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NEWSLETTER

Reporting ISI news to you quarterly

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IN THIS ISSUE

UNESCO"国际泥沙计划"简报

本期内容

NEWS

A new river-specific international journal launched

China has launched a new academic journal called *River* to publish the latest findings on river systems and hydropower research. The announcement was made at the Global Water Forum in Beijing on August 24, 2022. The editorial staff of the journal and over 100 industry experts from China and abroad attended the forum both in-person and online. They discussed the challenges facing global river management and shared their views on ways to preserve rivers.

According to Kuang Shangfu, Chairperson of the journal and President of the China Institute of Water Resources and Hydropower Research, the journal is a platform where all kinds of knowledge, ranging from the natural and social sciences to topics involving water resources, will be discussed. (Source: CGTN)

About the Journal

A new open access journal presenting the engineering and practical applications of river systems, in addition to research on traditional water-related areas.

River welcomes research spanning the following areas:

- Water resources, water environment, water ecology, water disasters, hydraulics and irrigation
- Geotechnical engineering and dam construction techniques
- Estuarine and offshore engineering
- Water culture, policy, and security

Journal website:

https://onlinelibrary.wiley.com/journal/27504867

International Symposium "Uncertainty in river water monitoring – New insights on spatio-temporal variability of suspended river water components" will be held online during Nov. 30-Dec. 1, 2022

Dear colleagues,

We would like to invite you to the virtual international Symposium "Uncertainty in river water monitoring – New insights on spatio-temporal variability of suspended river water components" to be held on 30 November and 01 December 2022. The symposium is organized by the German Federal Institute of Hydrology (BfG) and the International Centre for Water Resources and Global Change (ICWRGC).

We are looking forward to contributions to the following topics:

- New methods and developments in suspended solid quantitative and qualitative monitoring.
- Insights on variability and gradients of suspended sediment distribution in the river cross-section.
- Insights on chemical composition and element distribution in the river cross-section.
- Temporal variability of suspended solids as well as element distribution and implications for a(n) required/optimal monitoring interval.
- Relationships between suspended solid characteristics (e.g. grain size, mineral composition, organic matter) and bound chemical elements.
- Insights on flocculation processes.
- (Global) suspended solids load estimates, their uncertainties, and resulting implications.
- Upscaling methods i.e. point measurements to cross-section / interpolation of low-frequency time series to estimate annual loads.

You can find more details in the attached call

for abstracts or on

www.waterandchange.org/symposium-2022

Best regards,

Kerstin Wickel

On behalf of the URSACHEN Team

International Centre for Water Resources and Global Change (ICWRGC) UNESCO Category 2 Centre Secretariat German IHP/HWRP National Committee Federal Institute of Hydrology P.O. Box 200253 | 56002 Koblenz | Germany

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Pakistan and China collaborate to protect the Indus Delta against climate change

SHANGHAI, Jul 4 (China Economic Net) Researchers from Pakistan and China are working together on the challenges and solutions for the sustainable development of the Indus Delta.

At the Progress Meeting of the UN Ocean Decade "Mega-Delta Programme" hosted last month by the State Key Laboratory of Estuarine and Coastal Research (SKLEC), East China Normal University, scientists from Pakistan, China and several other countries shared their progress in research and announced that online archives containing scientific data for major river deltas will be set up to share with partners.

Known as the backbone of Pakistan's ecology and economy, the Indus Delta is the fifth largest in the world and home to the seventh biggest mangrove forest. The complex system of swamps, mudflats, and streams are home to rice, cotton, and wheat plants, fish and prawns, mangrove forests, and wild animals, offering various sources of income to the inhabitants.

However, recent years has witnessed a sharp decrease in sand and water supply to the delta area. A World Bank study shows that the sediment that reaches the delta has declined from an estimated 270 million tonnes per year at pre-development levels to 13 million tonnes in 2019. The rising sea level and offshore storm surges have triggered beach erosion and salt-water encroachment, leading to the degradation and death of mangrove forests and decreased production of fish and shrimp.

