



NEWSLETTER

Reporting ISI news to you quarterly

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IN THIS ISSUE

News

- ✧ UNESCO's Member States are leveraging cooperation around water issues through the Intergovernmental Hydrological Programme 1
- ✧ UNESCO's Intergovernmental Hydrological Programme showcases solutions to drought and water scarcity around the world 1
- ✧ Source-to-Sea approach explored at COP-25 side event organized by UNESCO 2
- ✧ UNESCO promoting peace and water security in transboundary basins 2
- ✧ WASWAC World Conference IV held in India 3
- ✧ The Second International Conference on All Material Fluxes in River Eco-Systems Held at Peking University, China 3
- ✧ Danube sediment data analysis published 4
- ✧ Soil erosion must be stopped 'to save our future', says UN agriculture agency 5
- ✧ China requires further improvement of sedimentation in the Yellow River 6
- ✧ Provinces and cities take aim at illegal sand mining along the Yangtze River 6

Publications

- ✧ Papers published in IJSR Vol.34, No 6, 2019 7
- ✧ Contents of ISWCR (Vol. 7, No 4, 2019) 7

Coming Events

- ✧ CoastLab 2020 (China, May 25-29, 2020) 9
- ✧ International Symposium on River sediment quality and quantity (Poland, June 1-5, 2020) 9
- ✧ River Flow 2020 (The Netherlands, July 7-10, 2020) 9
- ✧ World's Large Rivers Conference 2020 (Russia, August 3-7, 2020) 9
- ✧ 8th International Conference on Flood Management (USA, August 17-19, 2020) 10
- ✧ ISI-Training Workshop on "River Basin Sediment Monitoring and Management" (Germany, September 7-11, 2020) 10
- ✧ 14th International Conference on Hydrosience & Engineering (Turkey, September 22-25, 2020) 10
- ✧ International Conference "Water, Megacities and Global Change" (France, Dec. 1-4, 2020) 11
- ✧ The 7th International Conference on Estuaries and Coasts (Shanghai, China, October 18-21, 2021) 11
- ✧ 15th International Symposium on River Sedimentation (Florence, Italy, September, 2022) 11

UNESCO “国际泥沙计划” 简报

本期内容

新闻

- ✧ UNESCO 会员国通过政府间水文计划在水问题上加强合作 1
- ✧ UNESCO 政府间水文计划展示全世界干旱和缺水的解决方案 1
- ✧ UNESCO 组织召开 COP-25 周边会议探讨“源至海”方法 2
- ✧ UNESCO 促进跨流域和平与水安全 6
- ✧ 世界水土保持学会第四次国际研讨会在印度举办 3
- ✧ 第二届河流全物质通量国际学术研讨会在北京大学召开 3
- ✧ 多瑙河泥沙分析报告发布 4
- ✧ 联合国农业机构称必须停止土壤侵蚀以拯救我们的未来 5
- ✧ 中国需要进一步改善黄河泥沙问题 6
- ✧ 长江沿岸各省市合作打击非法采砂 6

出版物

- ✧ 《国际泥沙研究》期刊 2019 年第 34 卷第 6 期论文目录 7
- ✧ 《国际水土保持研究》期刊 2019 年第 7 卷第 4 期论文目录 7

会议信息

- ✧ CoastLab 2020 (舟山, 2020 年 5 月 25-29 日) 9
- ✧ 河流泥沙质与量国际学术讨论会(波兰, 2020 年 6 月 1-5 日) 9
- ✧ 河流流动 2020(荷兰, 2020 年 7 月 7-10 日) 9
- ✧ 世界大河学术讨论会(俄罗斯, 2020 年 8 月 3-7 日) 9
- ✧ 第八届洪水管理国际学术研讨会(美国, 2020 年 8 月 17-19 日) 10
- ✧ ISI“流域泥沙监测与管理”培训班(德国, 2020 年 9 月 7-11 日) 10
- ✧ 第十四届水科学与工程国际学术研讨会(土耳其, 2020 年 9 月 22-25 日) 10
- ✧ “水、大城市与全球变化”国际学术讨论会(法国, 2020 年 12 月 1-4 日) 11
- ✧ 第七届河口海岸国际研讨会(上海, 2021 年 10 月 18-21 日) 11
- ✧ 第十五次河流泥沙国际学术讨论会(意大利佛罗伦萨, 2022 年 9 月) 11

NEWS

UNESCO's Member States are leveraging cooperation around water issues through the Intergovernmental Hydrological Programme



United Nations
Educational, Scientific and
Cultural Organization



Intergovernmental
Hydrological
Programme

UNESCO's General Conference (GC) revised, at its 40th session (12-27 November 2019), the Statutes of the Intergovernmental Council (IGC) of UNESCO's Intergovernmental Hydrological Programme (IHP), that had been previously adopted by IHP-IGC's 23rd session (11-15 June 2018)

The First Extraordinary Council session of the Intergovernmental Hydrological Programme (IHP) took place on 28 November 2019 and reinforced UNESCO's work on international cooperation at the Science-Policy interface. Water security for all remains the focus of the Programme, whose objectives and work continue under the leadership of the incoming Chairperson of the IHP Intergovernmental Council, Mr Fadi Georges Comair from Lebanon.

