

# INTERNATIONAL SEDIMENT INITIATIVE

# NEWSLETTER

Reporting ISI news to you quarterly

No. 35 Dec. 29, 2014

## IN THIS ISSUE

### News

- ✧ New Overview Statement for ISI 1
- ✧ ISI Governance 1
- ✧ UNESCO Launches Food, Energy, Environment and Water Network 1
- ✧ USACE expert Dr. Wen Huei Chang visits IRTCES 1
- ✧ Study: Nutrients, not sediment, is main problem (USA) 2
- ✧ [PIC] Wintry Hukou Waterfall (China) 3
- ✧ More News in ISI Website 3

### Conference Report

- ✧ 2nd World's Large Rivers Conference in Manaus, Brazil 4
- ✧ Review on the International Magdeburger Seminar on River Protection, held on 18-19 September 2014 5

### Publication

- ✧ Papers published in Issue 4 Volume 29, 2014, IJSR 6
- ✧ Contents of ISWCR (Vol. 2, No.3, 2014) 6
- ✧ Publications in ISI Information System 7

### Coming Events

- ✧ 13th International Symposium on River Sedimentation (Stuttgart, Germany, Sep. 19-22, 2016) 8
- ✧ 5th International Conference on Estuaries and Coasts (Oman, Nov. 2-4, 2015) 8
- ✧ International Conference on African Large River Basins Hydrology (Tunisia, Oct., 26-30th, 2015) 9
- ✧ 36th IAHR World Congress 2015 (the Netherlands, June 28-July 3, 2015) 9
- ✧ 8th International Conference on Remediation and Management of Contaminated Sediments (USA, Jan. 12-15, 2015) 10
- ✧ International Youth Forum of Soil and Water Conservation (China, Oct. 16-18, 2015) 10
- ✧ 5th International Conference on Water and Flood Management (Bangladesh, 6-8 March 2015) 10
- ✧ More Coming Events in ISI Website 11

## UNESCO “国际泥沙计划” 简报

### 本期内容

#### 新闻

- ✧ 国际泥沙计划新的表述与目标 1
- ✧ 国际泥沙计划新的管理机制 1
- ✧ UNESCO 建立粮食、能源、环境与水网络 1
- ✧ 美国陆军工程师兵团专家张文辉博士访问国际泥沙中心 1
- ✧ 研究：主要问题是营养物而不是泥沙(美国) 2
- ✧ [图片] 黄河“冰瀑玉壶” 3
- ✧ ISI 网更多新闻 3

#### 会议报道

- ✧ 第二届世界大河学术讨论会在巴西玛瑙斯召开 4
- ✧ 国际河流保护马格德堡研讨会九月召开 5

#### 出版物

- ✧ 《国际泥沙研究》期刊 2014 年第 29 卷第 4 期论文目录 6
- ✧ 《国际水土保持研究》期刊 2014 年第 2 卷第 3 期论文目录 6
- ✧ ISI 信息系统更多出版物 7

#### 会议信息

- ✧ 第十三次河流泥沙国际学术讨论会(德国, 2016 年 9 月 19-22 日) 8
- ✧ 第五届河口海岸国际研讨会(阿曼, 2015 年 11 月 2-4 日) 8
- ✧ 非洲大河流域水文国际讨论会(突尼斯, 2015 年 10 月 26-30 日) 9
- ✧ 第三十六届 IAHR 大会(荷兰, 2015 年 6 月 28 日-7 月 3 日) 9
- ✧ 第八届污染泥沙修复及管理国际研讨会(美国, 2015 年 1 月 12-15 日) 10
- ✧ 水土保持国际青年论坛(中国, 2015 年 10 月 16-18 日) 10
- ✧ 第五届国际水与洪水管理大会(孟加拉, 2015 年 3 月 6-8 日) 10
- ✧ ISI 网更多会议信息 11

## NEWS

### New Overview Statement for ISI

ISI contributes to the 8th phase of the IHP (2014-2021) with the title "Water security: responses to local, regional and global challenges" **by addressing the wide-ranging social, economic and environmental impacts of erosion, sediment transport and sedimentation processes** with due consideration of gender perspectives. ISI addresses both sediment quantity and quality within the context of global change.

The objectives of ISI are to:

- Support the global agenda for sustainable integrated land and water resources management through sound sediment management;
- Link science with policy and management needs at the local, regional and global scale, as well as in transboundary settings;
- Promote the development of an improved understanding of sediment mobilization, transport and storage and sediment budgets at local, regional and global scales, to support effective sediment management;
- Strengthen the capacity for sediment management, through education, training and the promotion of cooperation among stakeholders;
- Communicate the importance of sediment management to decision makers and the public.

These objectives will be attained through the implementation of the following actions:

- Continue the development of a global repository for data, information and documentation on soil erosion, sediment transport and sediment-related issues to serve as the basis for a global assessment of erosion and sedimentation problems and their social, economic and environmental implications
- Update existing river basin case studies and initiate new studies to provide representative examples of sediment processes, problems and management in different physiographic and institutional settings
- Develop activities and joint programmes to promote the improved understanding of sediment processes and methods for their investigation and monitoring
- Support scientific exchange, education and capacity building for sustainable sediment management at all levels through the organisation with partners of conferences, training events and other capacity-building initiatives.
- Develop information materials, policy briefs and procedures relating to sediment problems and their management, for local and national authorities, river basin commissions, relevant technical agencies, local communities and other stakeholders
- Strengthen cooperation with other UNESCO programmes, Centres and Chairs, other UN organizations, regional networks, international institutions and professional and scientific associations

### ISI Governance

ISI's governing structure has been reorganized, in order to ensure the continued efficient coordination of its programme. ISI activities will be guided by an Advisory Group with the help of an Expert Group.

