

WORLD ASSOCIATION FOR SEDIMENTATION AND EROSION RESEARCH

World Association for Sedimentation & Erosion Research – WASER

NEWSLETTER

Reporting WASER news to you regularly 2025 No. 1

(Mar 31, 2025)

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¹ NEWS

A Joint Webinar on Sediment Management for Sustainable Hydropower and Water Security held by IRTCES and RC-IRBM



On February 21, a joint webinar with the overarching theme of 'Sediment Management for Sustainable Hydropower and Water Security' was successfully held. The webinar was co-organized by the International Research and Training Center on Erosion and Sedimentation (IRTCES) in China and the Regional Centre for Integrated River Basin Management (RC-IRBM) in Nigeria. This workshop marked the first official collaborative exchange between the two UNESCO Category II Centers following the signing of a Memorandum of Understanding in September 2024.

The webinar brought together a total of 14 participants from IRTCES and RC-IRBM to discuss key issues such as sediment management, sustainable hydropower development, and water security. The meeting was co-chaired by Prof. Shi Hongling, Division Chief of IRTCES, and Prof. Omogbemi O. Yaya, Director of RC-IRBM.

Dr. Martin Eduvie from the Nigerian National Water Resources Institute (NWRI) introduced the goals and mission of the Institute. Dr. Sani Dauda Ahmed from RC-IRBM shared the latest research progress on sustainable watershed management practices in Nigeria. Mr. Adedotun Salami from NWRI presented research on reservoir sedimentation studies in Nigeria, while Engineer Julius Onemano discussed the results of flood and erosion assessments in the country. Porf. Zhang Jianli, Deputy Director of IRTCES, provided an overview of the China Institute of Water Resources and Hydropower Research (IWHR) and IRTCES, including their organizational structure and research focus. Prof. Shi Hongling delivered a comparative analysis on variations in runoff and sediment load of the typical rivers worldwide. Prof. Liu Cheng shared key experiences of sediment management drawn from several large rivers around the world, and Dr. Zhao Ying introduced the global data collection and publishing platform for erosion and sedimentation.

Following the presentations, the two sides explored future collaboration and next steps, such as strengthening cooperation through expert exchanges, training programs, and international student projects. The webinar concluded with summaries by Prof. Shi Hongling and Prof. Yaya. Against the backdrop of increasing global water resource demands, sediment management is a critical component for ensuring sustainable hydropower development and water security. This workshop aimed to share cutting-edge research and practical experience in sediment management through academic exchanges and international cooperation, enhancing the capacity of both sides in water resource management and river basin governance, and contributing wisdom and strength to achieving global sustainable development goals.



Webinar on Glacier Protection Successfully Held



On March 21, 2025, to celebrate World Water Day and the inaugural World Glacier Day, the International Research and Training Center on Erosion and Sedimentation (IRTCES), together with the China Institute of Water Resources and Hydropower Research (IWHR), the UNESCO Regional Office for East Asia, and other partners, organized a Webinar on Glacier Protection. The theme of the event was "Glacial Sediment, Soil Erosion, and Hazard Management." Experts from IWHR, UNESCO East Asia, the Advisory Committee of the International Sediment Initiative (ISI) – IHP – UNESCO, the Institute of Tibetan Plateau Research (ITP-CAS), and the Institute of 2

Geographic Sciences and Natural Resources Research (IGSNRR-CAS) participated in the webinar.



The webinar began with speeches by Ms. Ai Sugiura, Programme Specialist and Head of Natural Sciences, UNESCO Regional Office for East Asia; Prof. Vít Vilímek, Charles University in Prague, and Working Group leader of ISI Thematic Priority 3 (Glacier-related sediment, erosion and hazard management); and Mr. Zhang Jianli, Deputy Director of IRTCES. They highlighted that World Water Day 2025 focuses on glacier preservation and that March 21 will henceforth be observed as 'World Glacier Day', raising awareness of the critical role of glaciers in the climate system and the hydrological cycle, as well as the impacts of rapid glacial retreat. They also emphasized UNESCO's commitment to open science and data-sharing in glacier protection, shared the achievements of ISI in glacier-related research, and introduced the contributions of IWHR to glacier studies. They called for global action to strengthen glacier research and safeguard vital water resources for the future. The opening session was moderated by Prof. Wang Yujie, Director of the Division of International Cooperation, IWHR.