The Third Pole, a platform dedicated to promoting information and discussion about the Himalayan watershed and the rivers that originate there, has reported that around 1.2 million people from the Indus Delta have already migrated to Karachi.

According to Dr. Samina Kidwai, Director of the National Institute of Oceanography, Pakistan, the challenges faced by the Indus River Delta include coastal erosion, mangrove degradation and decreased fishery production.

" Comprehensive management of water and sand resources in the entire drainage basin is required", said Li Xiuzhen, Professor of Ecology and Deputy Director for International Affairs, State Key Laboratory of Estuarine and Coastal Research, East China Normal University, in an interview with China Economic Net (CEN).

The Mega-Delta Programme of the UN Ocean Decade was initiated in June 2021 in response to the global issues facing deltas around the world, such as reduced sediment and excessive nutrient inputs from the catchment, frequent storm surges from the sea, as well as land subsidence, reclamation and flooding. According to Prof. He Qing, Director of the State Key Laboratory of Estuarine and Coastal Research, East China Normal University, it aims to understand the current status of global river deltas, explore the mechanisms of delta evolution under the influence of global climate change and human activities, predict future trends of water-sediment and socio-economic evolution, as well as to provide early warning for hazards, and solutions for common problems, such as sea-level rise, coastal erosion, flood disasters, salt water intrusion, soil and water pollution, and ecosystem degradation.

"Collaboration between different disciplines and stakeholders is required to support sustainable development in delta regions", she said.

It is planned that in the future, collaboration will be conducted in the management of hazards and resources, carbon sequestration and micro-plastics, etc.

(Mega-Delta Programme, https://delta.ecnu.edu.cn/; Source: http://en.ce.cn/)

Recent drop in Lake Powell's storage shows how much space sediment is taking up

The Bureau of Reclamation last week revised its data on the amount of water stored in Lake Powell, with a new, lower tally taking into account a 4% drop in the reservoir's total available capacity between 1986 and 2018 due to sedimentation.

Bureau data on the reservoir's water-storage volume showed a loss of 443,000 acre-feet

between June 30 and July 1 — a 6% drop in storage from 6.87 million acre-feet (which is 28.28% of live storage based on 1986 data) to 6.43 million (26.46% of full).

The cause was a recalculation of water stored based on a Bureau of Reclamation and U.S. Geological Survey study released in March — the first such analysis in more than 30 years — about Lake Powell's loss of storage capacity due to the amount of sediment that the Colorado River and other tributaries deposit into the reservoir. The study was based on data about sediment in the lake collected in 2017 and 2018.

"After inputting the new data on July 1, 2022, storage values at the current elevation were updated, resulting in a decrease of 443,000 acre-feet," bureau officials wrote in an email.

The Bureau of Reclamation has performed two prior sediment surveys: pre-impoundment (before the construction of the dam — up to 1963) and in 1986.

Storage capacity figures prior to the release of the report in March had been based on 1986 data, Casey Root, a hydrologist for the U.S. Geological Survey's Utah Water Science Center, said in an email.

The new data will be included in the upcoming July 24-Month Study, scheduled to be released in mid-July, which forecasts the reservoir's volume and surface elevation, and in any subsequent operational projections.

Slackwater delta

"Like most reservoirs, Lake Powell loses storage capacity as a result of sedimentation from its source rivers," said Root, who worked on the most recent USGS and Bureau of Reclamation study.

The paper explained that Lake Powell has continuously trapped sediment — including silt, sand and mud — from the Colorado and San Juan rivers since the Glen Canyon Dam impounded the rivers in 1963. The meeting of the free-flowing rivers carrying sediment with the slack water of the reservoir creates a delta, where the sediment falls to the lake's bottom.

Root explained that the delta regions are located at the furthest extents of Lake Powell and that these areas typically contain the most sediment.

"Sediment isn't deposited uniformly across the reservoir but rather far from the dam," he said. "Over time, these deposits can laterally build toward the dam."

