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NEWSLETTER

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NEWS

The 7th International Conference on Estuaries and Coasts held in Shanghai, China



The 7th International Conference on Estuaries and Coasts (ICEC2021) was held in Shanghai, China from October 18-21, 2021. About 260 onsite and 300 online participants from 15 countries and regions attended the Conference. The ICEC2021 was organized by the State Key Laboratory of Estuarine and Coastal Research (SKLEC) of East China Normal University (ECNU), sponsored by the International Research and Training Center on Erosion and Sedimentation (IRTCES), the United Nations Decade of Ocean Science for Sustainable Development 2021-2030, and the World Association for Erosion and Sediment Research (WASER); and co-sponsored by the International Association for Hydro-Environment Engineering and Research (IAHR), the Integrated Marine Biosphere Research (IMBeR), the Future Earth Coasts (FEC), the Anthropocene Coasts, the Shanghai Society of Hydraulic Engineering, the National Natural Science Foundation of China, and the Science and Technology Commission of Shanghai Municipality.

The opening ceremony was held in the morning of October 19 and was chaired by Prof. Qing He, Conference Chair of the ICEC2021. Welcome speeches were made by Prof. Zhenrong Sun, Vice president of ECNU; and Guangquan Liu, Deputy Director of IRTCES.

The ICEC2021 main theme was 'Anthropocene Coasts' with the following topics:

- Hydrodynamics in estuaries and coasts: tides, waves, circulations, and their interactions;
- Sediment dynamics: sand, mud and their mixture;
- Multi-scale morphodynamics: tidal flats, estuaries, deltas, beaches, dunes, eco-morphodynamics;
- Coastal management: flood defense, ecosystem conservation, human-nature interactions;

- Estuarine and coastal modeling: physical modeling, numerical modeling of all physical and ecological processes;
- Field monitoring and technology: in-situ and remote monitoring technologies;
- Coastal ecosystem development: eco-morphodynamics, ecosystem conservation and restoration;
- Anthropocene Coasts;
- Special session: Mega-Deltas; and
- INQUA special session: Mid- to late Holocene extreme storm events and relative sea-level changes in East Asia

The programme included 9 plenary presentations chaired by Prof. Qing He (SKLEC/ECNU), Prof. Cheng Liu (IRTCES), and Prof. Hui Wu (SKLEC/ECNU), respectively; 24 invited and 142 oral presentations in parallel sessions; and 35 poster presentations. The plenary presentations were:

- Earth's sediment cycle during the Anthropocene
Prof. Jaia Syvitski, University of Colorado Boulder, USA;
- Carbon fluxes in the coastal ocean: synthesis, boundary processes and future trends
Prof. Minhan Dai, Xiamen University, China;
- Monitoring and forecasting systems for the Greater Bay Area
Prof. Dake Chen, Second Institute of Oceanography, MNRI, China;
- The WATERMAN system for Real-time Beach Water Quality Forecasting – a Ten-Year Retrospective
Prof. Joseph Hun-Wei Lee, Macau University of Science and Technology, China;
- The components of a storm surge
Prof. Charitha Pattiaratchi, University of Western Australia, Australia;
- Sediment motion thresholds in coastal environments
Prof. Yaping Wang, East China Normal University, China;
- Managing coastal ecosystems in times of climate change: challenges & opportunities for Nature-based flood defense
Prof. Tjeerd J. Bouma, Royal Netherlands Institute for Sea Research, the Netherlands;
- Nitrogen transformation and fate in estuarine and coastal wetlands

Prof. Lijun Hou, East China Normal University, China; and

- Diahaline analysis of estuarine mixing and exchange flow
Prof. Hans Burchard, Leibniz Institute for Baltic Sea Research, Germany.