The **Advisory Group** shall establish ISI's strategic direction and objectives, lead and review its implementation, and identify and facilitate cooperation with partners and funding sources.

An **Expert Group** comprising academics and researchers on erosion and sedimentations representatives of UNESCO Centres and Chairs and other partner organizations, as well as other stakeholders.

The Expert Group shall provide expert knowledge and advice, networking and institutional support to implement ISI's activities.

### UNESCO Launches Food, Energy, Environment and Water Network

25 November 2014: The UN Educational, Scientific and Cultural Organization International Hydrological Programme (UNESCO-IHP)



and the Australian National University (ANU) established the Food, Energy, Environment and Water Network (FE<sup>2</sup>W), which aims to bridge silos across these sectors. The network stresses the importance of these sectors for human wellbeing and environmental health.

In its initial phase, the Network will focus on the: Colorado basin, US; Ganges-Brahmaputra-Meghna basin, South Asia; Murray-Darling basin, Australia; Nile basin, East Africa; and Volta Basin, West Africa.

The Network will bring together academia, the private and public sectors, and civil society to facilitate cross-sectoral dialogue, share information and address knowledge gaps to address challenges related to achieving water, energy and food security, enhancing livelihoods and sustaining the environment. The FE<sup>2</sup>W Network will also work with decision makers to help them understand systemic risk and manage shocks. [FE<sup>2</sup>W Website] [UNESCO Press Release]

### USACE expert Dr. Wen Huei Chang visits IRTCES

Dr. Wen Huei Chang, Senior Economist / Technical Team Lead of the Institute for Water Resources, U.S. Army Corps of Engineers, visited the International Research and Training Center on Erosion and Sedimentation (IRTCES) on December 12, 2014. IRTCES Deputy Directors Prof. Ning Duihu and Prof. Liu Guangquan welcomed him and held a meeting with him. Dr. Chang explained the purpose of the visit, and expressed the desire to strengthen collaboration between the International Center for Integrated Water Resources Management (ICIWaRM) and IRTCES, within the frame of the Memorandum of Understanding between the Ministry of Water Resources, PR China and the U.S. Army Corps of Engineers which is to be signed. Prof. Ning and Prof.

Liu introduced IRTCES and its activities, and discussed the potential for substantive cooperation between the two UNESCO Category II Centres with Dr Chang. IRTCES division chiefs Prof. Chen Jianguo, Prof. Liu Cheng and Prof. Liu Xiaoying also participated in the meeting.

Dr. Chang is currently serving as Enterprise technical team leader to direct programs and advise the senior Corps leadership on matters relating to policy development, planning, program analysis, research and development of decision-support methods and models, water resources planning and transportation analysis, and performance-based budgeting for the agency. He manages several nationally significant projects, including the Corps' Value to the Nation communications effort, which informs Americans of the many social, economic and environmental benefits of Corps' programs. The ICIWaRM was established by the U.S. Army Institute for Water Resources (IWR) in 2007 in collaboration with U.S. institutions and organizations sharing an interest in the advancement of the science and practice of integrated water resources management (IWRM) around the globe. It was formalized as a UNESCO Category II Water Centre in October 2009 with the signing of an agreement between the U.S. Government and UNESCO.



### Study: Nutrients, not sediment, is main problem (USA)

A highly anticipated report released Thursday, Nov. 13, suggests that the sediment trapped behind the Conowingo Dam's reservoir, which is reaching capacity, is not what people should be most concerned about.

Though sediment that scours over the Conowingo Dam — the last dam on the Susquehanna River before it reaches the top of the Chesapeake Bay — has negative repercussions on the Bay's health, the assessment says that a majority of the impact comes from nutrients associated with the sediment that originates upstream.

That said, the study found that dredging in Conowingo's nearly full reservoir wouldn't help with water quality as much as focusing on the nutrients that come from upstream on the Susquehanna.

"Sediment removal yielded minimal short-lived water quality improvements due to constant deposition of sediment and nutrients from the watershed," said Anna Compton, the study's manager for the U.S. Army Corps of Engineers.

A draft Lower Susquehanna River Watershed Assessment, which was started in 2011 and released by the U.S. Army Corps of Engineers and the Maryland Department of Environment, is out for public comment as of Thursday. A number of other state, federal and private partners had a hand in the report, including the Maryland

Department of Natural Resources, U.S. Geological Survey, Susquehanna River Basin Commission, Environmental Protection Agency and the Nature Conservancy.

Since the dam was built, it has been acting as a barrier for sediment getting into the Bay. But, the reservoir behind the dam is losing its capacity to store sediment, and during high water flow events and storms sediment is scoured over the dam.

The study recognizes this problem, that the dam and two others upstream from it are losing their long term sediment-trapping ability.

The sediment that flows over the Conowingo Dam, from the Susquehanna and into the Bay, mostly affects the northern main stem of the Upper Bay, said Bruce Michael, resource assessment service director with the Department of Natural Resources. But, that sediment "falls out fairly quickly," he said.

"It is nutrients associated with it (sediment) that have a longer term impact on us meeting our dissolved oxygen water quality standards," Michael said.

Another one of the study's findings is that more sediment is coming over the dams and into the Bay more often, even during low flow events.

Still, nutrients from runoff — sewage, farms and urban areas — upstream is a "bigger threat to water quality than sediment alone," said Army Corps of Engineers (Compton).