Since it began filling in 1963, the reservoir has lost on average about 33,270 acre-feet in storage capacity each year, according to the study.

"Lake Powell is unique in that it is a long, narrow, steep-walled canyon, so the deltas have historically been about 150 miles away from Glen Canyon Dam," Root said. "Simply being far away from the deltas can help buffer the dam and its operations against sedimentation."

Due to this sedimentation, Lake Powell's storage capacity at full pool decreased by 6.79% from 1963 to 2018, or a 1.83 million acre-foot loss.

Between 1986 and 2018, it dropped by 4%, which represents a loss of 1.05 million acre-feet in 32 years.

Sedimentation and the limits on useful life

While sedimentation is shrinking Lake Powell's storage capacity, the 2022 study shows that storage loss has remained stable since 1963.

From 1963 to 1986, Lake Powell had lost on average 33,390 acre-feet in storage capacity each year; from 1986 through 2018, 33,180 acre-feet per year was lost, according to the report.

"As a first-order approximation, the average annual storage loss in Lake Powell indicates the remaining volume at full pool will be filled in approximately 750 years. However, the reservoir fills laterally, from the deltas toward Glen Canyon Dam, and would likely cease to be useful sooner," the study pointed out.

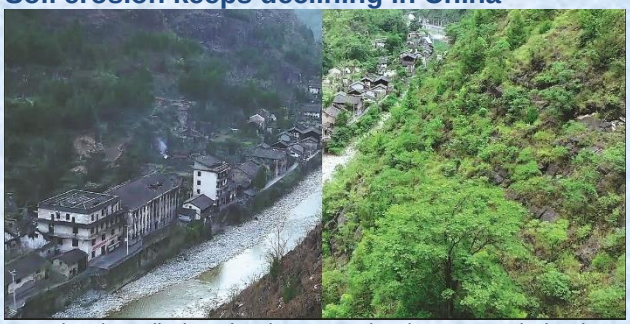
Several other variables — including sedimentation rates and climate sensitivity among others — need to be taken into consideration to better evaluate the remaining useful life of the reservoir.

Researchers are currently working on the July 24-Month Study, which should offer further insights on the reservoir's future operations when it gets published later this month. Lake Powell dropped to its lowest level since filling prior to this spring's runoff, which has been increasing reservoir levels since late April. At its lowest point, Lake Powell's surface elevation at the Glen Canyon Dam dropped to 3,522.24 feet above sea level on April 22, just 32 feet above the minimum

level required to generate hydropower. Water volume at the reservoir on that day was listed as being at 23.68% of full pool.

(Source: https://aspenjournalism.org/)

Soil erosion keeps declining in China



A combo photo displays the changes to the slopes around Ningchang ancient town in Chongqing's Wuxi county since 2017 before and after the national afforestation campaign. [Photo/CHINA DAILY]

BEIJING, June 28 (China Daily) -- About 2.67 million square kilometers of land experienced soil erosion in China last year, a decrease of 0.69 percent on 2020, according to the latest data released by the Ministry of Water Resources on Monday.

With nearly 28 percent of the mainland currently affected by soil erosion, the ministry said it will focus on reducing the impact of human activity on soil and will also prioritize the management of the Yellow River's coarse sand areas and enhance treatment of erosion in black soil areas in northeastern China.

The main causes of erosion are water and wind, the ministry said.

It added that 80 percent of water erosion takes place in river basins, most of which occurs in the upper and middle reaches of rivers, especially along the Yangtze and Yellow rivers.

The upper reaches of the Yangtze River and the middle reaches of the Yellow River suffered the most. Covering 14 percent of the country's land area, they account for 40 percent of areas of moderate and severe water erosion.

About 80 percent of wind erosion mainly occurs in sandy areas including the Qinghai-Tibet Plateau and the black soil areas of northeastern China, it said.