The closing ceremony was organized on the afternoon of October 21. Prof. Hui Wu, SKLEC/ECNU, chaired the closing ceremony. Prof. Qing He, Conference Chair of the ICEC2021, gave a brief overview for the Conference. The Outstanding Poster Award for Young Scientists was announced, and Ms. Chunyan Zhu, Ms. Shuangzhao Li, Ms. Silu Zhou, Ms. Xiaomei Xu, and Mr. Peng Li received the awards. Prof. Guangquan Liu, the representative of the ICEC Permanent Secretariat, announced that the 8th ICEC will be held in Quebec City, Canada in 2024 and will be co-organized by the Eau Terre Environnement Research Centre of INRS, Canada and by the Water Resources Lab of Clarkson University, USA. An online presentation was made by the LOC of the 8th ICEC to welcome all participants to meet again in Quebec in 2024.

The ICEC is a triennial event initiated by the International Research and Training Center on Erosion and Sedimentation (IRTCES). Six conferences have been held in Hangzhou (China), Guangzhou (China), Sendai (Japan), Hanoi (Vietnam), Muscat (Oman), and Caen (France), respectively, from 2003 to 2018. Thanks to the support from related international associations and active participation of experts and scholars worldwide, ICEC has attracted wide attention and become a renowned event of academic importance and global popularity.



Global conference “Climate-resilient water management approaches: Application towards climate action and 2030 agenda” held during 26-28 October 2021

As per the recently released IPCC 6th Assessment Report (August 2021), “it is

unequivocal that human influence has warmed the atmosphere, ocean and land”, the report concludes with high confidence. Moreover, it states that “climate change is intensifying the water cycle”, which will bring more associated flooding and drought in many regions. In fact, in the face of the extreme flooding, drought and fire events that 2021 brought so far, responsible for casualties and extensive material damage worldwide, it is becoming increasingly evident that climate uncertainty (together with the uncertainty inherent to global circulation models), is failing to support the development of adequate adaptation policies. In that context, bottom-up approaches present a good alternative for resilient water management in the face of climatic uncertainty. These “bottom-up approaches” differ from the dominant paradigm guiding water management for the past half-century — namely the assumption that we can use the past to confidently predict (and plan for) the future. Their emphasis is placed upon gaining more complete understanding of a project’s vulnerabilities and learning under what conditions a system no longer functions.

The objectives of the UNESCO Global Conference “Climate-resilient water management approaches: application towards climate action and 2030 agenda”, which was held virtually in 26-28 October 2021, were: 1) to introduce participants to the technical and practical components of bottom-up approaches for climate adaptation; 2) to share a global set of case studies; 3) to identify the policies and institutional capacity needed to more widely incorporating these approaches within national climate programs, climate finance, and the private sector; 4) to present the outcome of the conference to policy community at COP-26. The conference has also contributed to the formulation of strategies for the 9th Phase of IHP (IHP-IX, 2022-2029).

This was a truly global conference, with a total of 1,238 individuals registered online for the three-day conference, hailing from 149 countries. 658 individuals attended at least one session, for a total of 1,138 cumulated attendees, from 125 countries (which represents 53% attendance). The gender balance of attendees was distributed as 62% male and 38% female. All regional groups were represented at the conference, with the African States leading in terms of attendance (361 attendees, followed by the Asia-Pacific States (356 attendees). Additional 472 participants joined the conference through the YouTube live stream.

The conference counted with high-level keynotes and panels, where it was highlighted the importance of “water as a prerequisite to achieve Agenda 2030”. On his special opening remark, Mr. Han Seung-Soo (Former Prime Minister of the

Republic of Korea and Chair of the High-level Experts and Leaders Panel on Water and Disasters, HELP) brought us the figures of climate impacts: "More than 2 trillion dollars were lost globally in the last 20 years due to water-related disasters".

The High-level Science Policy Panel that followed, moderated by Ms. Shamila Nair-Bedouelle, discussed the contrasting paradigms of bottom-up vs. top-down methodologies in addressing climate change. An essential key-message to be extracted from these discussions is the need to reposition water in the center of the political agenda and connecting it with the agenda on climate change, particularly relevant for building a better world after the COVID19 pandemic. We need political will to make these changes happen. The conference was also an opportunity to launch the policy brief "Planning water resilience from the bottom-up to meet climate and development goals", co-written by UNESCO and AGWA.