Among the most visible modifications produced by the revision of the Statutes is the change of name of the Programme, from "International" to "Intergovernmental Hydrological Programme". The Intergovernmental Hydrological Programme adopted its new name on 27 November 2019, when the 40th session of the General Conference revised the Programme's Statutes to reflect better the intergovernmental nature of the Programme and to align its governance closer with that of other International and Intergovernmental Bodies (IIB) of UNESCO, reinforcing the cooperation among IHP's member countries.

In his speech, the new Chairperson Mr Comair highlighted that "cooperation around water is now more essential than ever to the achievement of peace and the common objectives of development and prosperity". Mr Comair furthermore underlined the importance of "the rationalization of agricultural practices, better efficiency of drinking water and sanitation networks, reasonable use of non-conventional water, enhancement of information and training in water professions".

The First Extraordinary Session of IHP's Intergovernmental Council initiated the implementation of the recently adopted Statutes with the election of its Bureau. The new Bureau is composed of Lebanon, Spain, Slovenia, Mexico, China and Zambia (Rapporteur).

The IHP Intergovernmental Council also set the dates for its 24th ordinary Session, to take place from 19 to 22 May 2020. The Council will be preceded by the 2nd Science Policy Interface Colloquium on Water (SPIC Water), which will gather water ministers from around the world to discuss "Digital Water".

The Council further re-established the working group tasked to update the Internal Rules of Procedure of IHP's Council and Bureau and adjusted the timetable for the preparation of the strategic document for IHP's ninth phase (IHP-IX) that will guide its actions from 2022 to 2029. The adjustment will allow for additional and more exhaustive consultations with Member States.

The new Bureau Members will first convene from 17 to 19 March 2020 for a technical meeting, inter alia to take stock of the progress of IHP-IX.

For more complete news, please see online: <https://en.unesco.org/news/unescos-member-states-are-leveraging-cooperation-around-water-issues-through-intergovernmental>. (Source: UNESCO)

UNESCO's Intergovernmental Hydrological Programme showcases solutions to drought and water scarcity around the world



The side event "Droughts in the Anthropocene" at COP-25, Madrid, Spain.

The side event "Droughts in the Anthropocene" was held on 18 November 2019 in UNESCO Headquarters, Paris, France, during

UNESCO's 40th General Conference, to launch a publication and digital display of case studies on the impacts of drought. Speakers at the side event, organized by IHP in collaboration with partners, included representatives of the IHP Secretariat, the Government of Flanders to UNESCO, and experts from Sudan, Brazil, UK and Norway.

The case studies, developed by IHP and GRID-Arendal, were presented through a series of videos (available [here](#)) highlighting solutions provided by the collaboration between scientists and local communities, and the significant work of IHP in bridging science with society and policy makers to better address the impact of droughts worldwide.

The event provided an opportunity for the formal launch of the new publication "Droughts in the Anthropocene" co-published by UNESCO and GRID-Arendal (available in English/French and English/Spanish) and the web-based, interactive drought-monitoring platform developed by the University of Southampton in coordination with UNESCO.

Case studies were also presented during a side event organized by UNESCO on 11 December 2019 at UNFCCC COP-25 in Madrid, Spain, as well as the International Colloquium on Drought, Low flows and Water Scarcity, held on 11-13 December 2019 in UNESCO Headquarters, Paris, France.



Demonstration of the web-based drought-monitoring platform, Paris, France. Credit: L. Gagnier

Source-to-Sea approach explored at COP-25 side event organized by UNESCO

Water flows from Sources in the highest mountains to the deepest oceans through river basins to the Seas that span the earth system from top to bottom. Starting from highest mountains to the depths of the seas, all people depend directly or indirectly on the multitude of ecosystem services this water provides.

The Science Policy panel, organized by UNESCO during the COP-25 in Madrid, Spain, emphasized the importance of scientific cooperation, and connecting scientific research,

policy development and action, and developed a set of recommendations to enhance interface and interconnections among different components of the Source-to-Sea flow pathway.

IHP provides the knowledge base to develop a comprehensive scientific understanding of the Source-to-Sea phenomena incorporating the cryosphere, the terrestrial hydrological water cycle, water quality, sediment and erosion processes and deposition in littoral zones, deltas and coasts.

UNESCO promoting peace and water security in transboundary basins

Since 2017, UNESCO has been working with the Lake Chad Basin Commission (LCBC) to implement the BIOPALT project (BIosphere and Heritage of Lake Chad), aimed at promoting a multidisciplinary approach to sustainably managing and protecting the natural resources, culture and livelihoods of the Lake Chad and its people. The project focuses on five Lake Chad Basin countries: Cameroon, Central Africa Republic, Chad, Niger, and Nigeria.

Under the framework of BIOPALT, IHP developed an improved Flood and Drought Monitoring System for Lake Chad Basin Countries, based on the continental African Flood and Drought Monitor. The system provides historic surface water conditions and associated flood and drought indices at 5km and daily resolution for 1979-2016 using a combination of existing datasets used in the operational AFDM and newly available datasets, such as for Multi-Source Weighted-Ensemble Precipitation.

IHP's work in the Lake Chad Basin also included activities to promote peaceful management of water resources among Basin stakeholders. In September and October 2019, UNESCO organised regional, national and community level training of trainer workshops on water diplomacy in Abuja and Maiduguri, Nigeria and Maroua, Cameroon to build capacity and understanding of hydropolitics in transboundary waters, negotiation and communication skills, and international water law. The training targeted key national water managers, community leaders and representatives from the LCBC, among others. More than 100 persons have been trained to date. Similar workshops will continue take place in 2020 in the Central African Republic, Chad and Niger.