(Source: China Daily)

How the world's rivers are changing

The way rivers function is significantly affected by how much sediment they transport and where it gets deposited. River sediment—mostly sand, silt, and clay—plays a critical ecological role, as it provides habitat for organisms downstream and in estuaries. It is also important for human life, resupplying nutrients to floodplain agricultural soils, and buffering sea level rise caused by climate change by delivering sand to deltas and coastlines. However, these functions are under threat: In the past 40 years, humans have caused unprecedented, consequential changes to river sediment transport, according to a new Dartmouth study published in Science.

The Three Gorges Dam dramatically reduced the amount of sediment transported by the Yangtze River in China after its completion in 2003

Using satellite images from NASA Landsat and digital archives of hydrologic data, Dartmouth researchers examined changes in how much sediment is carried to the oceans by 414 of the world's largest rivers from 1984 to 2020.

"Our results tell a tale of two hemispheres. The north has seen major reductions in river sediment transport over the past 40 years, while the south has seen large increases over the same period," says lead author Evan Dethier, a postdoctoral fellow at Dartmouth. "Humans have been able to alter the world's biggest rivers at rates that are unprecedented in the recent geologic record.

"The amount of sediment rivers carry is generally dictated by natural processes in watersheds, like how much rain there is or whether there are landslides or vegetation. We find that direct human activities are overwhelming these natural processes, and even outweighing the effects of climate change."

The findings show that massive 20th century dam building in the global hydrologic north—North America, Europe/Eurasia and Asia—has reduced global in river suspended sediment delivery to the oceans by 49% relative to pre-dam conditions. This global reduction has occurred despite major increases in sediment delivery from the global hydrologic south—South America, Africa and Oceania. There, sediment transport has increased on 36% of its rivers in the region due to major land use change.

The changes to sediment transport in the south have been driven mainly by intensive land

use changes, most of which are associated with deforestation. Notable examples include logging in Malaysia; alluvial gold mining in South America and sub-Saharan Africa; sand mining in Bangladesh and India; and palm oil plantations across much of Oceania. (In prior research, Dethier found that artisanal gold mining in Peru is associated with increases in suspended sediment levels).

In the north, dam building has been the dominant agent of change for rivers in the past several centuries.

"One of the motivations for this research has been the global expansion of building large dams," says co-author Francis Magilligan, a professor of geography and the Frank J. Reagan '09 Chair of Policy Studies at Dartmouth, who studies dams and dam removal. "In the U.S. alone, there are more than 90,000 dams listed in the National Inventory of Dams." Magilligan says, "One way to think about this is that we as a nation have been building, on average, one dam per day since the signing of the Declaration of Independence."

Rivers are responsible for creating floodplains, sandbars, estuaries, and deltas due to the sediment that they transport. However, once a dam is installed, that supply of sediment, including its nutrients, is often shut off.

In the U.S. and other countries in the Northern Hemisphere, however, many dams are more than a half-century old, and fewer dams are being built in the 21st century. Recent declines in sediment transport are relatively minimal, as a result. Dam building in Eurasia and Asia in the past 30 years, especially in China, has driven ongoing reductions in global sediment transport.

"For low-lying countries (countries that live at, near or below sea level) in delta regions, sediment supply from rivers has, in the past, been able to help offset the effects of sea level rise from climate change," says Magilligan, "but now you've got the double drivers of declining sediment from dam construction and rising sea levels." He says, "This is particularly worrisome for densely populated places like Vietnam, where sediment supply has been reduced significantly by dam activity along the Mekong River."

The results in the north are striking and could foreshadow future changes to come for the south, as the study reports that there are more than 300 dams planned for large rivers in South America and Oceania. The Amazon River carries more sediment than any other river in the world and is a major target for these dams.

"Rivers are pretty sensitive indicators of what we're doing to the surface of the Earth—they are sort of like a thermometer for land use change," says co-author Carl Renshaw, the Evans Family Distinguished Professor of Earth Sciences at Dartmouth. "Yet, for rivers in the Northern Hemisphere, dams are now blocking that signal for sediment coming to the ocean."