The event was concluded with pre-recorded messages focusing on expectations to COP26 and a synthesis of the conference to be presented at COP26, by Mr. Abou Amani (Director of the Division of Water Sciences, UNESCO).

The conference recordings are available at <https://en.unesco.org/news/climate-resilient-water-management-approaches-application-towards-climate-action-and-2030>.

The 1st International Seminar on Water Culture held in Beijing, China



The 1st International Seminar on Water Culture, co-hosted by the China Institute of Water Resources and Hydropower Research (IWHR) and UNESCO, was successfully convened on November 18, with more than 300 water experts worldwide joining in an online-offline-combined manner.

With "Water and Civilization - Inheritance and Innovation of Water Culture" as its theme, the Seminar aimed to echo the call of SDG 11.4, "Strengthen efforts to protect and safeguard the world's cultural and natural heritage", by gathering

water culture experts from around the world, to explore the great value in water culture, provoke thoughts on the relations between water and civilization and share innovative practices on social development based on water culture.

Distinguished guests from the Ministry of Water Resources (MWR) of China, IWHR, UNESCO Intergovernmental Hydrological Programme (IHP) Secretariat, and UNESCO Beijing Cluster Office attended the Seminar, underscoring the necessity to protect the world's water heritage, carry forward the splendid water cultures around the world, learn from the ancient wisdom in water governance for social development, and inspire and improve today's human efforts for sustainable development.

The keynote speeches addressed the research, protection and inheritance of water culture and water history under various cultural backgrounds in different countries and regions, including:

- "Re-Aligning Water Culture to Address the Urgency of Climate Change" by Prof. David Groenfeldt, Director of the U.S. Water-Culture Institute;
- "Hydro-technologies in Greece during the Prehistoric times" by Prof. Andreas N. Angelakis, Member of European Academy of Sciences & Art;
- "Historical evolution of Yongding River and urban development of Beijing" by Prof. Lyu Juan, Director of IWHR Research Center on Flood and Drought Disaster Reduction;
- "Revival of the water-related old practices in the East Asian region to modern ecological practices" by Prof. Woo Hyo-seop from the Gwangju Institute of Science and Technology of South Korea;
- "Teaching Water and Culture: Indigenous Americans and Water Development" by Prof. David A. Pietz, UNESCO Chair in Environmental History of the University of Arizona, U.S.;
- "Water Culture: The Dynamic Mechanism and Current Innovation in Water Management" by Prof. Zheng Xiaoyun, Director of the China Institute of Yangtze River Culture Studies of Hubei University and former President of the International Water History Association (IWHA);
- "Water and Culture Efforts of UNESCO Beijing Office" by Prof. Shahbaz Khan, Director of UNESCO Beijing Cluster Office.

The Seminar was organized by IWHR's Department of Water Resources History, which is the largest and most comprehensive research

body in water culture and water history in China. The Department has long been dedicated to the collection of water culture and history archives, the establishment of bibliographic databases of water resources history, the protection of water resources heritage, the investigation and study on the ancient water works, as well as the research on floods, droughts and disaster history. (Source: IWHR)

China Institute of Water Resources and Hydropower Research co-convenes a session on youth water education during the Africa Water and Sanitation Week 2021



The African water and sanitation communities celebrated Africa Water and Sanitation Week 2021--a long-awaited event postponed due to the pandemic--during November 11-26, 2021. Dozens of thematic sessions were organized, generating refreshing thoughts on addressing the water and sanitation challenges facing the continent.

The China Institute of Water Resources and Hydropower Research (IWHR), together with UNESCO Nairobi Office, the African Ministers' Council on Water (AMCOW) and the International Association for Hydro-Environment Engineering and Research (IAHR), contributed to this important dialogue process from the perspective of water education. In a thematic session on "Future-proofing the African young generations for water and climate: the educational side" on Nov. 24, representatives from the co-convening organizations, as well as panelists from UNESCO IHP National Committee of Rwanda, University of KwaZulu-Natal, South Africa, Transient Flows Working Group, IAHR and AMCOW Groundwater shed light on why engaging the youth early on their educational path is important and how we can make sure it happens.