Compton said, "Nutrient pollution has a lingering effect that leads to algae blooms and dead zones" that pose the potential to suffocate aquatic life. She said problems in the northern main stem of the Bay are a result of nutrients coming from the Susquehanna River during storm events that produce high water flow.

The study estimates that between 2008 and 2011, 13 percent of the Susquehanna's sediment load into the Bay came from the reservoir behind the Conowingo. The remaining 87 percent came from the broader, six-state watershed, Compton said.

Another finding of the study was that managing the sediment through strategies like large-scale dredging, or rerouting the sediment somehow, "unto themselves, will not help in the long term," Compton said.

Compton said it would cost between \$48 million and \$267 million to dredge 3 million cubic yards of sediment a year, and that would "simply be keeping up with pollution."

Another dredging strategy the study identifies is to remove about 25 million tons of sediment, which would take the reservoir back to its 1996 status, and could cost anywhere from \$496 million to \$2.8 billion.

As an example, Compton noted Tropical Storm Lee in 2011, which forced 3 million tons of sediment into the Bay from the Susquehanna. Comparatively, she said 14.5 million tons of sediment came from the rest of the watershed.

Michael said that before the 2017 midpoint assessment of the Chesapeake Bay's water quality standards, an assessment of the full impact on the river's effect on the Bay's water quality and living resources should be produced, given what is shown through the study concerning sediment not being trapped by the Conowingo and two other upstream dams.

He said that over the next two years, an enhanced water quality and sediment assessment upstream and

downstream will be produced, for which the Exelon Corp. has agreed to foot the \$3.5 million bill.

Exelon, which operates the Conowingo, is going through a federal relicensing process, but that process was delayed until the impacts of sediment trapped behind the dam were known.

The Federal Energy Regulatory Commission recently granted Exelon a one-year extension to run the dam until the Lower Susquehanna River Watershed Assessment was released.

The Maryland Department of Environment has until the end of January to make a decision on Exelon's water quality certification.

A final report is anticipated for summer 2015. (Source: <http://www.stardem.com/>)

### [PIC] Wintry Hukou Waterfall (China)



Hukou Waterfall icicles, near Xi'an, on Dec 11.  
[Photo/xinhuanet.com]

The Hukou Waterfall on the Yellow River, near the city of Xi'an, Shaanxi province, which is the river's largest fall and China's second largest, turned into a winter wonderland after icing up during the cold spell, attracting many travelers who came to photograph the beautiful scenery, Xinhuanet.com has reported.



### More News in ISI Website

- Wintry Hukou Waterfall (China)
- USACE expert Dr. Wen Hwei Chang visits IRTCES)
- International Hydrology Prize – Call for nominations before 31st December (IAHS)
- Contents of ISWCR (Vol. 2, No.3, 2014)
- Check dams are causing Russia's Lake Elton to brighten
- Protect the world's deltas
- UNESCO Launches Food, Energy, Environment and Water Network
- China and Laos signed MOU in the field of water resources cooperation
- Corps of Engineers finalizes sediment management plan for Lower Snake River (USA)
- Soil stores more carbon than scientists thought
- Final environmental report approved for Devil's Gate Reservoir Sediment Removal Project (USA)
- Study: Nutrients, not sediment, is main problem (USA)
- Three Gorges project generates 800 billion kWh electricity
- Elwha River mouth grows as sediment creates new habitat, estuaries (USA)
- Erosion in Mekong Delta worsens
- Vacancy notice on consultancy for the design of the IHP Anniversary logo (UNESCO-IHP)
- The formation and development of desert dunes on Titan
- ITRC Publishes New Guidance Document on Contaminated Sediments Remediation
- Review on the International Magdeburger Seminar on River Protection, held on 18-19 September 2014
- [pdf] Post conference report - the 2nd World's Large Rivers Conference in Manaus, Brazil
- IAHR Vice President Marian Muste Visited IWHR, China

More .....

[\(http://www.irtces.org/isi/\)](http://www.irtces.org/isi/)

## CONFERENCE REPORT

### 2nd World's Large Rivers Conference in Manaus, Brazil

The 2nd "International Conference on the Status and Future of the World's Large Rivers", initiated by Prof. Helmut Habersack from the University of Natural Resources and Life Sciences, Vienna, Austria, and organized together with Prof. Naziano Filizola from the Universidade Federal do Amazonas, Manaus, Brazil, took place from 21st to 25th of July 2014 and gathered more than 200 scientists and practitioners from all over the world. Besides attractive scientific sessions, interesting technical tours and charming social events, the UNESCO-supported World's Large Rivers Initiative, which aims to further intensify research and cooperation on large rivers, has been further developed.

The pressures and impacts on the World's Large Rivers have increased greatly in recent years, as a consequence of their exploitation to meet human needs. Large rivers are particularly exposed to problems of multiple uses, often with conflicting aims. At the global scale, there is no overview assessment of the current status of the World's Large Rivers, the conflicting demands on such rivers, and likely future anthropogenic impacts, as well as the potential for restoration and the associated problems.

In 2011 the first International Conference on „The Status and Future of the World's Large Rivers“ in Vienna, Austria, provided 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.

This successful event was continued in 2014 in Manaus, Brazil at the fascinating Amazon River. More than 500 submitted abstracts covering all relevant topics and rivers (from the Amazon through the Congo and the Yellow River to the Siberian Rivers) have been submitted to the conference and more than 200 participants coming from 36 nations proved the importance of this meeting and contributed significantly to its success.

