. Two training workshops, focusing on Early warning systems for hydrological extremes and hydrometry and Ecohydrology and vulnerability modelling, were organized on September 29 and September 30 to October 3, respectively.

FRIEND-Water (Flow Regime from International Experimental and Network Data) is an international collaborative network of experts of the UNESCO Intergovernmental Hydrological Programme (IHP). Established in 1985, it aims to generate new understanding about regional hydrology and multi-scale water cycle processes. FRIEND-Water is investigating long-term variations and changes in hydrological regimes to better understand the climate and river basin controls, as well as the influence of humans on the spatial and temporal distribution of water. The FRIEND-Water initiative is currently structured into 8 regional groups: West and Central Africa, Europe, Mediterranean, Latin America and Caribbean, Southern Africa, Asia Pacific, Nile, Congo.

The FRIEND-Water programme complements and interacts with many national and international

projects and initiatives: the Ecohydrology-IHP, the International Sediment Initiative (ISI), the International Drought Initiative (IDI), the International Floods Initiative (IFI), the Global Network on Water and Development Information for Arid Lands (GWADI), the WMO/GWP Integrated Drought Management Programme (IDMP), the World's Large Rivers Initiative (WLRI), among others.

The Global FRIEND conference takes place every 4 years with previous venues including Norway, Germany, Slovenia, South Africa, Cuba, Morocco, France and China.

Prof. Cheng Liu and Prof. Hongling Shi from the International Research and Training Center on Erosion and Sedimentation (IRTCES) and the ISI Secretariat attended the 9th FRIEND-Water Global Conference and made a presentation entitled 'The International Sediment Initiative (ISI) and its case studies on sediment management in river basins'. During the conference, they had discussions on ISI activities and future collaboration with Dr. Koen Verbist from UNESCO IHP Secretariat, Dr. Stephan Dietrich from the International Centre for Water Resources and Global Change, Dr. Eric Servat from the International Center for Interdisciplinary Research on Water Systems Dynamics (ICIREWARD), Prof. Mohamed Meddi a 6th term Council member of WASER and other participants.



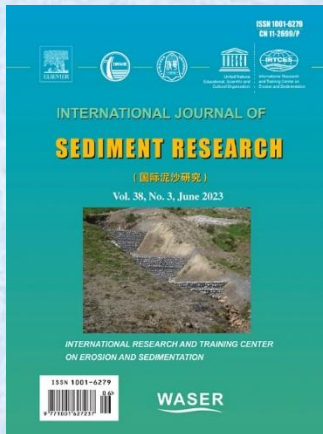
A display of IRTCES Brochures



Prof. Liu making presentation

PUBLICATIONS

Papers Published in the International Journal of Sediment Research Volume 38, No. 5, 2023



Volume 38, No.5, 2023
Pages 629-780 (October 2023)

[Sand wave migration near the southeastern corner of Martha's Vineyard, Massachusetts, USA](#)

Vinícius Santos Pessanha, Peter Cheng Chu, Matthew Kenneth Gough, Peter Traykovski, Mara Morgenstern Orescanin
Pages 629-642

[Study of gravitational sedimentation of flexible, permeable circular and planktonic particle applying the immersed boundary method](#)

Rekha Panghal, Sudeshna Ghosh
Pages 643-652

[Analysis of the sediment sources of flood driven erosion and deposition in the river channel of the Fu River Basin](#)

Shanghong Zhang, Xujian Hu, Wei Miao, Zan Xu
Pages 653-661

[A framework approach to address the trend and causes of flood stage change in a river reach downstream of a dam influenced by tributaries](#)

Zhaohua Sun, Shanshan An, Xinyue Zhou, Zhiqing Li, Lei Zou
Pages 662-672

[The Igarapé Weir decelerated transport of contaminated sediment in the Paraopeba River after the failure of the B1 tailings dam \(Brumadinho\)](#)

Daniela Patrícia Salgado Terêncio, Fernando Antônio Leal Pacheco, Renato Farias do Valle Junior, Maytê Maria Abreu Pires de Melo Silva, ... Luís Filipe Sanches Fernandes

Pages 673-697

[Modeling uncertainties of reservoir flushing simulations](#)

Camila Bergmann Goulart, Tobias Bleninger, Hugo de Oliveira Fagundes, Fernando Mainardi Fan
Pages 698-710

[Improving hydrodynamic modeling of river networks by incorporating data assimilation using a particle filter](#)

Chenhui Jiang, Dejun Zhu, Haobo Li, Xiaoqun Liu, Danxun Li
Pages 711-723

[Historical fluxes of metal and metalloids in an aquatic ecosystem affected by land-use change and mining activities in northwestern Mexico](#)

Ochoa-Contreras Roberto, Jara-Marini Martín Enrique, Ruiz-Fernández Ana Carolina, Sanchez-Cabeza Joan Albert, ... Pérez-Bernal Libia Hascibe
Pages 724-738