Dr. PENG Jing, IWHR Vice President noted that water and climate risks weigh on the young generations disproportionately, as they may not yet have the knowledge, skills and resources to adapt. Therefore, the current generation must live up to their responsibility of educating the young, helping them, and thereby future-proofing the young generation for a changing water and climate scenario.

Dr. Paul Orengoh, AMCOW Programme Officer pointed out that, on the one hand, we must be fully aware of the indispensable role the African youth can play in effective management of water resources and in improving access to water and sanitation. On the other hand, we need to activate the sense of responsibility and empowerment of the youth. The Water Education series for school-age children is a prime example of improving water science literacy of the children when they are young enough to change and adapt.

Amparo López Jiménez, IAHR Vice President said that, Africa has a really promising future, and a peer network of knowledgeable and prepared African youth is where this water future of Africa lies. IAHR is ready to work with all parties to catalyze and disseminate knowledge, thoughts and capabilities of the African youth in water engineering, research and policy-making.

Dr. Abou Amani, UNESCO Water Sciences Director and IHP Secretary-General stressed that the youth education on water and environment should ensure that the young women and girls and the vulnerable groups are granted with equal opportunities and an inclusive, enabling environment. In this regard, informal education activities should be promoted on par with formal education so as to realize a continuous education from school through career."

The IWHR team behind the Water Education English series made a themed presentation on these books, which received generous praises from the panelists. The books are about to reach African schools in 2022. (Source: IWHR)

Nations along the Lancang-Mekong River work together to fight climate change impacts



A view of the Mekong river bordering Thailand and Laos is seen from the Thai side in Nong Khai, Thailand, Oct 29, 2019.

China Daily, 2021-12-08. Lancang-Mekong River countries have vowed to strengthen cooperation on water resources management as they forge ahead to cope with common

challenges in the basin, including drought caused by climate change.

Heads of water resources authorities of the six countries made the remarks as they gathered online on Tuesday for the Second Lancang-Mekong Water Resources Cooperation Forum.

Themed "Working Together to Address Challenges and Promote Common Development", the forum will end on Wednesday.

The Mekong River, known as the Lancang in China, is a vital waterway that stretches across China, Laos, Myanmar, Thailand, Cambodia and Vietnam.

"The six Lancang-Mekong countries drink water from the same river and are as close as one family. We are naturally bonded and well positioned to work together and deepen cooperation," Water Resources Minister Li Guoying said when addressing the forum's opening ceremony in Beijing.

Li noted fruitful results achieved by the six countries as they pooled their strengths to put Lancang-Mekong water cooperation onto a fast track in the past five years.

Policy dialogue and technical exchanges between the countries have been strengthened, he said, citing the establishment of the Lancang-Mekong Water Resources Cooperation Center in China as an example.

He said the strategies, standards and policies of the six countries have been further aligned, and a consensus on cooperation has been forged.

Since last year, China has been sharing the Lancang's whole-year hydrological data with Mekong countries, he said, adding that the website of the Lancang-Mekong Water Resources Cooperation Information Sharing Platform was also launched last year.

Li called on countries to focus on the common vision and work together to improve Lancang-Mekong water resources cooperation.

"The Lancang-Mekong water resources cooperation mechanism should be further upgraded, and the leading role of the ministerial meeting as an overarching framework should be brought into full play," he said.

Efforts should be made to develop the Lancang-Mekong Water Resources Cooperation Forum into an international platform for cooperation and exchange, so as to pool the "LMC wisdom" and propose the "LMC solution", he said.

Lauding the achievements made in Lancang-Mekong water resources cooperation, Lim Kean Hor, Cambodia's minister of water resources and

meteorology, also called for cooperation among Lancang-Mekong countries to be strengthened to cope with emerging challenges in the basin.

The Lancang-Mekong River provides the six countries with water and other related resources to support sustainable development in the basin, as well as peoples' sustainable livelihoods and well-being, he said via video link.

Among areas of focus, the countries have collaborated on studies and research, as well as exchanged best practices, he said.