The keynote Speech session, chaired by Prof. Shi Hongling, Division Chief of IRTCES and Head of ISI's Global Secretariat, featured three presentations: 'Glacial Lakes, Outburst Floods, and Extreme Sediment Transport Events' – Dr. Adam Emmer, The Mountain Processes and Mountain Hazards Group, Institute of Geography and Regional Science, University of Graz, Austria; 'Variation of Riverine Runoff and Sediment Flux over the Tibetan Plateau Under Climate Change – Prof. Zhang Fan, ITP-CAS; and 'Remote Sensing and Modeling of Recent Glacier Mass Loss Hotspots in the Tibetan Plateau' – Dr. Li Xingdong, IWHR.



The Q/A and Discussion session was moderated by Professor Liu Cheng, former member of the ISI Advisory Group and Vice President of WASER. Dr. Yu Guo'an from IGSNRR-CAS, and the keynote speakers Dr. Emmer, Prof. Zhang, and Dr. Li participated in the discussion as panelists. Prof. Matjaz Mikos, Civil and Geodetic Engineering, University of Ljubljana, and UNESCO Chair in Water-Related Disaster Risk Reduction was also engaged in the discussion. Key challenges in glacier-related sediment, erosion and hazard management were deeply discussed and addressed. The webinar concluded with consensus on the need for enhanced international cooperation to address glacier retreat and its impacts on water resources. Participants emphasized the importance of continued research and data sharing to support evidence-based policymaking for alacier preservation.

Four decades after Mount St. Helens blast, sediment continues to cause problems downstream



Tan sediment is seen running out of the mouth of the Cowlitz River into the Columbia in 2014.

Henry Brannan / Murrow News Highlights

Nearly 45 years after Mount St. Helens' eruption sent almost 90 billion cubic feet of debris into the upper Toutle Valley, millions of tons of sediment still pour down into the Cowlitz River each year.

And that flow is causing costly problems for towns along the way.

Updating Toutle's roughly 36-year-old sediment retention dam has been delayed, leaving nearby cities to find their own solutions to drinking water needs, and maintaining deep draft levels at ports.

Kelso is looking to update its water system due to impeding sediment, while Castle Rock and Longview have changed their systems in light of the blast, and the U.S. Army Corps of Engineers continues to monitor sediment levels.

The problem

The issue starts when mountain runoff carries ashen remains of what was the volcano's peak into the North Fork Toutle River and down to the Toutle. From there, the lower Cowlitz River ferries an average of nearly 3 million tons of sediment through Castle Rock, Kelso and Longview before much of it dumps into the Columbia on its way to the Pacific Ocean.

That 3 million tons is 10 times greater than preeruption levels, and it causes damage by burying cities' water intake systems and filling in deep water ports' berths.

The U.S. Army Corps of Engineers has long managed the issue. It constructed the sediment retention dam in 1989 on the North Fork of the Toutle River, and still spends between \$400,000 and \$600,000 a year monitoring the problem, said Corps' spokesman Jeffrey Henon.

But the structure has become less and less effective as it fills, switching from catching about 80% of passing sediment to allowing 80% to pass, said Henon. While work to refurbish the structure again is planned, it has been delayed, said David Vorse, Castle Rock Public Works director.

And — with the Corps spread thin managing an almost endless number of project around the country including most of the Columbia River hydropower system — the burden of dealing with Mount St. Helens' sediment has increasingly fallen to cities along the rivers' path.