The technical sessions gave up-to-date insight into the latest scientific findings on the situation and problems of large rivers in the thematic fields of "Hydrology, Hydraulics and Water Quality", "Sediment Transport and Morphodynamics" as well as "Ecology and Restoration". Special focus was also given to recent developments and research at the Amazon River Basin and other South American rivers facing the same challenges. The multilingual character (English – Portuguese – Spanish) of these sessions attracted a large number of local scientists and gave the opportunity for deep-insight discussions. This "Amazonia-Session" was therefore started by a keynote lecture given by Prof. Naziano Filizola who presented recent research results of this largest river of the world.

In the evenings, a variety of social events was offered, allowing the conference attendees to make contact with other scientists and researchers. The Welcome Reception took place on Monday, 21st of July at the Tropical Manaus Hotel and provided a relaxed ambience in a beautiful tropical setting. The Conference Banquet at the end of the

meeting was also organized at the Tropical Manaus Hotel and offered local dishes as well as a folkloristic show.

On Friday, 25th of July, a large number of attendees took the chance to participate in one of the Technical Tours. The "Mixing of Waters"-Tour brought the participants by boat to one of the most fascinating natural spectacles in the world. At the "Meeting Point of Waters" the black Negro River joins the light brown Solimoes River (the Amazon) and both waters do not mix for several kilometers, creating a two-tone river. The second tour featured "The Anavilhanas" which is the biggest fresh water archipelago of river islands of the world positioned less than 100 kilometers from Manaus on the Negro River. More than 400 islands extending over 90 kilometers covered with native forest form a unique ecological system of extreme biodiversity in the Amazon.

Based on the Vienna Declaration, which has been adopted by the participants in 2011, the new UNESCO / IHP Initiative (WLRI - World's Large Rivers Initiative) has been established. In a Discussion Forum during the conference attended by the majority of conference attendees, the main issues of this upcoming Initiative have been debated.

The third World's Large Rivers Conference will be held in 2017. The venue will be announced in the beginning of 2015 according to the decision of an expert panel which will choose between the five submitted proposals.

We would be very happy to welcome you at this 3rd Conference!

More information can be found on <http://worldslargerivers.boku.ac.at>.



Opening Ceremony (f.l.t.r.): Habersack (Initiator and Scientific Committee), Filizola (Local Organizing Committee), De Mendes (Rector of UFAM), De Dapper (IAG), Guyot (IRD), Mair (ICPDR) (© WLR)



Group photo at the Conference Venue (© WLR)



Technical Tour Mixing of the Waters (© WLR)

### **Review on the International Magdeburger Seminar on River Protection, held on 18-19 September 2014**

Already for the third time the International Magdeburger Seminar on River Protection took place at the origin of the River Elbe in Špindlerův Mlýn, Czech Republic. The 16th edition of the traditional seminar, which was initiated in Magdeburg in 1988, focused on the state of the river Elbe and new challenges.

During the opening ceremony, the ICPER Sediment Management Concept was officially presented and made available to all participants by ICPER President Dr Helge Wendenburg. Due to the effort of an expert working group, this concept was released in time to have an impact on the second management cycle of the Water Framework Directive. It contains recommendations for good sediment management practice within the Elbe river basin for achieving supra regional objectives. It is available for downloading at the ICPER website.

At the seminar, more than 150 experts from the Czech and German parts of the Elbe basin discussed the state, quality and need for remediation of the Elbe. Meteorological extreme events have been a rising issue in recent years. Also results of several studies carried out under the scope of the ELSA project were highlighted, representing the work of the past years in which a solid basis for projects to follow was established. Examples are the optimization of the Mulde reservoir for keeping contaminated sediments from the Elbe, but also the remediation of parts of the Bilina tributary. Also further issues dealing with aquatic life and habitat as well as hydromorphology were part of the discussion.

The post program of the conference had three excursions to offer, one of them taking the participants to a very special place - the symbolic spring of the river Elbe within the giant mountains which was well-regarded by everybody.

Conference material, including presentations given, will be made available at [www.ikse-mkol.org](http://www.ikse-mkol.org).

The next International Magdeburger Seminar on River Protection was announced to be held in October 2016 in the city of Dresden, Germany. Main topics will be urban water and its management.

More information about the Elbe:

Projekt Schadstoffsanierung Elbesedimente  
[www.elsa-elbe.de](http://www.elsa-elbe.de)

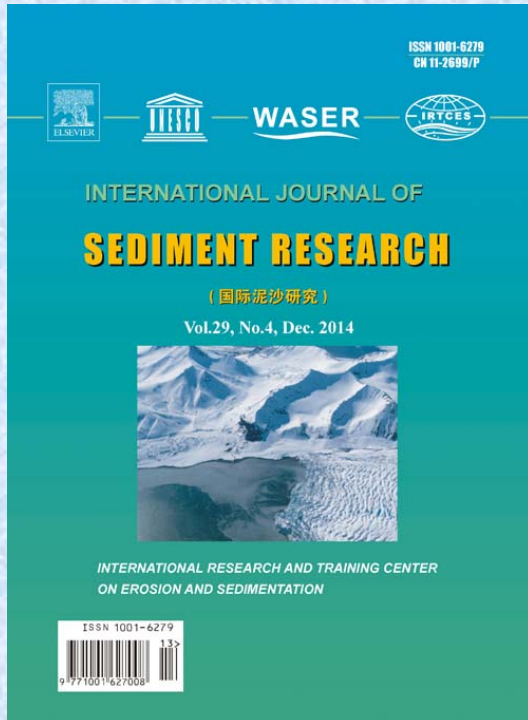
International Elbe Protection Commission [www.ikse-mkol.org](http://www.ikse-mkol.org)