Renshaw says, "It's well-established that there's a soil loss crisis in the U.S. but we just don't see it in the sediment export record because it's all getting stuck behind these dams, whereas we can see the signal for rivers in the global south."

Dethier says, "In many cases throughout the world, we have built our environment around rivers and the way that they operate, for use in agriculture, industry, recreation and tourism, and transportation, but when human activity suddenly disrupts the way rivers function, it may become difficult to adapt in real-time to such impacts."

How dams retain sediment and how land use is increasing downstream erosion are principles the researchers hope can be used to help inform planning decisions, and land use and environmental management policies in riparian and coastal zones in the future.

More information: Evan N. Dethier et al, Rapid changes to global river suspended sediment flux by humans, Science (2022). DOI: 10.1126/science.abn7980

(Source: https://phys.org/)

PUBLICATIONS

Papers Published in the International Journal of Sediment Research Volume 37, No. 5, 2022

Volume 37, No.5, 2022
Pages 539-700 (October 2022)

1. Horizontal and vertical fluxes of particulate matter during wind erosion on arable land in the province La Pampa, Argentina
Nicole Siegmund, Roger Funk, Michael Sommer, Fernando Avecilla, Juan Esteban Panebianco, Laura Antonela Iturri, Daniel Eduardo Buschiazzo

2. Influences of rock fragments on the hydraulics and erosion of concentrated runoff in steep spoil heaps on the Loess Plateau of China
Wenzhao Guo, Hongliang Kang, Xiao Yu, Wenlong Wang, Pei Tian

3. Historical variations in autochthonous and allochthonous sediment supplies to the largest freshwater lake in Central India
Nafees Ahmad, Satinder PalSingh, Aasif Mohmad Lone, Abul Qasim, Ravi Bhushan, Gyana Ranjan Tripathy， Chinmay Shah

4. Sedimentation in small-scale irrigation schemes in Ethiopia: Its sources and management
Zerihun Anbesa Gurmu, Henk Ritzema, Charlotte de Fraiture, Mekonen Ayana

5. Dynamic response of debris flows impacting curved joint check dams
Dongpo Wang, Xiaomei Zhang, Wei Shen, Aronne Armanini

6. Hybrid meta-heuristic machine learning methods applied to landslide susceptibility mapping in the Sahel-Algiers
Mohammed Amin Benbouras

7. Temporal variations of sediment and morphological characteristics at a large confluence accounting for the effects of floodplain submergence
Kun Li, Hongwu Tang, Saiyu Yuan, Lei Xu, Yang Xiao, Carlo Gualtieri

8. Joint probability analysis of water and sediment and predicting sediment load based on copula function
Haoyu Jin, Xiaohong Chen, Ruida Zhong, Yingjie Pan, Tongtiegang Zhao, Zhiyong Liu, Xinjun Tu

9. Characteristics of runoff and sediment yield for two typical erodible soils in southern China
Xuchao Zhu, Yin Liang, Lili Qu, Longxi Cao, Zhiyuan Tian, Tong Liu, Meng Lie

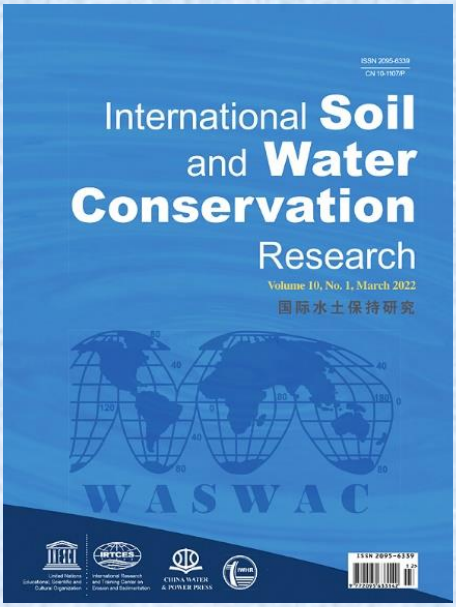
10. Temporal evolution of scour at bridge abutments in compound channels
Yifan Yang, Bruce W. Melville, Xiaozhou Xiong, Lu Wang