Participants in the Lake Chad Regional Training of Trainers Workshop discuss conflict management techniques, Abuja, Nigeria. Credit: R. Gift

WASWAC World Conference IV held in India



The 4th WASWAC World Conference was successfully held in New Delhi, India from November 5-9, 2019, with 263 participants from 13 countries. The theme of the conference was "Soil and Water Resources Management for Climate Smart Agriculture and Global Food and Livelihood Security". This conference was jointly organized by WASWAC, ISCO AND SCSi, and was hosted by the Soil Conservation Society of India, New Delhi, co-sponsored by the Indian Council of Agricultural Research (ICAR), DST-SERB, NABARD, ISSSR, NBA, NRAA, CSIR and ISRO and supported by IUSS and ESSC.

The conference received many greeting messages from both the host country government and many international organizations, including those from the Vice-President of India, the Minister of Agriculture & Farmers' Welfare, Rural Development and Panchayati Raj, the Minister for Jal Shakti, the MS Swaminathan Research Foundation, the Indian Department of Agricultural Research & Education, the Indian Council of Agricultural Research, the International Crops Research Institute for the Semi-Arid Tropics, the International Rice Research Institute, the International Water Management Institute, the International Union of Soil Sciences, the Soil and Water Conservation Society, the Indian Council of Agricultural Research and the Watershed Management Society of Iran.

At the opening ceremony, the President of the Soil Conservation Society of India, Dr. Suraj Bhan, as the host of the conference, and the President of WASWAC, Prof. Li Rui, gave

welcoming speeches. Then the Chief Guest, Dr. Trilochan Mohapatra, introduced the conference-related publications.

The panel discussion topic was "Soil and Water Conservation under changing climate scenarios: Issues and Challenges". Prof. Li Rui from the Institute of Soil and Water Conservation, Prof. Miodrag D. Zlatic, from Belgrade University, Dr. Samir A El-Swaify from ISCO, Sh. V.W. Ambekar, ex-director of Agriculture, Dr. Jose L. Rubio from the Universitat de Valencia, Dr. C.P. Reddy from MoRD, Gol, Dr. Suraj Bhan from SCSi, Prof. Mohammad H. Golabi from the University of Guam and representatives from NABARD and NBA participated in the panel discussion.

The five day conference generated fruitful discussions concerning the following topics: soil degradation assessment and remediation, water resource conservation and management, climate smart techniques for sustainable agriculture, land use planning and management for food and livelihood security, biodiversity conservation and strategic soil and water management, future strategies for resource conservation to mitigate climate change, next generation nutrient and water management in agriculture, socio-economic issues in resource management for livelihood security, policy interventions in soil and water management for global food security, bio-industrial approaches to watersheds for food and livelihood security, geospatial techniques and simulation modelling for soil and water management, and new paradigms in soil health and nutrient management. (Source: WASWAC)

The Second International Conference on All Material Fluxes in River Eco-Systems held at Peking University, China



The Second International Conference on All Material Fluxes in River Eco-Systems was held at Peking University, China from October 11-13, 2019. The conference was sponsored by the Key Laboratory of Water and Sediment Sciences at Peking University, the State Key Laboratory of Hydrosience and Engineering at Tsinghua

University, the State Environmental Protection Key Laboratory of All Materials Flux in Rivers, the State Key Laboratory of Plateau Ecology and Agriculture, Qinghai University, and the National Natural Science Foundation of China. Professor Jinren Ni from Peking University and Professor Guangqian Wang from Tsinghua University were the chairmen of the conference. More than 230 experts, scholars, and graduate students from more than 10 countries attended the conference. This conference was aimed at promoting the exchange of innovative ideas and the latest progress in the study of various substances (including water, sediment, nutrients, trace substances, aquatic organisms and greenhouse gases, etc.) in river ecosystems and their relationships, and explored the key scientific issues and development trends associated with river material fluxes and river health maintenance.

The opening ceremony was co-chaired by Professor Gregory Korshin from the University of Washington and Professor Xudong Fu from Tsinghua University. Professor Jinren Ni gave a keynote report entitled "An Introduction of All Material Fluxes in Large River Eco-Systems", Professor Ni elaborated the concept system, method system, technical system and management system related to "all matter fluxes in rivers", introduced the latest progress in the field of research on all matter fluxes in rivers, and looked forward to the prospect of comprehensive management of river basin based on all matter fluxes in rivers. Professor Jean-Philippe Croue of Curtin University in Australia introduced the structural properties and environmental effects of colloid and soluble organics, and proposed a new method for separating single organics from the natural complex water environment, which provided a new idea for the study of the properties of natural organics in river system. Professor Jizhong Zhou from University of Oklahoma introduced the progress in research using genomics to study the migration and transformation of pollutants in groundwater environments and the function of microbial ecosystems. Professor Jamie Lead from the University of South Carolina described the environmental hazards of synthetic nanoparticles and their migration and transformation in river ecosystems.