German Elbe River Board [www.fgg-elbe.de](http://www.fgg-elbe.de)

(Source: SedNet, <http://www.sednet.org/>)

## PUBLICATION

### Papers Published in Issue 4 Volume 29, 2014, International Journal of Sediment Research



Volume 29, Number 4 Dec. 2014

#### Technical Papers

Modelling of meander migration in an incised channel  
Jianchun HUANG, Blair P. GREIMANN, and Timothy J. RANDLE 441–453

Rheological properties of dense natural cohesive sediments subject to shear loadings  
Wen-yu YANG, Guo-liang YU, Soon Keat TAN, and Hua-kun WANG 454–470

Biofilm effects on size gradation, drag coefficient and settling velocity of sediment particles  
Qian-qian SHANG, Hong-wei FANG, Hui-ming ZHAO, Guo-jian HE, and Zheng-hui CUI 471–480

Bedload transport of small rivers in Malaysia  
Zahra ZANGENEH SIRDARI, Aminuddin AB GHANI, and Zorkeflee Abu HASSAN 481–490

Effects of physical soil crusts on infiltration and splash erosion in three typical Chinese soils  
Chong-feng BU, Shu-fang WU, and Kai-bao YANG 491–500

#### Technical Notes

Study on changes in bed characteristics and friction factor in the presence of wash load in suspension  
N. K. Khullar and Jaspal Singh 501–508

Numerical prediction on the scour burial of cylinder object freely resting on the sandy seabed in the East China Sea using the DRAMBUJE model  
Chong-guang PANG, Li-qian LIU, and Kun LI 509–517

Experimental study of the velocity of density currents in convergent and divergent channels  
Hasan Torabi POUDEH, Samad EMAMGHOLIZADEH, and Manoocher Fathi-MOGHADAM 518–523

Cover Photo: Glacier transports sediment into the Arctic Ocean from Svalbard

### Contents of ISWCR (Vol. 2, No.3, 2014)



#### INTERNATIONAL SOIL AND WATER CONSERVATION RESEARCH

Volume 2 Number 3 September 2014

Upscaling the use of fallout radionuclides in soil erosion and sediment budget investigations: Addressing the challenge <i>D. E. Walling, P. Porto, Y. Zhang, and P. Du</i> .....	1
Land husbandry: an agro-ecological approach to land use and management—Part 1: Considerations of landscape conditions <i>Francis Shaxson, John Alder, Timothy Jackson, and Nigel Hunter</i> .....	22
Soil conservation and ecosystem services <i>Rattan Lal</i> .....	36
Evolving opportunities to integrate management of agricultural landscapes and ecosystem health: Sustainability by opportunity <i>J. Dumanjki, S. Joffe, E. Terry, and C. Pieri</i> .....	48
People's participation in watershed management programmes: Evaluation study of Vidarbha region of Maharashtra in India <i>G. L. Bagdi and R. S. Kurothe</i> .....	57
Preliminary study on mechanics-based rainfall kinetic energy <i>Yuan Jujin, Liang Yin, and Cao Longxi</i> .....	67
Effect of land use change on water discharge in Strepok watershed, Central Highland, Viet Nam <i>Nguyen Thi Ngoc Quyen, Nguyen Duy Liem, and Nguyen Kim Loi</i> .....	74
Cover photo: The small watershed of the Niulan Valley, Shangyou County, Juxi Province, China. Photographed by Ye Ka.	

Free download available for papers published in the ISWCR at: <http://www.waswac.org/report.asp>

**Publications in ISI Information System**

- Sustainable sediment management in reservoirs and regulated rivers: Experiences from five continents (Kondolf et al., 2014)
  - Towards Practical Guidance for Sustainable Sediment Management using the Sava River Basin as a Showcase
  - Moving Sediment Management Forward - The Four SedNet Messages (SedNet)
  - The World Water Development Report 4 available in Chinese language
- Download the World Water Development Report 2014, Water and Energy
  - Changes in runoff and sediment load from major Chinese rivers to the Pacific Ocean over the period 1955–2010 (Liu et al., 2013)
  - Suspended-Sediment Concentrations during Dam Decommissioning in the Elwha River, Washington (Curran et al., 2014)

More .....

(<http://www.irtces.org/isi/info.asp> )



## COMING EVENTS

### 13th International Symposium on River Sedimentation (Stuttgart, Germany, Sep. 19-22, 2016)

**Date:** September 19 – 22, 2016

**Venue:** Stuttgart, Germany

**Invitation:** On behalf of the entire Local Organizing Committee, I take great pleasure in inviting you to the 13th International Symposium on River Sedimentation (ISRS2016), which will be held from September 19th to 22nd 2016 in Stuttgart, Germany. Held triennially since 1980 under the auspices of the International Research & Training Center on Erosion and Sedimentation (IRTCES), the symposium series provides an important forum for scientists, engineers and policy-makers to share information, exchange ideas and collaborate in the field of erosion and sedimentation processes. Sediment dynamics in fluvial systems is of high ecological, economic and human-health-related significance worldwide. Appropriate management strategies are needed to limit maintenance costs as well as minimize potential hazards to the aquatic and adjacent environments. Human interventions, from nutrient / pollutant release to physical modifications by river regulation, have a large impact on sediment quantity and quality and thus on river morphology as well as ecological functioning. Truly understanding sediment dynamics requires multidisciplinary approaches. But how do we transfer new insights on complex interactions in fine sediments into sustainable management strategies? Can we win new partners by integrating biota? Can we do more with less? We hope to provide a stimulating symposium event with interesting talks and tours. (Silke Wieprecht, Chairperson of the Local Organizing Committee)

**Organizer:** University of Stuttgart

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

**Co-Sponsors:** United Nations Educational, Scientific and Cultural Organization (UNESCO), International Sediment Initiative (ISI), International Association for Hydro-Environment Engineering and Research (IAHR).....