[Rapid magnetic susceptibility measurement as a tracer to assess the erosion–deposition process using tillage homogenization and simple proportional models: A case study in northern of Morocco](#)

Abdessalam Ouallali, Naima Bouhsane, Saidati Bouhlassa, Mohamed Moukhchane, ... Habiba Aassoumi
Pages 739-753

[Diagenetic signatures in the deltaic and fluvial-estuarine Messinian sandstone reservoirs in the Nile Delta as a tool for high-resolution stratigraphic correlations](#)

Mahmoud Leila, Andrea Moscariello, Dustin Sweet, Branimir Šegvić
Pages 754-768

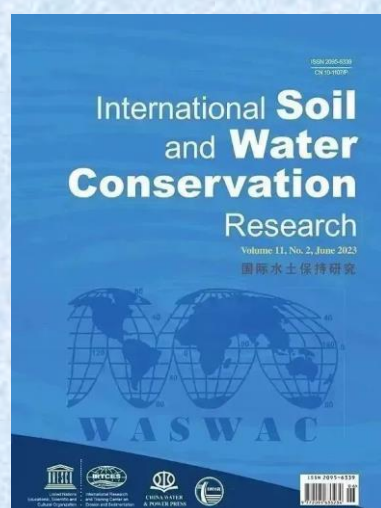
[Experimental investigation of sediment transport in partially ice-covered channels](#)

Mina Rouzegar, Shawn P. Clark
Pages 769-779

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. 11, No.3, 2023)



Volume 11, Issue 3
Pages 415-588 (September 2023)

[MINErosion 4: Using measurements from a tilting flume-rainfall simulator facility to predict erosion rates from post-mining catchments/landscapes in Central Queensland, Australia](#)

Ashraf M. Khalifa, Hwat Bing So, Hossein Ghadiri, Chris Carroll, ... Bofu Yu
Pages 415-428

[Remote sensing of soil degradation: Progress and perspective](#)

Jingzhe Wang, Jianing Zhen, Weifang Hu, Songchao Chen, ... Xiaodong Yang
Pages 429-454

[A WEPP-Water Quality model for simulating nonpoint source pollutants in nonuniform agricultural hillslopes: Model development and sensitivity](#)

Ryan P. McGehee, Dennis C. Flanagan, Bernard A. Engel
Pages 455-469

[Estimating the annual runoff frequency distribution based on climatic conditions and catchment characteristics: A case study across China](#)

Ziwei Liu, Hanbo Yang, Taihua Wang, Dawen Yang
Pages 470-481

[Magnitude, direction, and drivers of rhizosphere effect on soil nitrogen and phosphorus in global agroecosystem](#)

Andong Cai, Shengnan Tang, Muhammad Ahmed Waqas, Bin Wang, ... Tianjing Ren
Pages 482-493

[Novel sediment source fingerprinting quantifying erosion-induced total nitrogen and total phosphorus outputs from an intensive agricultural catchment, North China](#)

Hanqing Yu, Joseph Adu-Gyamfi, Suarau Odutola Oshunsanya, Adrian Chappell, ... Lee Heng

Pages 494-506

[Spatiotemporal variations and determinants of stream nitrogen and phosphorus concentrations from a watershed in the Three Gorges Reservoir Area, China](#)

Jun Deng, Yiwen Zhou, Lin Chu, Yujie Wei, ... Cuiting Dai
Pages 507-517

[Wind erosion from crusted playa surfaces by no saltation and with saltation: A comparison through laboratory wind tunnel experiments](#)

Guoming Zhang, Li Li, Wenjian Tang, Lianyou Liu, ... Jiadong Dai
Pages 518-527

[Long-term conservation tillage results in a more balanced soil microbiological activity and higher nutrient supply capacity](#)

Priyo Adi Nugroho, Katalin Juhas, Nándor Prettl, Balázs Madarász, Zsolt Kotrocó
Pages 528-537

[Potential of roots and shoots of Napier grass for arresting soil erosion and runoff of mollisols soils of Himalayas](#)

Sushma Tamta, Akhilesh Kumar, Daniel Prakash Kushwaha
Pages 538-548

[Vegetation characteristics and soil properties in grazing exclusion areas of the Inner Mongolia desert steppe](#)

Wenbang Gao, Hongtao Jiang, Shuai Zhang, Chunxing Hai, Baoyuan Liu
Pages 549-560

[Variations of soil organic carbon fractions in response to conservative vegetation successions on the Loess Plateau of China](#)

Muhammad Imran Ghani, Jing Wang, Peng Li, Shamina Imran Pathan, ... Hamada Abdelrahman
Pages 561-571

[Redistribution process of precipitation in ecological restoration activity of Pinus sylvestris var. mongolica in Mu Us Sandy Land, China](#)