The conference involved five parallel sessions, with more than 130 high-level academic reports, including invited lectures by more than 40 distinguished experts and scholars from home and abroad. The participants promoted in-depth discussions and exchanges related to frontier scientific issues concerning changes in water and sediment fluxes, the evolution of river landscapes, and biogeochemical transformation of organic matter, pollutants and nutrients. The participants

also discussed trace substances in rivers and their environmental impact, the mechanism of interaction between substances in river systems, greenhouse gases and global climate change, the method systems of river health and risk assessment, the influence of natural and human activities on river fluxes, monitoring methods for all material fluxes in rivers, and data acquisition and mining.

The closing ceremony of the conference was chaired by Professor Alistair Borthwick from the University of Edinburgh and Professor William Johnson from the University of Utah. Professor James Tiedje from Michigan State University, Professor Gary Parker from the University of Illinois, Professor Gordon Huang from the University of Regina, Professor Yuan Zhiguo from the University of Queensland, Professor Satoshi Okabe from Hokkaido University, Professor Marc Benedetti from the Institut De Physique Du Globe De Paris presented excellent keynote conference reports.

The conference was notable for its outstanding papers and reports and the atmosphere of free discussion, which provided a platform for experts and scholars to exchange academic ideas and promoted interdisciplinary research and international cooperation in the field of all material fluxes in rivers.

Prof. Cheng Liu, a member of the ISI Advisory Group, was invited to make a keynote presentation at the conference.

Danube sediment data analysis published



Curve of the Danube River. Credit: Getty Images

The EU Interreg Danube Transnational Programme has published its data analysis for the future sediment management plan for the river: www.interreg-danube.eu/uploads/media/approved_project_output/0001/37/96aa5f0389e23a912c019a07ffa96a21d63348de.pdf. The programme investigates how to tackle adverse changes in the sediment load caused by riverbed straightening and hydropower dams and dykes, which contribute to flood risks and reduces navigation possibilities and hydropower production. It also leads to the loss of

biodiversity within the Danube Basin.

For the analysis, the project team collected and analysed sediment transport data along the river from the Black Forest in Germany to the Black Sea.

The collected data included information on morphological changes, the longitudinal profile, dredging, sediment variations, and water levels. These data were referenced against historical data to validate the changes.

Sediment dredging along the Danube River has been performed mainly for water management, such as river training works, navigation and flood protection, construction of hydropower plants, and for commercial purposes, such as the sale of gravel and sand for construction.

Dredging data were considered important. "Overdredging for commercial purposes has often caused riverbed degradation leading to a fall in the surface and ground water levels in certain stretches of the Danube River. Sediment feeding has been performed downstream of the hydropower plants in order to reduce the impact of riverbed degradation, only in several stretches of the Danube in Germany and Austria," it is stated in the report.

"The most complete data were collected for the period between 1991–2016. Some of the partner countries provided fairly detailed data on dredging, such as Germany, Austria, Slovakia, [and] Hungary, including the annual volume, locality, and purpose of dredging with smaller or no data gaps. By contrast, some countries provided only the total volume of sediments dredged in longer river stretches in selected years," the report authors stated.

One of the main conclusions was therefore that a unified approach to collecting data was needed to simplify future monitoring.

A manual on morphological monitoring based on data collection in this report, more detailed analysis, and available scientific knowledge are available in the report titled 'Long-term morphological development of the Danube in relation to the sediment balance'.

(Source: <https://dredgingandports.com/>)

Soil erosion must be stopped 'to save our future', says UN agriculture agency

Although soils are essential for human well-being and the sustainability of life on the planet, they are threatened on all continents by natural erosion, the Food and Agriculture Organization (FAO) said on World Soil Day, calling for their protection.

Healthy soils are the basis for healthy habitats for all living beings. They provide food, clean water, raw materials and various ecosystem services.

But salinity, acidification and loss of biodiversity are just some of the threats that soils are currently facing.

This year's World Soil Day commemoration focuses on reversing soil erosion for our future.

"We are celebrating a treasure beneath our feet which hosts a quarter of the planet's biodiversity and provides about 95 per cent of our food", said Eduardo Mansur, FAO's Director of the Land and Water Division.

Unsustainable agriculture practices and other improper land use changes, such as illegal deforestation, can accelerate erosion up to a thousand times, according to FAO.

Soil erosion affects soil health and productivity by removing the highly fertile topsoil and exposing the remaining soil.

It decreases agricultural productivity, degrades ecosystem functions and amplifies hydrogeological risk, such as landslides or floods.

"Soil erosion can also cause significant losses in biodiversity, damage to urban and rural infrastructure and, in severe cases, lead to displacement of human populations", explained Mr. Mansur.

FAO spelled out that by 2050, it may reduce up to 10 per cent of crop yields, which is equivalent to removing millions of hectares of land from crop production.

"We must stop soil erosion to save our future", stressed Mr. Mansur. "It takes up to 1,000 years to form one centimeter of top soil, but this one centimeter can be lost with just one heavy rainfall if soil cover is not protected".

To prevent and minimize soil erosion, farmers and other land users can adopt sustainable soil management practices under an enabling environment.

Underscoring that FAO is ready to support them, he urged everyone to take action.

"Fighting soil erosion must be everyone's fight", he concluded. "Join our effort. Stop soil erosion and save our future."

World Soil Day is held annually on 5 December to focus attention on the importance of healthy soil and to advocate for the sustainable management of soil resources. (Source: UN, <https://news.un.org/en/>)

China requires further improvement of sedimentation in the Yellow River

BEIJING Sept. 23 (Xinhua) - China's Ministry of Water Resources called for further improvement of sedimentation in the Yellow River to safeguard the long-term stability of the river.