Lim expressed Cambodia's sincere appreciation to China for the support it has provided to water resources development and management in Cambodia, including special funds through Lancang-Mekong cooperation for some water resource projects.

"This support is critically important and truly needed," he said, adding that it has helped contribute to sustainable economic development and social progress in Cambodia.

He said, however, that the shared river also faces many challenges due to population growth, increasing resource needs in each of the countries, rapid development in the basin, and climate change.

"The experience of critical drought and low water flow in the Mekong are our great concerns and has caused a big impact on the Mekong's shared resources and sustainability," he said.

In order to effectively overcome the common challenges and achieve sustainable outcomes, collective efforts, stronger collaboration and cooperative partnerships are required, Lim said.

(By HOU LIQIANG, Source: China Daily)

Increases in sediment flux in High Mountain Asia could threaten the region's food and energy security



Braided River at the Yangtze headwaters. Credit: Dongfeng Li

Rivers flowing from the Tibetan Plateau and the surrounding high Asian mountains which support one-third of the world's population have

experienced rapid increases in annual water and sediment runoff since the 1990s, and the volume of sediment washed downstream could more than double by 2050 under the worst-case scenario, a team of scientists has found.

The cause is "amplified warming": Since 1950, the High Mountain Asia area, or the region of Asia containing five mountain ranges including the Himalaya and Hindu Kush around the Tibetan Plateau, has warmed by about 2 degrees Celsius, twice the amount of warming worldwide. That warming is precipitating more glacier melt, permafrost thaw while annual rainfall is also increasing, the researchers note.

"These findings have far-reaching implications for the region's hydropower, food and environmental security," the researchers observe. The findings also highlight the under-appreciated importance of sediment fluxes and have implications for potential changes in the global carbon cycle, they add.

The research, published today in the journal *Science*, is led by the National University of Singapore and includes three researchers from the University of Colorado Boulder, including Irina Overeem, Jaia Syvitski and Albert Kettner, all researchers in the Institute of Arctic and Alpine Research. Overeem is also a CU Boulder associate professor of geological sciences, and Syvitski is professor emeritus of geological sciences.

The scientists analyzed observational data of runoff and sediment fluxes from 28 headwater basins over the past six decades.

Sediment flux is the mass of sediment that passes through a specific point in a river basin over a given time period, "like truckloads of sand being transported, in this case by water," Overeem said. Although river runoff, the amount of water entering a river system, and sediment flux are both increasing, they are rising at different rates.

In the river basins the scientists studied, runoff increased by about 5% per decade, while sediment flux increased about 12% per decade.

Overeem explained the variability is affected in two ways: "With glacial melt and permafrost thaw there are new sources of sediment, that previously had been frozen in place in the landscape now can slump into the river. In addition, if more rainfall triggers bigger floods, you suddenly have exceeded a threshold and you can pick up so much more sediment" compared to average conditions. "If you increase the source and the proportion of a couple of these extreme events, you'll get disproportionately much more sediment. So that is maybe what's going on in this

system."

River-borne sediment can benefit highly populated areas like Bangladesh, where sediment helps maintain the coastal zone. But in other areas such as Tibet or Nepal, which have hydro-electric power plants, rising levels of sediment can wear out the dams' turbines and fill reservoirs with sand and silt.

By harming existing or planned hydropower projects and reducing irrigation capacity, rising sediment fluxes can thus "threaten the region's food and energy security," the authors write. Additionally, the rising levels of sediment, which can carry nutrients, pollutants and organic carbon, can have implications for water quality and flooding, potentially affecting millions of people.

Research on the High Mountain Asia watershed was facilitated by the area's unusually good, long-term records of streamflow and sediment flux, Overeem said, adding that datasets of similar quality do not exist for Greenland or the whole Arctic.

In the Arctic, scientists have also recorded increases in water discharge from melting ice and increasing rainfall but have few measurements of sediment flux.

"What is happening on the Tibetan plateau may be happening in the Arctic as well, but we just don't have enough long records there and observational support to really know that yet," Overeem said.