11. Entropy model to assess sediment resuspension probability and trap efficiency of small dams
Francisco Jairo Soares Pereira, Antonio Viana da Silva Filho, José Wellington Batista Lopes, José Carlos de Araújo

12. Modelling the long-term geomorphic response to check dam failures in an alpine channel with CAESAR-Lisflood
Jorge Alberto Ramirez, Mirjam Mertin, Nadav Peleg, Pascal Horton, Chris Skinner, Markus Zimmermann, Margreth Keiler

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. 10, No.3, 2022)



Volume 10, Issue 3
Pages 343-546 (September 2022)

COMING EVENTS

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

Date: October 10-14, 2022
Venue: Nanjing, China
Invitation: On behalf of the International Association for Hydro-Environment Engineering and Research and the local organizing committee, we cordially invite you to the 14th International Symposium on Ecohydraulics that will be held from October 10th to 14th 2022 in Nanjing, China, an ancient capital of ten dynasties in Chinese history, boasting numerous historic sites, splendid cultural heritage, beautiful cityscape and sceneries.
Ecohydraulics is a rapidly developing inter-discipline of ecology and hydraulics brought about by the ever-growing concern of aquatic and riparian ecology. Since its first edition in 1994, the International Symposia on Ecohydraulics have provided platforms for scientists and engineers worldwide to discuss cutting-edge scientific progress, compared and evaluated state-of-the-art technical methods, and recommended them to the end-users.
ISE 2022 covers a wide spectrum of topics related to ecohydraulics in theory and in practice, including the hydrological, hydraulic, morphodynamic, structural, ecologic, biologic, and technical aspects of the discipline. Six high-profile keynote speeches will be presented. We are expecting you to present at the symposium and share the latest advancement of your research with the international scientific community. Both oral and poster presentations are welcome. A special issue of Environmental Science & Ecotechnology focusing on this conference will be published. Traditionally, ISE features an ECoENet pre-conference workshop which helps early career researchers (ECR) working in ecohydraulics find opportunities and overcome challenges. Starting from the current edition, ISE plans to provide an interactive lecture of a helpful technical tool applied in one of these three topics (1) fieldwork, (2) lab experiments (3) numerical simulation, and rotate among them in the future. (ZHANG Jianyun, Yangtze Institute for Conservation & Development, China, Nanjing Hydraulic Research Institute, China)
URL: https://ise2022.org/
Contact
ISE2022 Secretariat
sec@ise2022.org
+86-25-85828956

IAHS/ICCE International Symposium River sediment quality and quantity (Poland, Oct. 17-21, 2022)

Date: October 17-21, 2022
Venue: Bydgoszcz, Poland (hybrid conference formula)
Invitation: It is a pleasure on behalf of International Association of Hydrological Sciences (IAHS) – Commission on Continental Erosion (ICCE) to invite you to: The International Symposium on River sediment quality and quantity: environmental, geochemical and ecological perspectives, 17 - 21 October 2022, Bydgoszcz, Poland (hybrid conference formula).
Subjects of the Conference:
Sediment quantity – cascades, budgets, yields
Sediment impacts on river channel hydromorphology and managment
Sediment quality – geochemistry, nutrients, contaminants, emerging issues
Sediment-biota interactions
Business Day - inland waterways development in Middle-East Europe
Conference programme will include:
Oral and poster thematic sessions
Social events and post-conference tours
Gala-dinner at Mill Island - a green oasis in the city centre
Business Day
The first IAHS/ICCE International Symposium was held in Florence, Italy more than 30 years ago, and recent symposia have been held in Dundee, UK in 2006; Christchurch, New Zealand in 2008; Warsaw, Poland in 2010; Chengdu, China in 2012; New Orleans, USA in 2014; Okehampton, UK in 2016 and in Moscow, Russia in 2018. The 2022 ICCE Symposium will be held at Bydgoszcz in Poland, at the Kazimierz Wielki Univeristy.
URL: https://icce2022.ukw.edu.pl/
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1st IACRR International Conference on Coastal Reservoirs and Sustainable Water Management (Nanjing, China, October 17-20, 2022)