The ministry called for prioritizing water conservation, improving the allocation of water resources and stepping up efforts to protect instream flows.

In terms of ecological protection and high-quality development of the Yellow River basin, the ministry underscored that more efforts should be made to protect water resources.

The ministry demands that officials protect the ecological environment of key rivers and lakes, gradually restore the damaged water ecosystems and improve the system of lake chiefs and river chiefs so as to sustainably improve the ecosystems of rivers and lakes.

Authorities should insist on water and soil conservation, strictly control man-made soil erosion and further reduce sediment deposition in the lower reaches of the Yellow River, said the ministry.

The ministry also called for systematic protection of cultural heritage along the Yellow River and improvement of the monitoring system of the water conservation sector.

Provinces and cities take aim at illegal sand mining along the Yangtze River

Oct. 11, 2019 (China Daily) - Police in 10 provinces and cities along the Yangtze River have cracked down on 90 groups involved in illegal sand mining during the past nine months, the Ministry of Public Security said on Thursday. They have uncovered 1,667 criminal cases related to illegal mining and seized over 1.79 billion yuan (\$251 million) related to sand mining, 305 sand mining vessels and 2.88 million cubic meters of sand.

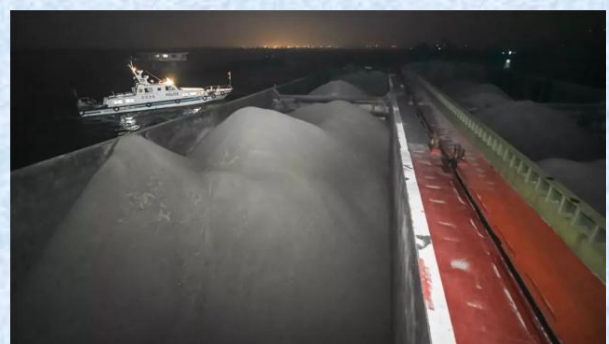
On Jan 11 2019, the ministry launched a one-year campaign cracking down on illegal sand mining and deployed public security forces in the cities of Shanghai and Chongqing, as well as in Jiangsu, Anhui, Jiangxi, Hubei, Hunan, Sichuan, Guizhou and Yunnan provinces. Due to the huge profits realized from the critical building material, sand mining has become a key money maker for organized criminals.

Tang Wenfa, police chief of Yueyang, Hunan province, said such illegal activities could seriously disrupt public security. "Illegal sand mining vessels were mainly active at night to

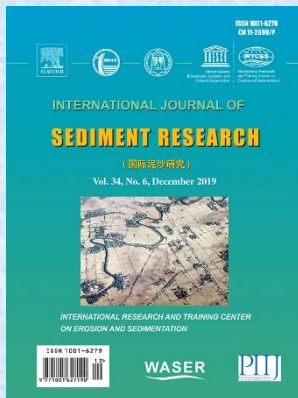
avoid police, but they caused multiple boat accidents in the waterway," Tang said. "The large-scale sand mining vessels can drill to a depth of 20 meters, which could alter a river's course and endanger protection works on both banks, causing the collapse of dams."

"Some local officials may even get involved in illegal sand mining, tempted by huge profits from criminals under "protective umbrellas", Tang said. Yueyang is investigating over 100 tip offs in this regard, and six officials have been detained, he added.

Huang Ruixue, political commissar of the Criminal Investigation Bureau of the ministry, said that the police will rely on existing institutional mechanisms for fighting organized crime. Cooperation among provinces and departments has achieved results. Police and water resources departments in Hubei, harbor supervision departments and the Changjiang River Administration of Navigational Affairs shut down 39 illegal mining areas and dismantled 536 docks. A group consisting of 50 people from Hubei, Hunan and Chongqing was also smashed by the joint law enforcement team, Huang said. (Source: China Daily)



PUBLICATIONS



Papers Published in the International Journal of Sediment Research Volume 34, No. 6, 2019

Pages 509-516 (Dec. 2019)

Bedload transport from analytical and turbulence phenomenological perspectives
Subhasish Dey, Sk Zeeshan Ali, Ellora Padhi
Pages 509-530

From fluvial dynamics to eco-fluvial dynamics
Guojian He, Hongwei Fang, Jianyu Wang, Tao Zhang
Pages 531-536

Modeling the impact of dam removal on channel evolution and sediment delivery in a multiple dam setting
R.E. Poepl, T. Coulthard, S.D. Keesstra, M. Keiler
Pages 537-549

Turbulent mechanisms in open channel sediment-laden flows
Hai Huang, Hongwu Zhang, Deyu Zhong, Yinglong J. Zhang
Pages 550-563

Laboratory experiments evaluating sedimentation and mound formation of obliquely discharged sand particles in stagnant water
Masoud Manzouri, Amir Hossein Azimi
Pages 564-576

Application of Bayesian model and discriminant function analysis to the estimation of sediment source contributions
Pengfei Du, Donghao Huang, Duihu Ning, Yuehong Chen, ... Jingjing Xu
Pages 577-590