More information: Dongfeng Li et al, Exceptional increases in fluvial sediment fluxes in a warmer and wetter High Mountain Asia, *Science* (2021). DOI: 10.1126/science.abi9649

(by Clint Talbott, University of Colorado at Boulder. Source: <https://phys.org/>)

Study on Ganga basin sheds light on sustainable management

Over the last two decades, after 1995, there has been a steady increase in the number of flooding events in the Upper Ganga Basin. Catastrophic landslides and floods in the basin occur more frequently.

This trend is unlikely to change with scientists predicting an increase in the magnitude of extreme flows and occurrence of flood. But advances in technology and new types of hydraulic structures can make a difference.

These were some of the findings of a study conducted by researchers from the Indian Institute of Science (IISc), Bengaluru, and Indian Institute of Technology, Kanpur (IITK) on how

climate change and human activities like building dams affect basin.

They analysed the effects of past human activity on the mountainous regions, focusing on two major tributaries, Bhagirathi and Alaknanda, which merge at Devprayag to form the Ganga.

Their findings were published in the online peer-reviewed open access journal, Scientific Reports (published by Nature). "Our results indicate that low and moderate flows have been significantly altered, and the flood peaks have been attenuated by the operation of hydraulic structures in the Bhagirathi (western subbasin).

The Alaknanda (eastern subbasin) has experienced an increase in extreme rainfall and flows post-1995. The downstream reaches experience reservoir-induced moderate flow alterations during pre-and post-monsoon and increasing extreme flood magnitudes during monsoon," said the researchers in the paper.

The team studied data on rainfall, water discharge in the rivers, and sediment load from hydrological stations across the Upper Ganga Basin (UGB) corresponding to the years 1971-2010.

When they analysed the data corresponding to two periods—pre-1995 and post-1995— they found a steady increase in the number of flooding events in both river basins after 1995.

"Further, the change in low flows and middle-level flows in Bhagirathi can be attributed to three major dams – Maneri, Tehri, and Koteshwar – on the river," said IISc in a press release.

The Alaknanda basin saw a doubling of water flow from 1995 to 2005 at the Joshimath hydrological station, along with an increase in the rate of flow of water, termed extreme flow.

"We observed that Alaknanda basin has a high, statistically increasing rainfall trend, unlike the Bhagirathi basin. Most of these trends were observed in the downstream region of the Alaknanda. Therefore, we have also seen an increase in the magnitude of extreme flow in these regions," said Somil Swarnkar, a postdoctoral fellow at the Interdisciplinary Centre for Water Research (ICWaR), IISc, and first author of the study.

The researchers suggested that after 2010, along with climatic changes, the building of dams in the Alaknanda region may have modified the water activity. "Dams and reservoirs have influenced the sediment transported by the rivers. Due to abrupt changes in water flow, sediment depositions in the upper reaches of the Ganga have led to changes in the sediment composition downstream," stated the release.

It cited Tehri dam, which plays a crucial role in the UGB region. Being a large reservoir and flow control structure, it blocks sediment flow from upstream and controls the volume of water that flows downstream.

There are currently 11 new dam projects planned in the Bhagirathi basin and 26 in the Alaknanda basin. While they may provide the much-needed hydropower to the region, these structures will likely affect the water flow and sediment transport processes in these regions, says corresponding author Pradeep Mujumdar, Professor in ICWaR.

Regarding predictions of a further increase in the magnitude of extreme flows and occurrence of floods in the Ganga basin, the paper stated that advances in technology and new types of hydraulic structures can make a difference. For example, the Pashulok barrage in Rishikesh has helped prevent floods and reduce extreme flows in downstream regions. "We do not have control [over] what happens in the atmosphere. But on the ground, we have control. Flows can be predicted using hydrological models. With this knowledge, we can develop both structural and non-structural responses to mitigate [such] high flows," said Prof Mujumdar.

The research teams hoped that the study will help in sustainable river basin management and encourage more serious work towards a better understanding of hydrology, ecology, and geomorphology in the Upper Ganga Basin.