Kelso plans for new water system

That management can be a costly task, said Kelso City Council person Mike Karnofski, who used to run utilities for Weyerhaeuser's local operations and now budgets for upgrades to the city's water system.

The city switched from drawing water directly from the Cowlitz River to a Ranney Collector Well system in 1979, said Kelso Public Works Manager Devin Mackin.Ranney. Wells collect naturally filtered groundwater using pipes that extend out under a riverbed horizontally from a main vertical shaft.

The switch was planned to create a more consistent water supply, not as vulnerable to seasonal changes in water level, contamination and natural disasters.

But, when the mountain blew one year later, fine sediment deposited on the riverbed began to slow the percolation of water into the intake pipes. That problem has not gone away and it's not cheap to deal with.

"We do not have a precise cost estimate for managing the silt and sediment in the Cowlitz River, because the expenses are too extensive to accurately track, and the silt buildup itself is not systematically monitored," Mackin said.

To combat the issue, the city has needed to dredge above the intakes, buy water from Longview and even refurbish the system.

The last of that trio alone cost the city about \$1 million last year, said Karnofski. And the continuing expense is significant enough that it has led the City Council to budget for maintenance and an eventual replacement years into the future.

The current system has about five to eight years left, said Karnofski. After that, the city will have to build a new water system.

Longview dredging costs

Longview gets its water from groundwater wells near the Mint Farm Regional Water Treatment Plant.

That approach started in 2013 specifically to avoid costly and frequent sediment related maintenance, said Chris Collins, Longview Public Works director and assistant city manager.

"It was to the point where the plant was needing a full rebuild, which would have costs \$40 million over the course of nine years, and our new plant was \$32 million," Collins said. "So it made that decision pretty easy."

And while the approach hasn't always been universally popular, it has been consistent and helped the city avoid issues that come from getting water directly from the Cowlitz or from a Ranney well system under it.

But, as Port of Longview director of external affairs Dale Lewis will tell you, that doesn't mean the city totally dodged the bullet.

Last year alone, the port spent more than half a million dollars dredging about 200,000 cubic feet of Mount St. Helens' sediment from the mouth of the Cowlitz and nearby port berths.

"We dredge almost every year," Lewis said. "The amount of dredging at the docks varies by year but is almost always needed since the eruption of the Mount St. Helens."

The recently passed 2024 Water Resource Development Act authorized the Corps to start dredging the mouth of the Cowlitz River to support navigation and not just flood risk, said Henon, the Corps' spokesman. That could reduce some of the cost the port has taken on.

Castle Rock issues

"When the Mountain blew, the log debris that came down the river literally wiped out the intake structure to the water treatment plant," said Vorse in Castle Rock.

When the city rebuilt, they put their water intake on the upper Cowlitz River — above where the Toutle and all the Mount St. Helens' sediment it carries meet the river.

Vorse, who started his job the year after the eruption, said the system they built in the aftermath still provides water to many communities around the area.

Despite that combination of lucky location and ambitious engineering, even Castle Rock hasn't come out totally unscathed.

Water cleaned by the city's wastewater treatment plant is supposed to be released by a set of diffuser pipes back into the river, but it's buried in 3 feet of sediment at all times.

"Again, it's a sediment issue that has impacted all three of the communities along the river at some level," he said.

Henry Brannan is a Murrow News Fellow shared between The Daily News and The Columbian, covering Columbia River economics and environment.