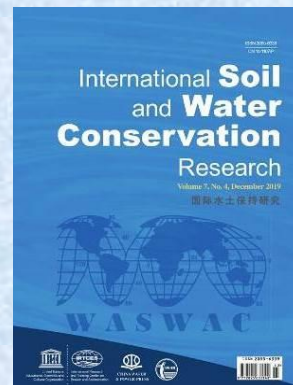
Small river basin and estuarine sediment fluxes: The magnitude necessary for coastal dispersion and siltation effects on a coral reef
Paula Sagilião Isacksson, Eduardo Guilherme Gentil de Farias, Francisco José Dias, Roberto Nascimento de Farias, ... Mauricio Mussi Molisani
Pages 591-599

Comparing carbon accumulation in restored and natural wetland soils of coastal Louisiana
Glenn M. Suir, Charles E. Sasser, Ronald D. DeLaune, Elizabeth O. Murray
Pages 600-607

The use of woods-run chips in filter socks to control

erosion and sedimentation during petroleum development in the Appalachian Basin
Shawn T. Grushecky, Louis M. McDonald, Lawrence Osborn
Pages 608-615

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. 7, No.4, 2019)

International Soil and Water Conservation Research
Volume 7, Issue 3
Pages 317-394 (Dec. 2019)

Soil genetic erosion: New conceptual developments in soil security
Carmelo Dazzi, Giuseppe Lo Papa
Pages 317-324

Improving cover and management factor (C-factor) estimation using remote sensing approaches for tropical regions
André Almagro, Thais Caregnatto Thomé, Carina Barbosa Colman, Rodrigo Bahia Pereira, ... Paulo Tarso Sanches Oliveira
Pages 325-334

Efficiency of wheat straw mulching in reducing soil and water losses from three typical soils of the Loess Plateau, China
Abbas E. Rahma, David N. Warrington, Tingwu Lei
Pages 335-345

Using Ecosystem Service Modeler (ESM) for Ecological Quality, rarity and Risk Assessment of the wild goat habitat, in the Haftad-Gholleh protected area
Amir Ansari, Mohammad H. Golabi
Pages 346-353

Determinants for adoption of physical soil and water conservation measures by smallholder farmers in Ethiopia
Million Sileshi, Reuben Kadigi, Khamaldin Mutabazi, Stefan Sieber
Pages 354-361
Download PDFArticle preview

Drought and conflicts at the local level: Establishing a water sharing mechanism for the summer-autumn rice production in Central Vietnam
Chuong Van Huynh, Catharien Terwisscha van Scheltinga, Ty Huu Pham, Non Quoc Duong, ... Jos Timmerman

Pages 362-375

Farmers' decision to adopt watershed management practices in Gibe basin, southwest Ethiopia
Fekadu Mengistu, Engdawork Assefa
Pages 376-387

Combined effect of micro silica with clay, and gypsum as mulches on shear strength and wind erosion rate of sands
Fateme Naghizade Asl, Hamid Reza Asgari, Hojat Emami,

Mohammad Jafari
Pages 388-394

Free full papers and open access are available at
ScienceDirect :

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

COMING EVENTS

CoastLab 2020 (China, May 25-29, 2020)

Date: May 25-29, 2020

Venue: Zhoushan, China

Hosts: Zhejiang University & Dalian University of Technology, co-organized by Sichuan University & Zhejiang Ocean University

Summary: On behalf of the CoastLab2020 Organizing Committees, it is our great pleasure to invite you to participate in the 8th International Conference of Physical Modeling in Coastal Science and Engineering (CoastLab2020) during the 25th -29th of May, 2020 in Zhoushan, China. CoastLab2020 is organized under the auspices of the International Association of Hydro-Environment Engineering and Research (IAHR) and will be jointly hosted by Zhejiang University, Dalian University of Technology, Sichuan University and Zhejiang Ocean University. CoastLab2020 will build on the successes of previous conferences held in Porto (2006), Bari (2008), Barcelona (2010), Ghent (2012), Varna (2014), Ottawa (2016) and Santander (2018). It will provide a stimulating and enriching forum to discuss the latest developments in physical modeling applied to coastal engineering and in new trends in coastal sciences. We are looking forward to collaborating with the Coastal and Maritime Hydraulics Committee of IAHR to host a successful CoastLab2020 in Zhoushan. (Prof. Pengzhi Lin, Prof. Zhiguo He, and Prof. Dezhi Ning)

URL: <http://www.coastlab2020.com/>

Conference Email: coastlab2020@zju.edu.cn

International Symposium on River sediment quality and quantity (Poland, June 1-5, 2020)

Date: June 1-5, 2020

Venue: Bydgoszcz, Poland

Summary: 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

The Symposium takes place in Bydgoszcz, Poland in June 1-5, 2020. Subjects of the Conference:

- Sediment quantity – cascades, budgets, yields
- Sediment impacts on river channel hydromorphology and management
- 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
- Field excursion on Vistula river - ship and by bus
- 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 2020 ICCE Symposium will be held at Bydgoszcz in Poland, at the Kazimierz Wielki University.

URL: <https://icce2020.ukw.edu.pl/jednostka/icce2020>

Contacts:

Michał Habel

Marta Brzezińska

Kazimierz Wielki University

Institute of Geography

Department of Revitalization of Inland Waterways

ul. Pl. Kościeleckich 8

85-033 Bydgoszcz

e-mail: icce2020@ukw.edu.pl

River Flow 2020 (The Netherlands, July 7-10, 2020)

Date: July 7-10, 2020

Venue: Delft, Netherlands

Summary: The 10th Conference on Fluvial Hydraulics under the auspices of IAHR, River Flow 2020, will be held in Delft, Netherlands, from 7 to 10 July 2020, (with masterclasses on the 6th of July). The conference themes are: rivers in urbanised areas; climate change and extreme events; river functions under pressure; nature based solutions; the healthy river; river resources: food, energy, water; the digital river; river fundamentals.