Yiben Cheng, Hongbin Zhan, Wenbin Yang, Wei Feng, ... Ruifang Hao
Pages 572-585

[Call for joint international actions to improve scientific understanding and address soil erosion and riverine sediment issues in mountainous regions](#)

Fan Zhang, Baoyuan Liu, Liping Zhu, Richard Cruse, ... Shaoshan An
Pages 586-588

Free full papers and open access are available at ScienceDirect :

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

COMING EVENTS

The 1st IAHR and 4th CAE International Conference on Global Water Security and Sustainable Development (Nanjing, China, October 30-November 3, 2023)

Date: October 30-November 3, 2023

Venue: Nanjing, China

Summary: The 1st IAHR and 4th CAE International Conference on Global Water Security and Sustainable Development will be held by the Yangtze Institute for Conservation and Development, Hohai University and Nanjing Hydraulic Research Institute in Nanjing (China) from October 30th to November 3rd, 2023. The successful development of global water security faces significant challenges. These challenges require close cooperation between scientists, engineers, water resources managers and policy makers. In this regard, the conference will provide a forum bringing together participants from academia, consulting firms, local, provincial and national government agencies, and offering them an opportunity to interact in an informal and relaxed environment. The conference will also provide students with an opportunity to discuss their interests with renowned and well-established researchers and professionals in this field.

Themes:

1. Hydro-environmental Modelling and Assessment;
2. Hydro-biological Processes;
3. Hydro-morphological Processes;
4. Groundwater Transport Processes;
5. Groundwater Transport Processes;
6. Nature-Based Solutions;
7. Disaster Risk Reduction and Resilience;
8. Climate Change and Population Growth Impacts;
9. Digital Water Transformation;
10. Data Technologies;
11. Design of Storage Facilities, Coastal Basins and Desalination Plants;
12. Agricultural and Aquaculture Developments;
13. Water-Food-Energy Nexus;
14. Water Transfer and Governance;
15. Externalities of Engineering

URL:

<https://icgws2023.iahr.org/en/web/index/266>

Organization & Contacts: Yangtze Institute for Conservation and Development, Hohai University

Nanjing Hydraulic Research Institute

Contacts

Email: gws2023@yicode.org

9th 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 9th 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/>

The 15th 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 15th 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

The 10th 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

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

Date: 2-6 September 2024

Venue: Liverpool, UK

Summary: The 12th 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.

Dr Iacopo Carnacina

Email: i.carnacina@ljmu.ac.uk

The 8th International Conference on Estuaries and Coasts (Quebec City, Canada, August 27 to 29, 2024)

Date: August 27 to 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 have now been 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. 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 the Quebec City, Canada during August 27 to 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 tsunami: 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: Quebec Conference Secretariat

Conferium. Conferences. Events. Service

2828 Laurier Blvd. Quebec City, Quebec G1V 0B9
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



unesco

Intergovernmental
Hydrological Programme



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

ORGANISATION: UNESCO

Abou Amani	UNESCO, Paris
(to be confirmed)	UNESCO, Beijing
Koen Verbist	UNESCO, Paris

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

ISI GOVERNANCE

Advisory Group

Manfred Spreafico (Chairperson)	Switzerland
Cheng Liu	China
Koen Verbist	UNESCO
Desmond E. Walling	UK

Expert Group

Abdalla Abdelsalam Ahmed	Sudan
Farhad Yazdandoost	Iran
Gerrit Basson	South Africa
Giampaolo Di Silvio	Italy
Gil Mahé	France
Helmut Habersack	Austria
Johannes Cullman	WMO
Rollin H. Hotchkiss	USA
Valentin Golosov	Russia
Zhao-Yin Wang	China
José Alberto Zúñiga	Costa Rica
Thomas Hoffmann	Germany

ISI TECHNICAL SECRETARIAT

International Research and Training Center on
Erosion and Sedimentation (IRTCES)
under the auspices of UNESCO
P.O. Box 366, 20 Chegongzhuang West Rd.
Beijing, 100048, China
Fax: +86-10-68411174
<http://www.irtces.org/>

Secretary-General:

Liu, Cheng	China
------------	-------

Contact

Shi, Hongling	China
Zhao, Ying	China

=====

Newsletter Layout and Production:

ISI Technical Secretariat
The ISI Newsletter is sent quarterly to ISI
Governance members and interested experts.
Please send your contributions to the ISI
Chairperson at manfred.spreafico@gmail.com or
ISI technical Secretariat at shihl@iwhr.com

=====

Editor: Prof. Shi Hongling
P.O. Box 366, 20 Chegongzhuang West Rd.
Beijing, 100048, China
Fax: +86-10-68411174
E-mail: shihl@iwhr.com

Advisor: Prof. Des. E. Walling

=====