(Source:<u>https://www.chronline.com/stories/four-decades-after-mount-st-helens-blast-sediment-continues-to-cause-problems downstream</u>,376946)

Changes in global fluvial sediment concentrations and fluxes between 1985 and 2020



Abstract

Fluvial sediment transport, a key pathway for global biogeochemical cycling, has changed Anthropocene. However. markedly in the disaggregating compound effects the of anthropogenic stresses on fluvial sediment transport at the global scale remains a challenge. Here, the suspended sediment concentrations for global river channels were mapped based on satellite observations between 1985 and 2020, and long-term changes in land-ocean sediment transfer were estimated. Significant (P < 0.05) changes in suspended sediment concentrations were identified in 67.8% (3.2 × 10⁵ km) of the examined river channel length, with 43.4% (2.05 × 10⁵ km) exhibiting a significant increasing trend, driven mainly by rising rainfall erosion and climate warming. Consequently, a global net increase (+0.58 Gt year¹) in land-ocean sediment flux has been observed over the past four decades, despite sediment trapping by recently constructed dams, mostly in Asia. This study provided a new baseline for source-to-sink fluvial transport in the Anthropocene, that can inform global water resource management and delta management and protection.

CITATION

Sun, X., Tian, L., Fang, H. et al. Changes in global fluvial sediment concentrations and fluxes between 1985 and 2020. Nat Sustain 8, 142–151 (2025).

DOI

https://doi.org/10.1038/s41893-024-01476-7

Ecological restoration in the Yellow River Basin enhances hydropower potential

Abstract

Hydropower, an important renewable energy source worldwide, is threatened by reservoir sedimentation. Ecological restoration (ER) can mitigate this by reducing upstream sediment, thereby extending hydropower facilities' lifespan. However, ER may also reduce runoff, potentially diminishing energy generation and complicating its overall impact on hydropower potential. Here, we examine China's Yellow River, once the world's most sediment-laden river, using eco-hydrological and reservoir regulation models to assess how large-scale ER influences the hydropower potential of the Xiaolangdi Reservoir, which controls 92.3% of the basin area. Our results indicate that, excluding upstream reservoirs' operations and socioeconomic water use. Xiaolangdi could generate total а of ~2.7×10¹¹ kWh of energy before facing diminished flexibility and efficiency caused by the exhaustion of sediment storage-57.3% more than without ER-equating to an additional ~100 billion kWh. This enhancement in hydropower potential primarily arises from the extended lifespan, despite a 6.9% reduction in average annual energy These generation. findings advance our understanding of the ecosystem-water-sedimentenergy nexus, offering valuable insights for integrated watershed management globally.

CITATION

Xutong Wu, Zihan Yan, Haiyan Yang, Shuai Wang, Haoyu Zhang, Yilin Shen, Shuang Song, Yanxu Liu, Ying Guo, Dawen Yang & Bojie Fu Nature Communications volume 16, Article number: 2566 (2025)

(Source:<u>https://www.nature.com/articles/s41467-025-57891-7)</u>

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Full papers are available at ScienceDirect: <u>https://www.sciencedirect.com/journal/internation</u> <u>al-journal-of-sediment-research</u> with free access.

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Free full papers and open access are available at ScienceDirect :

https://www.sciencedirect.com/journal/internation al-soil-and-water-conservation-research.

10 **COMING EVENTS**

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28th ICOLD Congress & 93rd Annual Meeting (China, May 16-23, 2025)

Date: May 16-23, 2025

Venue: Chengdu, China

Organizers: Ministry of Water Resources of the People's Republic of china, International Commission on Large Dams (ICOLD), The People's Government of Sichuan Province

Hosted by: Chinese National Committee on Large Dams (CHINCOLD), Chengdu Municipal People's Government

Theme: Common Challenges, Shared Future, Better Dams Topics:

T1: Precautionary management of dams and river basin under climate change

T2: Multifunctional development of dams and reservoirs

T3: Technologies for dam construction under complex (extreme) conditions

T4: Digital technology applied in dams and digital river basins T5: The role of dams in achieving the goal of reducing carbon dioxide emissions

URL: https://www.icold-cigb2025.com/

Contact: Email:icoldcigb2025@outlook.com;icoldcigb2025@iwhr.com

41st IAHR World Congress "Innovative Water Engineering for Sustainable **Development**" (June 22-27, 2025. Singapore)