Deadline for abstract submission: 15 August 2019.

URL: <http://www.riverflow2020.nl>

World's Large Rivers Conference 2020 (Russia, August 3-7, 2020)

Date: August 3-7, 2020

Venue: Moscow, Russia

Summary: This WASER- / ISI-co-sponsored conference aims to provide a global forum for a wide-ranging discussion of key issues related to research on large rivers and to their effective and sustainable management, involving both scientists and decision makers. The conference will be organised by MSU - Lomonosov Moscow State University, Russia, and BOKU - University of Natural Resources and Life Sciences, Vienna, Austria. We kindly ask all interested authors to submit their work within the topics of

- Hydrology, Hydraulics & Hydroclimatic Impacts
- Sediment Transport & River Morphology
- River Pollution, Ecology & Restoration
- Integrated River Management

Special focus will be given this time to **Climate Change** and its impact - not only in general, but also specifically related to **Russian and Arctic Rivers**.

Supported by: WASER World Association for Sedimentation and Erosion Research; UNESCO United Nations Educational, Scientific and Cultural Organization; IAHR International Association of Hydro-Environment Engineering and Research; IAHS International Association of Hydrological Sciences; IAG International Association of Geomorphologists

All WASER- and ISI-members can benefit from a reduction of conference fees of 10%.

More information:

URL: <http://worldslargerivers.boku.ac.at/wlr/>

8th International Conference on Flood Management (USA, Aug. 17-19, 2020)

Date: August 17 – 19, 2020

Venue: Iowa City, Iowa, USA

Hosted by: The University of Iowa, Iowa Flood Center, IIHR

Summary: The 8th International Conference on Flood Management (ICFM8) offers a platform to discuss a range of flood related issues and stimulate progress in the management of flood risk. The 8th International Conference on Flood Management (ICFM8) seeks to further advance global research, practice and policy in flood management. With an emphasis on 'resilience', the theme for ICFM8 marks the further progress of integrated approaches to flood management which were first embraced as the International Symposia on Flood Defence (Kassel 2000, Beijing 2002, Nijmegen 2005 and Toronto 2008), the precursor of the subsequent ICFM series (ICFM5 - Tokyo, 2011; ICFM6 - São Paulo 2014; ICFM7 - Leeds, 2017). ICFM8 will be held in Iowa City, Iowa, USA on August 17 - 19, 2020, and will be hosted by the Iowa Flood Center, a research group of the century old IIHR-Hydrosience & Engineering (IIHR) at The University of Iowa. The theme of ICFM8 is 'Lowering Risk by Increasing Resilience' and will focus on building resilience into current and future flood management strategies and approaches as envisioned by the United Nations programmatic documents Sustainable Development Goals (SDGs) and the Sendai agreement on Disaster Risk Reduction (DRR) adopted in 2015. The conference is an integral part of the week-long centennial celebrations at IIHR.

URL: <https://icfm2020.org/>

Contact: Marian Muste (marian-muste@uiowa.edu)

ISI – Training Workshop on 'River Basin Sediment Monitoring and Management' (Koblenz, German, September 7-11, 2020)

Date: September 7 – 11, 2020

Venue: Federal Institute of Hydrology, Koblenz, Germany

Organizer: International Centre for Water Resources and Global Change under the auspices of UNESCO, German Federal Institute of Hydrology

Co-sponsors: International Sediment Initiative (ISI) of UNESCO IHP, International Research and Training Center on Erosion and Sediment Research (IRTCES).

Summary: The workshop on River Basin Sediment Monitoring and Management focuses on training and capacity building with a particular attention to:

- i) monitoring sediment dynamics in relation to (planned) river management or reservoir measures,
- ii) evaluation of monitoring results in terms of impact analysis and management and
- iii) communication and outreach of expert knowledge on sediment dynamics to support sustainable sediment management solutions, which highlight the need for integrated river basin management plans.

Major questions of the WS will be: What are main technical issues in sediment monitoring programs and how to cope with them? How simple/complex do we need to measure (e.g. simple flux measure to complex sediment budget) to provide empirical evidences for the specific management solution?

The workshop aims to provide knowledge on sediment measurement and monitoring, how to transfer measurement and monitoring results to management solution, how to improve current sediment management strategies to find sustainable solution and how to evolve from local river

management to integrated landscape management. Although we will focus on inland waters, we also want to highlight possible impacts on downstream areas, including estuaries and coastal zones.

After a general introduction to the topic (1st day), the participants will conduct hands-on workshops on monitoring techniques and data analysis (2nd and 3rd day). During a field trip at the River Rhine, the participants will be introduced to various sensors and techniques for measuring suspended sediment characteristics and loads. On subsequent days the field data will be analyzed by the workshop participants. Their results will be presented in a best-practice guide on suspended sediment monitoring (4th day). Additionally, we offer an excursus about data management and data sharing principles in collaboration with the ISI database as well as with the GEMS/Water Data Centre for Water Quality (gemstat.org) (5th day).