(By Chitra Kontu. Source: <https://www.thehindu.com/>)

PUBLICATIONS

Papers Published in the International Journal of Sediment Research Volume 37, No. 1, 2022



Volume 37, Issue 1
Pages 1-138 (February 2022)

Response of Reynolds stresses and scaling behavior of high-order structure functions to a water-worked gravel-bed surface and its implication on sediment transport
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Sediment transport simulation and design optimization of a novel marsh shoreline protection technology using computational fluid dynamics (CFD) modeling
Salman Sakib, Grant Besse, Peng Yin, Daniel Gang, Donald Hayes
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Thermal stability of soil organic carbon subjected to water erosion as a function of edaphic factors
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Improved bridge pier collar for reducing scour
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An improved formula for incipient sediment motion in vegetated open channel flows
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Impacts of land use and land cover changes on

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Heavy mineral composition and texture of the recently formed fluvial delta sediment of Lake Nasser/Nubia, Egypt and Sudan
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Spatial distribution, source apportionment, and associated risks of trace metals (As, Pb, Cr, Cd, and Hg) from a subtropical river, Gomti, Bangladesh
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Sediment dynamics in the mudbank of the Yangtze River Estuary under regime shift of source and sink
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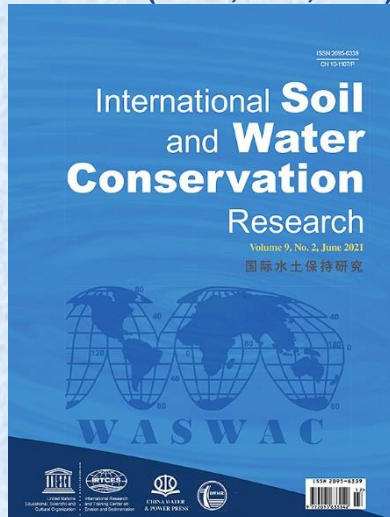
Characterizing and identifying bedforms in the wandering reach of the lower Yellow River
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Swimming behavior of juvenile silver carp near the separation zone of a channel confluence
Saiyu Yuan, Lei Xu, Hongwu Tang, Yang Xiao, Colin Whittaker
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Abiotic predictors of fine sediment accumulation in lowland rivers
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Full papers are available at ScienceDirect:
<https://www.sciencedirect.com/journal/international-journal-of-sediment-research> with free access to the paper abstracts.

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COMING EVENTS

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

Date: May 26-27, 2022

Venue: Cesme, Turkey

Invitation: We are pleased to announce that 14th International Conference on Hydrosience & Engineering, ICHE 2022, will be held on May 26-27, 2022 through face-to-face sessions at IZTECH, Urla, Turkey.

Due to the health and safety concerns, and prospective uncertainties regarding the global travel situation, we had to postpone ICHE 2022 conference which was originally planned in September, 2020.

If you haven't submitted an abstract yet, you can directly submit an extended abstract/full paper to participate ICHE 2022 by December 15, 2021.

We look forward to seeing you in İzmir. Until then, we hope that you stay safe and well.

ICHE 2022 LOC

URL: <https://www.iche2020.org/>

Contact

info@iche2022.org

importance of considering the integral water cycle to address present and future challenges.

Specific topics including Human-water relationships, Snow, river and sediment management, Environmental hydraulics and urban water cycle, Hydraulic structures, Water resources management, valuing and resilience, Computational and experimental methods, Coasts, estuaries and shelves and Extreme events: from droughts to floods will be covered in regular sessions. Special Sessions will also be organized in collaboration with worldwide experts in the different fields.

The Congress will provide a platform for science and practice to meet. A lively exhibition alongside the congress will present the latest developments in equipment, software and instrumentation as well as enhance relevant achievements from practice. Workshops and training events will be offered as well throughout the event. (Prof. Joseph Hun-wei Lee, IAHR President)

URL: <https://iahrworldcongress.org/>

Contact

Congress Secretariat

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Llámanos iaahr2022@kenes.com

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

Date: June 19-24, 2022

Venue: Granada, Spain

Invitation: On behalf of the Congress Organising Group (COG) of the 39th IAHR World Congress and the International Association for Hydro-Environment Engineering and Research (IAHR), we are delighted to invite you to join the 39th IAHR World Congress in 2022 in Granada, Spain.