Date: October 17-20, 2022
Venue: Nanjing, China
Summary: The 1st International Conference on Coastal Reservoirs and Sustainable Water Management will be held by Hohai University in Nanjing (China) in November 6th-9th, 2023. Coastal reservoirs could provide a solution to the water problems of many coastal cities, but their successful development faces various 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 provide students an opportunity to discuss with renowned and well-established researchers and professionals in this field.
Hohai University, founded in 1915, has the largest number of researchers studying water-related problems in the world and has gained worldwide reputation for its focus on water. Hohai is a state key university under the direct administration of the Ministry of Education of China. The university has been collaborating closely with various academic organizations including the International Association for Hydro-Environment Engineering and Research (IAHR). Seven colleges at Hohai are relevant to the topic of coastal reservoirs, including the College of Environment, College of Hydrology and Water Resources, College of Water Conservancy and Hydropower Engineering, College of Harbor, Coastal and Offshore Engineering, College of Oceanography, College of Civil

and Transportation Engineering, and College of Mechanics and Materials. Professor Hongwu Tang, the Chair of the University Council and the Founding-chair of the China Chapter of the International Association for Coastal Reservoir Research (IACRR), cordially invites you to attend the conference.
URL: http://www.iacrr2020.com/
Contact
Chunhui Lu: clu@hhu.edu.cn
Guangqiu Jin: jingq@hhu.edu.cn
Chi Zhang: zhangchi@hhu.edu.cn
Consultation mailbox: iccr@hhu.edu.cn

The 40th IAHR World Congress (Austria, Aug. 21-25, 2023)

Date: August 21-25, 2023
Venue: Vienna, Austria
Invitation: On behalf of the International Association for Hydro-environment Engineering and Research (IAHR) I am delighted to invite you to participate in the 40th IAHR World Congress to be held in Vienna, Austria, from August 21st to 25th, 2023. For more than seventy-five years, the biennial IAHR World Congresses have brought together leading experts to help address the world's pressing water environment engineering challenges. The event has traditionally provided researchers and decision makers the opportunity to share recent advances and experiences, identify emerging technology trends, and engage in lively debates that have positively impacted our world. Following the last IAHR Congress held in 2021 in Granada, Spain under the theme "From Snow to Sea", the main theme of the 40th IAHR World Congress will be "Rivers – Connecting Mountains and Coasts" focusing attention on the importance of considering the integral water cycle to address present and future challenges. Since its creation in 1935, IAHR is known as a leading international organization of engineers and professionals in fields related to the water environment. IAHR stimulates and promotes research and its application – by sharing new research paradigms and networks, setting industry standards, informing best water management practices, and nurturing young professionals. Through its powerful knowledge products and networks, IAHR makes important contributions to sustainable development in many ways. At the upcoming Congress, IAHR will unleash its new Strategic Plan and present exciting knowledge platforms and prominent speakers on global water environment issues including climate-induced changes to water resources, adaptive management, artificial intelligence (AI) and smart water management, Eco hydraulics, and policy forums. I, therefore, welcome you to join us and share with us your work. I look forward to welcoming you to Vienna in August 2023! (Prof. Joseph Hun-wei Lee, IAHR President)
URL: https://rivers.boku.ac.at/iahr/
Vienna Water Conferences 2023: https://rivers.boku.ac.at

World's Large Rivers Conference 2023 (Austria, Aug. 21-25, 2023)