Date: June 22 - 27, 2025

Venue: Singapore

Organizers: IAHR, Singapore's National Water Agency, National University of Singapore, Nanyang Technological University

Summary: The International Association for Hydro-Environment Engineering and Research (IAHR) World Congress is a biennial event that brings together the latest technical and scientific knowledge, practice, trends, and innovations of the global hydro-environment community. Themed "Innovative Water Engineering for Sustainable Development", the 41st IAHR World Congress in Singapore will focus on the importance of innovative water engineering towards meeting the Sustainable Development Goals (SDGs) and targets related to water resources. Held amid the International Decade for Action on "Water for Sustainable Development" 2018–2028, by the UN, the Congress will showcase the role of expert knowledge by the water engineering community to the implementation of innovation solutions to meet the SDGs, and share insights on research, technology and innovations that will create significant impact to tackle global challenges such as climate change and sea level rise.

Theme: Innovative Water Engineering for Sustainable Development

Topics:

- Coastal Flooding and Protection 1.
- **River and Sediment Engineering** 2.
- 3. Eco- and Environmental Hydraulics
- 4. Hvdraulic Structures
- 5. Integrated Water Resources Management
- Urban Water Management 6.
- 7. Flood and Drought Management
- 8. Groundwater Management
- **Remote Sensing and Field Measurements** 9. Computational and Experimental methods 10.

Website: https://iasws2025.univ-lille.fr/

Main conference topics:

Venue: Le Touquet, France

July 4, 2025)

1. Assessing and restoring disturbed catchments

11. Data-Driven Methods and Machine Learning

(Hydroinformatics)

UCL: https://2025.iahr.org/

Climate mitigation and adaptation

Email: fulvia_wong@pub.gov.sg

Date: June 30th - July 4th, 2025

Digital water 13. Nature-based solutions

- 2. Biogeochemistry in the hyporheic zone
- Biogenic influences on sediment-water interactions 3. from micro to macro scale

16th International Symposium on the Interactions

between Sediments and Water (France, June 30-

- 4. Carbon budgets and blue carbon ecosystems
- 5. Coastline, coastal erosion and solutions
- **Emerging contaminants in sediments** 6
- 7. Extreme events and environments (droughts, floods, wildfires etc.)
- 8. Modelling suspended particles and aquatic sediments
- Rewilding and restoration of coastal areas 9.
- 10. Sediment management
- Sediment-associated nutrients and contaminant 11. processes
- 12. Water quality and organic matter along the watershedriver-sea continuum

Other topics related to sediment-water interactions

16th International Symposium on River Sedimentation (USA, August 4-7, 2025)

Date: August 4-7, 2025

Venue: Omaha, Nebraska, United States

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 related to the study of sediment and its management.

Organizer: University of Nebraska-Lincoln

Sponsors: World Association for Sedimentation and Erosion Research (WASER), International Research and Training Center on Erosion and Sedimentation (IRTCES)

Co-Sponsors: International Association for Hydro-

Environment Engineering and Research (IAHR)......(to be invited)

Secretariat: University of Nebraska-Lincoln

Permanent Secretariat: IRTCES

Theme: Centennial of Modern Sediment Transport Mechanics

Topics:

1. Fundamentals for sediment transport (boundary layer flow, fluvial hydraulics, and hydrology)

2. Fundamentals of sediment transport (bed forms, bed load, and suspended load)

3. Experimental and computational sediment transport and fluvial processes

4. Watershed erosion and sedimentation

- 5. River erosion and sedimentation (case studies)
- 6. Scours abound hydraulic structures (case studies)
- 7. Reservoir sedimentation
- 8. Estuarine and coastal sediment transport
- 9. Seabed sediment transport

10. Environmental and ecological sediments with climate changes

URL: https://www.isrs2025.org/

Organization & Contacts: Prof. Junke (Drinker) Guo Department of Civil and Environmental Engineering University of Nebraska—Lincoln jguo2@unl.edu