**Secretariat:** Institute for Modelling Hydraulic and Environmental Systems, University of Stuttgart

**Permanent Secretariat:** IRTCES

**Theme and Topics:** The theme of the symposium is Sediment on the Move - Innovative Management Strategies in Riverine Systems: from old problems to new solutions  
The symposium topics include:

- Sediment Sources: Aspects of land erosion and sediment input, management strategies influencing sediment yield
- Sediment Transport in Rivers and Lakes: Transport processes, fundamental considerations, aspects of hydraulic and sediment transport, morphological processes
- Geomorphology Meets Ecology: Interaction between biota and sediments, from macro- to microscale to impact stability, erosion, transport, deposition and consolidation
- Sedimentation Processes: Reservoir and lake sedimentation, impacts on hydraulic structures (intakes, bridges, weirs, dams, etc.)
- Erosion Processes: Impacts on hydraulic structures (foundations), effects on groundwater, special effects (sorting, armoring, etc.)

- Morphology and Water Quality: Sediments as a source of contaminants, ecotoxicological and environmental aspects, mitigation measures, morphology and floodplains
- How to Address Sediment Dynamics Better: Data collection, measurement techniques, and requirements for models
- Innovative Management Strategies: Can we do more with less? Sediment removal, sediment trapping, hydraulic and ecological constructions
- Social, Economic and Political Aspects of Sediment Management

**Key Dates:**

- Abstract submission: September 1st, 2015
- Abstract notification: November 1st, 2015
- Paper submission: February 1st, 2016
- Paper notification: April 1st, 2016
- Early bird registration: May 31st, 2016
- Conference: Sept. 19th to 22nd, 2016

**URL:** <http://www.isrs2016.de/>

**Symposium Secretariat:**

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Fax: +49-711-685-64746

### 5th International Conference on Estuaries and Coasts (Oman, Nov. 2-4, 2015)

**Date:** November 2–4, 2015

**Venue:** Muscat, Sultanate of Oman

**Summary:** The Middle East region is going through an era of rapid coastal development which may be attributed to the strategic location of this region. Usually such developments bring economic growth and pose environmental concerns at the same time. This region has a diversity of sea grass beds, coral reefs, mangroves and salt marshes. Therefore, it is important to involve engineers and environmental professionals in the decision making process related to coastal and marine construction in order to minimize damage to the important ecosystems. ICEC 2015 will serve as a venue for engineers, researchers and administrators from industry, academia and public agencies to discuss and exchange information on issues important to sustainable coastal development.

**Organizer:** Sultan Qaboos University

**Sponsors:** International Research and Training Center on Erosion and Sedimentation (IRTCES)  
Sultan Qaboos University  
The Research Council, Oman  
Potential Sponsors from Public and Private Sectors in the Sultanate of Oman

**Co-Sponsors:** UNESCO, IAHR, IAHS, WASER, and other institutes and organizations to be invited

**Secretariat:** Sultan Qaboos University

**Permanent Secretariat:** IRTCES

**Conference Themes:**

- \* Coastal erosion: measurements, modeling, management
- \* Seawater quality: coastal and offshore pollution, measurements, modeling, solutions
- \* Tsunami: field observations, numerical modeling, mitigation
- \* Estuaries: water quality observations, modeling and effect on marine resources, mangrove rehabilitation
- \* Integrated Coastal Zone Management: approaches, measures
- \* Seawater intrusion: measurement, modeling, management
- \* Social, economical and political problems involving coasts and estuaries

**URL:**

online submissions:

<https://www.easychair.org/conferences/?conf=iccc2015>

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## International Conference on African Large River Basins Hydrology (Tunisia, Oct., 26-30th, 2015)

**Date:** 2015-10-26 to 2015-10-30

**Venue:** Hammamet, Tunisia

**Summary:** INCREASING POPULATION, increasing water demand, both in quantity and quality, increasing world average temperature, and other climate changes, modify the rainfall-runoff relationships from local to continental scales, and modify the water availability and potability.

ALL HUMAN ACTIVITIES have an important impact on runoff-rainfall processes and runoff regimes: agriculture activities, either pluvial or irrigated, dams and other hydraulic constructions, roads and urbanization, forest management, but also water and soil conservation practices, ecosystem protection, for instance.

FLOW REGULATION throughout the year helps mitigating the floods' impacts, deserving people with freshwater, agriculture, irrigation and leisure with regulated fluxes of water, maintaining ecosystems, producing energy.

DUE TO THEIR SIZE and their central role in countries' resources and activities, large river basins are key socio-economic objects.

BUT IN AFRICA, most of them are only poorly monitored and managed. Their water resources have been exploited since long, with poor interest on the sustainability of the water resource and water quality in the ecosystems, and most of all, their management does not take sufficiently into account the preservation of the natural equilibrium along the river stream, from the sources to the coastal areas.

THE REGULATION OF WATER, transferring water from one basin to another, storing sediments into dams, using surface water for irrigation purposes or for locally increase the groundwater level, all these activities have a major impact on downstream hydrology, down to the coast. The dramatic reduction of sediment fluxes to the sea have a direct impact on coastal instability and regression of the shore line, but also changes the equilibriums of coastal ecosystems.