Date: August 21-25, 2023
Venue: Vienna, Austria
Invitation: This conference aims to provide a global forum for a wide-ranging discussion of key issues related to research on large rivers and their effective and sustainable management, involving both scientists and decision-makers. We kindly ask all interested authors to submit their work on the topics of Hydrology, Hydraulics & Hydroclimatic Impacts Sediment Transport & River Morphology River Pollution, Ecology & Restoration Integrated River Management. This time, a special focus will be on Rivers in a Changing World. The goal is to establish a scientific knowledge base and develop scientific reports on the status of large rivers for a better understanding of developments, synergies, and challenges in large river basins. So far, three status reports on large rivers have been developed (Danube, Mekong, and Niger) and up to 300 rivers should follow. Furthermore, the structure of the World's Large Rivers Initiative will be discussed at the World's Large Rivers conference in Vienna 2023! Special information: In honour and celebration of the 5th anniversary of the World's Large Rivers Conference, the 40th anniversary of the IAHR Wo https://boku.ac.at/rld Congress and the 30th anniversary of the Danube Conference, all three conferences will be held simultaneously in Vienna under the motto "Vienna Water Conferences 2023"! You can purchase a special combined ticket to attend all three outstanding events!
URL: https://worldslargerivers.boku.ac.at
Vienna Water Conferences 2023: https://rivers.boku.ac.at

River Flow 2022 (Online, Nov. 8-10, 2022)

Date: Nov. 8-10, 2022
Venue: Online
Invitation: Welcome to River Flow 2022, the 11th International Conference on Fluvial Hydraulics. 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 the main international event focusing on fluvial hydraulics and river engineering. River Flow 2022 will be a unique occasion to present and discuss the latest experimental, theoretical and computational findings on fundamental river flow and transport processes, river morphology and morphodynamics. The conference will as well cover issues related, but not limited to: the effects of hydraulic structures on flow regime, river morphology and ecology; sustainable river engineering practices (including stream restoration and re-naturalization); and effects of climate change including extreme flood events. Given the present uncertainty related to COVID-19, the conference will be held virtually.
Following on the tradition and success of previous editions of River Flow conferences, River Flow 2022 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.
URL: https://www.rf2022.com/
Contacts:
The LOC of River Flow 2022
➥ Follow us on Twitter: @riverflow2022
riverflow2022.org@queensu.ca

The 15th International Symposium on River Sedimentation (Florence, Italy, Sept. 5-8, 2023)

Date: September 5-8, 2023
Venue: Florence, Italy
Organizer: University of Florence and University of Padua
Sponsors: International Research and Training Center on Erosion and Sedimentation (IRTCES); World Association for Erosion and Sediment Research (WASER)

Co-sponsors: International Association for Hydro-Environment Engineering and Research (IAHR).....(to be invited)
Secretariat: University of Florence, Italy
Permanent Secretariat: IRTCES
Summary: The triennial International Symposium on River Sedimentation (ISRS) was initiated in 1980. Since its foundation, IRTCES has served as the permanent secretariat of ISRS. WASER was inaugurated at the 9th ISRS in 2004, and the ISRS has since become the official Symposium of WASER. The objective of the ISRS is to provide a forum for scientists, engineers, researchers and decision makers to exchange ideas, research results and technical advances, , and to share experience and information relating to the study of sediment and its management.
Symposium Theme and Topics:
The theme of the symposium is
Sustainable Sediment Management in a changing Environment (tentative)
The symposium topics include (tentative):
1. Sediment transport
2. Reservoir sedimentation
3. River morphodynamics
4. Coastal morphodynamics
5. Ecomorphodynamics
6. Sediment related disaster
7. Plastic in river and coastal systems
8. Interaction between sediment dynamics and hydraulic structures
9. Integrated Sediment Management at the River Basin Scale
10. Social, economic & political problems related to sediment and water management
URL: https://www.isrs2022.it/
Organisation & Contacts:
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INTERNATIONAL SEDIMENT INITIATIVE (ISI)

Intergovernmental Hydrological Programme (IHP) UNESCO

ORGANISATION: UNESCO

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Qomolangma National Nature Reserve, Tibet, China (by Zhiyong Li)