

# INTERNATIONAL SEDIMENT INITIATIVE

# NEWSLETTER

*Reporting ISI news to you quarterly*

No. 36 Mar. 27, 2015

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## NEWS

### ISI 'Programme Planning Workshop' will be organized in Beijing

UNESCO IHP, IRTCES and the UNESCO Beijing Office are organising an International Sediment Initiative (ISI) 'Programme Planning Workshop' in Beijing, China from 25-28 May 2015.

The workshop will bring together members of the ISI Advisory and Expert groups, representatives of relevant UNESCO Category II Centres and Chairs and other partner organizations, as well as other stakeholders, to discuss the action plan for the future ISI programme, set priorities, and explore opportunities for collaborative projects with partner agencies within the framework of the ISI objectives.

### ISI experts participate in the AMFR 2015

The First International Conference on All Material Fluxes in River Eco-Systems (AMFR 2015) was held from January 15-18, 2015 at Peking University, Beijing, China. The conference was a great success with 20 excellent keynote lectures and 45 other oral presentations, attracting around 130 participants from 10 countries. This conference also provided participants with opportunities for wide-ranging discussions on key issues related to material fluxes in river eco-systems and sustainable river management.

During the conference, discussions were held on strengthening future collaboration between researchers investigating material Fluxes. As a follow-up response, Professor Gordon Huang (the Chair) has obtained approval from the Board members of the International Society for Environmental Information Sciences (ISEIS). This indicates that the proposed International Commission for River Informatics (ICRI affiliated to ISEIS) targeting interdisciplinary research on all material fluxes (AMFs) in river ecosystem will be soon be established. .

Several experts from the IHP – International Sediment Initiative (ISI) participated in the conference: Prof. Manfred Spreafico and Prof. Zhao-Yin Wang delivered keynote lectures in the conference, and Prof Cheng Liu served on the International Scientific Committee.

### IRTCES Deputy Director participates in the meeting of water related UNESCO Category II Centres



A meeting of water-related UNESCO Category II Centres was held in Koblenz, Germany from December 15-17, 2014. It was organized by UNESCO IHP, the International Centre for Water Resources and Global Change, and the German Federal Institute of Hydrology (BfG). The main goal of this meeting was to discuss possible cooperation between the Centres and their contribution to IHP VIII. About 40 participants including representatives of 18 Centres attended and discussed the potential for collaboration.

IRTCES Deputy Director Prof. Ning Duihu participated in the meeting and introduced the activities of IRTCES and the IHP – International Sediment Initiative (ISI) and had discussions with other Centres. .

### Sediment removed from Shimen Reservoir during severe drought (Taiwan, China)

Taipei, March 6, 2015 (CNA) A unit of Taiwan's Water Resources Agency is working to remove sediment from Shimen Reservoir in Taoyuan City, with the objective of transporting 150,000 cubic meters of material in a year, a government official said on Friday. Due to the current drought, the water level in the reservoir that supplies water to two major cities in northern Taiwan is low enough for sediment removal work to be carried out, the head of Northern Region Water Resources Office Chen Chao-cheng said. The sediment removal work began in January and so far they have removed 158,400 cubic meters. Since 2009, some 773,000 cubic meters of sediment have been removed from the reservoir, said Chen. Premier Mao Chi-kuo visited the reservoir on Thursday to receive a briefing and to check on the sediments removal work. As of March 5, the water level of the reservoir was the second lowest since it went into operation in 1964, Chen said. Shimen Reservoir supplies water for residents in Taoyuan and the western part of New Taipei City. The western part of New Taipei as well as Taoyuan, Hsinchu, Miaoli, Taichung, Tainan and Kaohsiung cities and counties began the second phase of water rationing on Feb. 26, as Taiwan faced its worst drought in a decade. In Taiwan, first-phase water rationing means reduced water pressure at night, while second-phase means the water supply is restricted for consumers who usually use more than 1,000 cubic meters per month, and third-phase rationing cuts the water supply to entire areas on a rotating basis. (By Chiu Chun-chin and Kuo Chung-han) (Source: <http://www.taiwannews.com.tw/etn/>)

### USGS study reveals sediment storage near capacity for Conowingo Dam (USA)

The Conowingo Dam on the Susquehanna River is at about 92 percent capacity for sediment storage according to new U.S. Geological Survey research.

Since the dam's construction in 1929, sediment and nutrients have been building up behind it, being released periodically downriver and into the Chesapeake Bay, especially during high flow events.

“Storage capacity in Conowingo Reservoir continues to decrease, and ultimately that means more nutrients and sediment will flow into the Bay,” says Mike Langland, a

USGS scientist and author of the study. "Understanding the sediments and nutrients flowing into the Bay from the Susquehanna River is critical to monitoring and managing the health of the Bay."

Previous research has shown that having excess nutrients in the Bay depletes the water of oxygen needed to maintain healthy populations of fish, crabs, and oysters. Additionally, the nutrients, along with sediment, cloud the water, disturbing the habitat of underwater plants crucial for aquatic life and waterfowl.

At full sediment-storage capacity, the Conowingo Reservoir will be about one-half filled with sediment, with the remainder--about 49 billion gallons--flowing water. That amount of sediment could fill approximately 265,000 rail cars, which if lined up would stretch more than 4,000 miles.