Regulating flows reduces the wet areas and associated ecosystems. Increasing urban areas increases the risk of local flash floods, insufficiently drained by under-dimensioned infrastructures.

IN MANY COUNTRIES the hydrological networks do not record data since decades, while in many other the number of permanent gauging stations is critically low and do not cover the whole country. Rainfall and other climatological data are often difficult to access, preventing researchers from working with accurate data, even in their own countries. Some of the needed data can be fortunately replaced by international data bases, but most of them are most often constituted with only a small part of the existing measured data, and few recent data.

SEDIMENT FLUXES AND WATER QUALITY, eventually, are quite never monitored, except for a very few number of stations, part of international observatories.

IN THIS CONTEXT, it is urgent to re-develop large basins hydrology and observatories, to monitor their activity and better model how the changes of their hydrology have affected the environment, with final impacts on societies and socio-economic activities, and this conference is also a good opportunity to advertise the good experiences already working in Africa, like in several international river basin authorities.

THIS INTERNATIONAL CONFERENCE is placed under the labels of several international programs and institutions, which aim at a better knowledge and data sharing, the increase of the number of permanent observatories for large rivers basins, more international cooperation, specially within shared river basins, and improved cooperation between development agencies, national and international operators, and the research sector.

**Topics:** TOPICS OF THE CONFERENCE are issued from both FRIEND and IAHS main research themes:

1 – Global change, climatology and hydrological regimes (Mohamed Meddi-Algeria)

2 – Erosion, sediment transport and water quality (Gaston Lienou-Cameroon)

3 – Coastal eco-hydrology and Integrated land-sea management (Maria Snoussi-Morocco)

4 – Low flows and groundwater/surface water relationships, karstic hydrogeology (Bamory Kamagate-Côte d'Ivoire)

5 – Extreme events (Ennio Ferrari-Italy)

6 – Databases and observatories (Jean François Boyer-France)

7 – Hydrological modeling and water resources scenarios (Denis Hughes-South Africa)

8 – Relationships between man and the environment and impact on water resources and socio-economic activities (Raphael Tshimanga-RDCongo)

**Languages:** français and English

**Key Dates:**

March 31, 2015: Dead line for the reception of abstracts

May 15, 2015: Notification to authors for oral or poster communications

May 15, 2015: End of discount registration period

July, 2015: Third call, provisional program

July, 2015: Notification to granted authors

September, 2015: Consolidated program

October, 2015: Reception of full size papers

**Contacts:**

Send abstracts to: [hammamet\\_lrb\\_2015@yahoo.fr](mailto:hammamet_lrb_2015@yahoo.fr)

## 36th IAHR World Congress 2015 (the Netherlands, June 28-July 3, 2015)

**Date:** 2015-06-28 to 2015-07-03

**Venue:** Hague, the Netherlands

**Summary:** It's no wonder the global focus on water has increased rapidly. Two major problems face us: the lack of access to safe water and sanitation and increasing water-related disasters such as floods and droughts. Hydro-environment engineering and research is more important than ever. So don't miss the next IAHR World Congress at the World Forum in The Hague. From 28 June to 3 July 2015! The 36th IAHR World Congress will provide special emphasis on cross-cutting themes related to Deltas of the Future, looking at what happens upstream, linking hydro-environment research to engineering practice, and reaching out to the developing world. On behalf of the International Association for Hydro-Environment Engineering and Research (IAHR) the Local Organizing Committee cordially invites you to attend! The Netherlands may be a small country, its achievements in high safety level coastal protection works are well-known around the world. Being located in the delta of the Rhine-Meuse river system, the Netherlands has been dealing with issues related to flooding, land reclamation, and sustainable development for centuries already. The Netherlands is also preparing for dealing with future effects or population growth and climate change, by developing new concepts like the Room for the River and Building with Nature programmes. But there are more reasons why the Netherlands offers an ideal location for issues related to water governance and water conflict resolution. The Hague is located near the coast in the Western part of the Netherlands, with easy connections to Amsterdam Schiphol Airport, one of the busiest airports in Europe. In early summer, the weather is generally pleasant and warm. The historic city of The Hague is home to the Dutch Parliament and the International Court of Justice. Furthermore, the city of Delft, only 10 km away, holds a number of leading technological institutes focusing on education, research and capacity development in various fields of water and environment. During the week prior to the IAHR World Congress, several short courses and master classes will be given at Delft University of Technology, UNESCO-IHE and Deltares. The Hague is 20 km from the Port of Rotterdam, which is the busiest port in Europe and the world's fifth largest.

**Key Dates:**

September 30, 2014: Submission of abstracts  
 November 1, 2014: Notification of acceptance  
 February 1, 2015: Full paper submission  
 April 1, 2015: Final paper submission  
 June 21–June 27, 2015: Short courses / Master Classes, Delft  
 June 28–July 3, 2015: IAHR World Congress, The Hague

**URL:** <http://iahr2015.info/>

**Contacts:**

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 Tel: +31 15 2151 747  
 LinkedIn: <http://linkd.in/1gl3TnO>  
 Twitter: IAHR2015  
 Facebook: IAHR2015

**8th International Conference on Remediation and Management of Contaminated Sediments (USA, Jan. 12–15, 2015)**

**Date:** January 12–15, 2015

**Venue:** New Orleans, Louisiana USA

**Summary:** The Sediments Conference series is organized and presented by Battelle as a forum for sharing experience and progress toward the goal of remediating, restoring and maintaining the environmental and economic viability of rivers, lakes, bays, and harbors. Each Conference

addresses the challenges of combining basic research, new characterization and assessment methodologies, innovative engineering and good management practices to address the challenges of all stakeholders.