Spain is a leading country in Hydro-Environment Engineering, strongly involved with IAHR. We are also a hub for Europe, Asia, Africa and the Americas, a gateway to the world. Customs procedures for coming to Spain are very easy for the majority of countries around the world, with no visa needed for over 100 nationalities. Granada has superb transportation connections – there are more than 70 international flights (destinations) from Malaga Airport and over 200 through the Madrid and Barcelona Airports – and incredible accessibility from all parts of the world.

Granada is unique: there are few places in the world where one can see so many hydro-environment engineering processes in such a small area: snow, desert, pristine rivers, spectacular reservoirs, and traditional cultural techniques alongside ultra-modern technologies. Granada is a modern city but with an impressive historical legacy. Not too large, nor too small; very well connected and affordable for everybody.

The University of Granada is the leader in Europe in international student exchanges and has vast experience organizing large-scale events. The Granada Congress Centre with its unique auditorium capable of welcoming 2.000 delegates and its modern audio-visual facilities offers a state of the art conference experience in the heart of the city. PCO Kenes Spain has the experience, knowledge and reliability that the IAHR World Congress needs.

This Congress will bring together the enthusiasm of a whole country to organize a high-level event in the field of water. For us it's not just another event, but the event of the year. The central theme of the Congress will be "From Snow to Sea", linking past with present and focusing attention on the

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

Date: September 6-9, 2022

Venue: Florence, Italy

Organizer: University of Florence and University of Padua

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

Co-sponsors: International Association for Hydro-Environment Engineering and Research (IAHR).....(to be invited)

Secretariat: University of Florence, Italy

Permanent Secretariat: IRTCES

Summary: The triennial International Symposium on River Sedimentation (ISRS) was initiated in 1980. Since its foundation, IRTCES has served as the permanent secretariat of ISRS. WASER was inaugurated at the 9th ISRS in 2004, and the ISRS has since become the official Symposium of WASER.

The objective of the ISRS is to provide a forum for scientists, engineers, researchers and decision makers to exchange ideas, research results and technical advances, and to share experience and information relating to the study of sediment and its management.

Symposium Theme and Topics:

The theme of the symposium is Sustainable Sediment Management in a changing Environment (tentative)

The symposium topics include (tentative):

1. Sediment transport
2. Reservoir sedimentation
3. River morphodynamics
4. Coastal morphodynamics
5. Ecomorphodynamics
6. Sediment related disaster
7. Plastic in river and coastal systems
8. Interaction between sediment dynamics and hydraulic structures
9. Integrated Sediment Management at the River Basin Scale
10. Social, economic & political problems related to sediment and water management

URL: <https://www.isrs2022.it/>

Organisation & Contacts:

Organized by the Department of Civil and Environmental Engineering, University of Florence, Italy

Organizing Committee Co-Chairs

Stefano Lanzoni, Department of Civil, Environmental and Architectural Engineering, University of Padova, Italy

Luca Solari, Department of Civil and Environmental Engineering, University of Florence, Italy

Contacts

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

Date: October 10-14, 2022

Venue: Nanjing, China

Invitation: On behalf of the International Association for Hydro-Environment Engineering and Research and the local organizing committee, we cordially invite you to the 14th International Symposium on Ecohydraulics that will be held from October 10th to 14th 2022 in Nanjing, China, an ancient capital of ten dynasties in Chinese history, boasting numerous historic sites, splendid cultural heritage, beautiful cityscape and sceneries.

Ecohydraulics is a rapidly developing inter-discipline of ecology and hydraulics brought about by the ever-growing concern of aquatic and riparian ecology. Since its first edition in 1994, the International Symposia on Ecohydraulics have

provided platforms for scientists and engineers worldwide to discuss cutting-edge scientific progress, compared and evaluated state-of-the-art technical methods, and recommended them to the end-users.

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

URL: <https://ise2022.org/>

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

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

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

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Photo of the Yellow River Source taken from Tiangong Space Station (by Wang Yaping)