The 6th WASWAC World Conference (Morocco, September, 2025)

Date: September 15-17, 2025

Venue: Rabat, Morocco

Summary: The World Association for Soil and Water Conservation (WASWAC), in collaboration with the Institut National de la Recherche Agronomique (INRA), is organizing the 6th WASWAC World Conference on Resilient Landscapes: Innovations and Traditions in Climate-Adaptive Soil and Water Conservation (RISE-SWC), scheduled from 15 to 17 September 2025 in Rabat, Morocco. The conference will provide an exchange platform for soil and water resources conservation on a global scale, fostering collaboration among scientists, experts, policymakers, and practitioners from around the world. The RISE-SWC conference will explore cutting-edge strategies in the context of climate change and propose practical solutions to provide strong support for addressing global climate change challenges. Participants will engage in discussions on innovative practices, integrating traditional wisdom with modern technologies, and addressing social and economic challenges. The conference aims to propose actionable solutions that can strengthen global efforts to combat climate change impacts on soil and water systems, support sustainable development, and promote technological and scientific advancements in these critical fields.

Organizer: The World Association of Soil and Water

Conservation (WASWAC), Institut National de la Recherche Agronomique (INRA)

Theme and Topics: Resilient Landscapes: Innovations and Traditions in Climate-Adaptive Soil and Water Conservation (RISE-SWC)

Sub-themes:

1. Impact of climate change on soil erosion and coping strategies

2. The role of water resources management in addressing climate change

3. Challenges and opportunities of land use planning and management in the context of climate change

4. Integration of traditional wisdom and modern technology in soil and water management

5. Social and economic considerations in soil and water management

6. Strategic shifts in soil and water conservation practices and technologies to address climate change

7. Monitoring and early warning mechanisms in soil and water management

8. Soil and water conservation in production and construction projects

Important dates:

Abstract submission begin: January 1, 2025

Last date of abstract submission: May 30, 2025 Intimation of acceptance of abstracts: June 30, 2025 Registration fee payment begin: January 1, 2025 **Contacts:** The WASWAC Secretariat: YANG Songdi: waswac@vip.163.com DU Pengfei: waswac@foxmail.com

The Conference Secretariat:

Benabdelouahab Tarik: tarik.benabdelouahab@inra.ma Conference updates:

www.waswac.org.cn and www.inra.org.ma

River Flow 2026, The 13th International Conference on Fluvial Hydraulics (Greece, June 29–July 3, 2026)

Date: June 29 - July 3, 2026

Venue: Thessaloniki, Greece

Summary: Since its inception in 2002, under the esteemed Fluvial Hydraulics Committee of the International Association for Hydro-Environment Engineering and Research (IAHR), the River Flow Conference Series has proudly stood as a premier global platform for the exchange of pioneering research and best practices in fluvial hydraulics and river engineering.

RiverFlow 2026 invites you to be part of a dynamic assembly of professionals, scholars, and industry practitioners in a vibrant forum dedicated to exploring the cutting-edge experimental, theoretical, and computational advances in river hydraulics and sediment transport processes, covering a wide range of themes spanning the areas of hydro-environment, geosciences and eco-bio-geomorphology.

Organizers: IAHR, Aristotle University of Thessaloniki, Division of Hydraulics and Environmental Engineering

Theme: Steering the future of hydro-environment research and practice

Topics:

- 1. Fundamental Flow Processes
- 2. Sediment Transport Dynamics and River Evolution Processes
- 3. Flow and Sediment Transport Through Hydraulic Structures
- 4. Eco-Hydraulics and River Re-naturalization
- 5. Pollutant Transport Processes
- 6. River Systems and Resilience Under a Changing Climate

7. Integrated River Basin Management

Contacts:

RiverFlow2026@civil.auth.gr URL: https://riverflow2026.web.auth.gr/

9th International Conference on Estuaries and Coasts (China, December 2026)

Date: December 2026 Venue: Qinzhou, China

Organizers: Qinzhou, Ohina Organizers: Qinzhou Municipal People's Government, Department of Water Resources of Guangxi Zhuang Autonomous Region, Department of Transport of Guangxi Zhuang Autonomous Region

Sponsors: International Research and Training Center on Erosion and Sediment Research (IRTCES);

Co-sponsors: World Association for Sedimentation and Erosion Research (WASER), China Institute of Water Resources and Hydropower Research (IWHR), International Association for Hydro-Environment Engineering and Research (IAHR), Guangxi University; Guangxi Normal University, Beibu Gulf University, and Pinglu Canal Group Co., Ltd

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). Eight such conferences have been held in Hangzhou and Guangzhou, China; Sendai, Japan; Hanoi, Vietnam; Muscat, Oman, Caen, France, Shanghai, China, and Quebec City, Canada in 2003, 2006, 2009, 2012, 2015, 2018, 2021 and 2024, 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 9th International Conference on Estuaries and Coasts (ICEC 2026) will be held in Qinzhou, China during December, 2026. The ICEC 2026 will provide a venue for intellectual and enlightening discussions of ideas. The conference program will cover broad topics.

Theme:

Estuaries and Coasts under Modern Civilizations

Topics of the Conference:

1. Hydrodynamics and Sediment Transport in Estuaries and Coastal Zones: Fundamentals and Modeling

2. Monitoring, Early Warning and Forecasting of Estuarial and Coastal Hazards

3. Eco-environment Protection in Estuaries and Coastal Zones

4. Climate Change, Human Activities and Their Impacts on Estuaries and Coasts

Canal Constructions in Estuaries and Coastal Zones
 Integrated and Intelligent Management of Estuaries and

Coastal Zones

7. Morphological Evolutions of Estuaries, Coasts and Deltas 8. History, Culture, Socioeconomics and Policy on Estuaries and Coasts

9. Impacts of Watershed Developments on Estuaries and Coastal Zones

URL: https://ICEC2026.scimeeting.cn

11th International Symposium on Environmental Hydraulics (ISEH 2027) (USA, June 1-4, 2027)

Date: June 1-4, 2027

Venue: The University of Iowa, Iowa City, IA USA Invitation: We are pleased to announce that the 11th International Symposium on Environmental Hydraulics (ISEH) will be held in Iowa City, IA, USA on the 1st - 4th June 2027. Sponsored by the International Association of Hydro-Environment Engineering and Research (IAHR), the 11th ISEH will build on the success of previous ISEH symposia in bringing together international experts to present and discuss new research and technical innovations in various areas of environmental fluid dynamics research. The symposium will be held within the University of Iowa campus, providing an ideal setting in which to share knowledge and to meet old and new friends. The symposium will focus on the latest advances in experimental and computational methods that can be used to deepen our understanding and capacity to predict flow and the associated fluid-driven ecological processes, anthropogenic influences (e.g., heat, dissolved and suspended organic/inorganic material), sediment transport and morphodynamic processes in rivers, coastal regions and reservoirs. We hope the ISEH symposium will provide a productive platform for fruitful scientific discussions, opportunities for younger scientists and practitioners to interact and exchange ideas with established researchers and spark new collaborations among participants. In

particular, cross-fertilization among research groups, emergence of new concepts and approaches, and interdisciplinary interactions are expected to be highlights of the ISEH symposium. We very much look forward to welcoming you in Iowa City. (Prof. George Constantinescu, Symposium Chair)

URL: https://iseh.conference.uiowa.edu/ Contact ISEH Conference College of Engineering Iowa City, Iowa 52242 Email: iseh-2027@uiowa.edu Phone: +01 319 594 2817

World Association for Sedimentation & Erosion Research

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WASER Secretariat

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