**Conference Themes:**

Conference sessions will be organized into five thematic tracks:

- Management and Policy
- Remedy Performance and Challenges
- Remediation Processes
- Characterization, Assessment, and Monitoring
- Sediment Processes and Modeling

**URL:** <http://www.battelle.org/sedimentscon>

**International Youth Forum of Soil and Water Conservation (China, Oct. 16-18, 2015)**

**Date:** October 16–18, 2015

**Venue:** Nanchang, China

**Summary:** You are cordially invited to the International Youth Forum on Soil and Water Conservation (IYFSWC). The conference will bring researchers, practitioners and policy makers a world-wide platform to share their research and discuss creative solutions related to soil and water conservation. IYFSWC is focusing to see the "old" soil and water conservation problems in the vision of the youth.

**Topics:**

Soil Erosion Processes and Modeling  
 Global Changes and Soil Conservation Practices  
 Land Degradation and Food Security  
 Watershed Management  
 Sustainable Development for Soil and Water  
 Soil and Water Conservation during Construction  
 New Technologies and Methods for Monitoring and Assessment Soil Erosion  
 Youth Engagement and the Education of Soil and Water Conservation

**Outstanding Youth Paper Award:**

The World Association of Soil and Water Conservation (WASWAC) will present WASWAC Outstanding Youth Paper Award at the conference. Ten outstanding papers by authors under the age of 40 will be selected from the submitted conference papers. The primary author of each paper will be awarded US\$1,000. The awarded paper will be published in WASWAC official journal—International Soil and Water Conservation Research, which is a peer-reviewed, quarterly published English journal.

**Important Dates:**

Sep. 1, 2014 Call for abstracts  
 Nov. 30, 2014 Abstract Due  
 Please submit your abstract to [IYFSWCpaper@nit.edu.cn](mailto:IYFSWCpaper@nit.edu.cn)  
 Mar. 31, 2015 Full Paper Due  
**URL:** <http://iyfswc.nit.edu.cn/>

**Contacts:**

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**5th International Conference on Water and Flood Management (Bangladesh, 6-8 March 2015)**

**Date:** 6-8 March 2015

**Venue:** Dhaka, Bangladesh

**Summary:** The purpose of the conference is to discuss the problems and issues and to advance knowledge on water

and flood management in order to promote environmentally sustainable development. A special goal for the 5th ICWFM would be to invite presentations of recent research outcomes that would enhance the knowledge base on physical processes and better management of deltas. Towards this, the conference aims to bring academicians, researchers, professionals, decision makers and policy makers together for exchange of views and experiences on water and flood management with special emphasis on delta management. It will focus on integrated approach to address issues like increasing water use efficiency, improving water resources system performance, reducing vulnerability and developing resilience against water related hazards, preserving environmental quality, protecting ecosystems, coping with climate variability, promoting participatory management, and ensuring equity and social justice in the decision making process. It seeks to bring forward research findings, case studies, success stories, recent advances in planning and design methodologies, and examples of improved water management policies, institutions, strategies and practices. A special plenary session for current research and actions on delta management will be held during the conference.

**Organizer:** The Institute of Water and Flood Management (IWFM) of BUET

**Sponsor:** Embassy of the Kingdom of Netherlands

**Co-Sponsors:** The Center for Environmental and Geographic Information Services (CEGIS) and Institute of Water Modelling

**Conference Main Themes:**

- \* Catchment Processes, Ecosystems and Quality of Environment
- \* Flood Management
- \* River Basin Management
- \* Urban Water Management
- \* Agricultural Water Management
- \* Coastal Zone Management
- \* Water Governance and National Development
- \* Water Information Management
- \* Climate Change Impacts on Water Management

**Correspondence:** All correspondence concerning the conference should be sent to E-mail:

[icwfm2015@gmail.com](mailto:icwfm2015@gmail.com)

**Conference Secretariat:**

ICWFM-2015

Institute of Water and Flood Management (IWFM)

BUET, Dhaka-1000, Bangladesh

Tel: 880-2-9665601

Fax: 880-2-8613046, 880-2-9665601 (Attention: ICWFM-2015)

**URL:** <http://www.buet.ac.bd/iwfm/icwfm2015.php>

- 8th International Conference on Remediation and Management of Contaminated Sediments (USA, Jan. 12–15, 2015)

More .....

[\(http://www.irtces.org/isi/\)](http://www.irtces.org/isi/)

**More Coming Events in ISI Website**

- 13th International Symposium on River Sedimentation (Stuttgart, Germany, Sep. 19-22, 2016)
- River Flow 2016 (US, July 11-14, 2016)
- 5th International Conference on Estuaries and Coasts (Oman, Nov. 2-4, 2015)
- International Youth Forum of Soil and Water Conservation (China, Oct. 16-18, 2015)
- 9th International SedNet Conference (Poland, 23-26 September 2015)
- 36th IAHR World Congress 2015 (the Netherlands, June 28-July 3, 2015)
- First International Conference on All Material Fluxes in River Eco-Systems (China, January 15 - 18, 2015)
- 5th International Conference on Water and Flood Management (Bangladesh, 6-8 March 2015)



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

**ORGANISATION: UNESCO**

Blanca Jimenez Cisneros	UNESCO, Paris
Hans Dencker Thulstrup	UNESCO, Beijing
Anil Mishra	UNESCO, Paris

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

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Hukou Waterfall on the Yellow River, near the city of Xi'an, China [Photo/Xinhua]