Organization & Contact:

Thomas Hoffmann (Thomas.Hoffmann@bafg.de) and Stephan Dietrich (Dietrich@bafg.de)

14th International Conference on Hydrosience & Engineering (Turkey, September 22-25, 2020)

Date: September 22-25, 2020

Venue: Çesme, Turkey

Summary: 14th of the International Conference on Hydrosience & Engineering, ICHE 2020 will be held in Çesme, Turkey on September 22-25, 2020. The International Conference on Hydrosience & Engineering began in Washington DC in 1993, and followed by Beijing hosted ICHE in 1995, Cottbus (1998), Seoul (2000), Warsaw (2002), Brisbane (2004), Philadelphia (2006), Nagoya (2008), Chennai (2010), Orlando (2012), Hamburg (2014) Tainan (2016) and Chongqing (2018). These conferences provided a common ground researchers and engineers to report and discuss the latest scientific advancements and practitioner's solutions in hydrosience and engineering. ICHE 2020 conference aims to bring together researchers and practicing engineers to share the latest scientific and technological advancements in hydrosience and engineering, and will provide networking opportunities for future activities. Participants will be able to hear experts in the field discuss the latest achievements in issues relevant to Hydro-Engineering for Sustainable Development.

Conference Themes

- Coastal and Maritime Hydraulics
- Dam Hydraulics and Safety
- Computational Hydraulics and Turbulent flows
- Water Resources and Climate Change
- Fluvial Hydraulics and Waterway Navigation
- Water Quality and Ecohydraulics
- Watershed Hydrology and Management
- Sediment Transport and Reservoir Sedimentation
- Groundwater Flow and Contaminant Transport
- Hydropower and Sustainable Energy
- Urban Flooding and Drainage
- Advances in Laboratory Measurements and Instrumentation
- Field Measurements and Data Collection

Key Dates

- Abstract Submission: Sep. 1 – Nov. 15, 2019
- Full-Paper Submission: Feb. 1 – April 30, 2020
- Revised Full-Paper Submission: July 15, 2020
- Early Bird Registration: February 1 – July 15, 2020

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

International Conference “Water, Megacities and Global Change” (France, Dec. 1-4, 2020)

Date: Dec. 1-4, 2020

Venue: UNESCO Headquarters, 125 avenue de Suffren, 75007 Paris, France

Summary: Paris, New York, Beijing, Mumbai, Tokyo, Buenos Aires, Mexico, Lagos... all Megacities – urban centers which accommodate more than 10 million inhabitants - are facing “mega”-challenges related to providing water services for their inhabitants, while managing their environment. Climate change effects of intensifying magnitude and global challenges such as sea level rise, increasing temperatures or urbanization, threaten these cities. Now, there is a need for action to achieve resilient cities. A transversal and multidimensional solution is proposed, based on the collaboration among scientists who advance knowledge, operators (in both the public and private sectors) who innovate technically and socio-politically, and local politicians who can support new, fairer and more efficient models of water governance, in constant interaction with civil society. The Second International Conference on “Water, Megacities and Global Change” (EauMega 2020), will take place from 1 to 4 December 2020 at UNESCO Headquarters in Paris, to bring all these actors together, 5 years after its first edition, also known as EauMega 2015.

Conference

website: <https://en.unesco.org/events/eaumega2020>

Contact: Alexandros Makarigakis

Programme Specialist

Division of Water Sciences, UNESCO

Tel.: +33 (0) 1 45 68 08 06

eaumega2020@unesco.org

The 7th International Conference on Estuaries and Coasts (Shanghai, China, October 18-21, 2021)

Date: October 18-21, 2021 (Tentative)

Venue: East China Normal University, Shanghai, China

Organizers:

East China Normal University

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

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

Secretariat: East China Normal University

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). Six such conferences have now been held in Hangzhou and Guangzhou, China; Sendai, Japan; Hanoi, Vietnam; Muscat, Oman, and Caen, France in 2003, 2006, 2009, 2012, 2015 and 2018. 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 7th International Conference on Estuaries and Coasts (ICEC-2021) will be held in the East China Normal University,

Shanghai, China during October 18-21, 2021.

Overall Theme:

Anthropocene Coasts

Topics of the Conference (tentative):

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

URL: (to be provided)

Contacts: (to be provided)

15th International Symposium on River Sedimentation (Florence, Italy, September, 2022)

Date: September, 2022 (Three consecutive days at the end of August / beginning of September, 2022)

Venue: Florence, Italy

Organizer: University of Florence and University of Padua

Sponsors: International Research and Training Center on

Erosion and Sediment Research (IRTCES); World

Association for Erosion and Sediment Research (WASER)

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

Contacts:

Dr. Luca Solari

Department of Civil and Environmental Engineering, University of Florence

Via di S. Marta 3, 50139 Firenze, Italy

TEL: +39 3488605446

E-mail: luca.solari@unifi.it



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

ORGANISATION: UNESCO

Youssef Filali-Meknassi	UNESCO, Paris
Philippe Pypaert	UNESCO, Beijing
Anil Mishra	UNESCO, Paris

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

ISI GOVERNANCE

Advisory Group

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Thomas Hoffmann	Germany

ISI TECHNICAL SECRETARIAT

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

Secretary-General:

Hu, Chunhong China

Contact

Liu, Cheng China

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ISI Technical Secretariat

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

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Editor: Dr. Liu Cheng

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

Advisor: Prof. Des. E. Walling

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