The Susquehanna River is the largest tributary to Chesapeake Bay and transports about half of the total freshwater input to the Bay, along with substantial amounts of sediment, nitrogen and phosphorus.

Measuring the capacity of the dam to hold sediments and nutrients contributes to an improved understanding of factors that influence the health of the Chesapeake Bay.

Three hydroelectric dams and their associated reservoirs on the lower Susquehanna River have been impacting sediment and nutrient transport since construction in the early 1900's. Previous USGS studies have shown the two upstream reservoirs have reached their sediment storage capacity and the most downstream dam and reservoir, the Conowingo, was also losing its ability to trap nutrients and sediment from reaching the Chesapeake Bay. A 2012 USGS report revealed that, even though the Conowingo reservoir had not yet reached its maximum storage capacity, it had begun to lose its phosphorus and sediment-trapping ability, with increasing amounts going into the Bay.

Due to the concerns about increasing nutrient and sediments loads flowing into the Bay, the U.S. Army Corps of Engineers, working with several partners, will soon be releasing the Lower Susquehanna River Watershed Assessment. The study suggests several sediment-management options for the reservoirs on the Lower Susquehanna River and indicated additional monitoring and research are needed to support management decisions.

The long-term analysis (1900-2012) conducted for this new USGS study reported here revealed how past practices affected sediment transport in the Susquehanna River Basin.

The USGS study, in addition to providing the current estimate of sediment capacity also provides a longer-term (100 years) analysis of sediment flowing into the reservoirs.

Sediment loads transported over the past 100 years in the Susquehanna River into the reservoirs have decreased from 8.7 million tons per year in the early part of the 20th century to the current level of about 3.5 million tons. The declines of sediment into the reservoirs since the 1950s are most likely related to introduction of soil

conservation practices, land reverting back to forest, and better management of stockpiled coal piles.

Since the construction of Conowingo Dam was completed in 1929, an average of 70 percent of the transported sediment reaching the upper Chesapeake Bay is from the Susquehanna watershed. The additional 30 percent of the sediment is being scoured, or removed from sediment deposited in the reservoirs.

From 1929 through 2012, approximately 470 million tons of sediment was transported down the Susquehanna River into the reservoir system. Of that number, approximately 290 million tons were trapped in the reservoirs behind the dams, and approximately 180 million tons were transported to Chesapeake Bay. The reservoirs are continuously losing their ability to trap sediment and more is flowing into the Bay.

Information from this report and new partner studies will be used by the U.S. Environmental Protection Agency Chesapeake Bay Program and the state partners in considering options to reduce nutrient and sediment loads to help meet the requirements of the Chesapeake Bay Total Maximum Daily Load.

The study, Sediment Transport and Capacity Change in Three Reservoirs, Lower Susquehanna River Basin, Pennsylvania and Maryland, 1900–2012 Open-File Report 2014-1235 is available online.

Additional information on USGS Susquehanna results and Chesapeake Studies can be found online. (Source: USGS, <http://www.usgs.gov/>)

### More News in ISI Website

- River erosion: Uganda losing land to Congo
- Musconetcong flows free as dams removed (USA)
- Sediment starving local reservoirs, waterways (USA)
- Penn Researchers Show How Rivers Creep and Flow to Shape Landscapes Over Time
- Sediments removed from Shimen Reservoir during severe drought (Taiwan, China)
- China helps Cameroon power up
- Sea levels 2nd highest on record
- Baiyin: China's 'copper city' strives to repair heavy metal-polluted land
- Some marina owners concerned about possible Yarmouth dam removal (USA)
- Assam erosion: 37,000 families lost their dwellings (India)
- USGS study reveals sediment storage near capacity for Conowingo Dam (USA)
- K-water CEO Visits and Signs an MOU with IWHR
- Senior Director of World Bank Visits IWHR and Talks on Water Management
- Contents of ISWCR (Vol. 2, No.4, 2014)
- ISI experts participate in the AMFR 2015
- IRTCES Deputy Director participates in the meeting of water related UNESCO Category II Centres
- China vulnerable to climate change
- Beijing receives water from south, but doubts remain

More .....

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

## CONFERENCE REPORT

### First International Conference on All Material Fluxes in River Eco-Systems held from January 15-18, 2015 at Beijing



The First International Conference on All Material Fluxes in River Eco-Systems (AMFR 2015) was held from January 15-18, 2015 at Peking University, Beijing, China. The conference was a great success with 20 excellent keynote lectures and 45 other oral presentations, attracting around 130 participants from 10 countries. This conference also provided participants opportunities for wide-ranging discussions on key issues related to material fluxes in river eco-systems and sustainable river management.

During the conference, discussions were held on strengthening future collaboration between researchers on All Material Fluxes. As a follow-up response, Professor Gordon Huang (the Chair) obtained approval from the Board members of the International Society for Environmental Information Sciences (ISEIS). This indicates that the proposed International Commission for River Informatics (ICRI affiliated to ISEIS) targeting interdisciplinary research on all material fluxes (AMFs) in river ecosystem will soon be established.

Keynote lectures included:

Material fluxes in River Eco-Systems as Basic Information for Integrated Water Resources Management // Prof. Manfred Spreafico, University of Berne, Switzerland

Modeling the Effect of Diversions for Land Building on the Lower Mississippi River //Prof. Gary Parker, University of Illinois at Urbana-Champaign, USA

Modeling Occurrence and Assessing Public Perceptions of De Facto Wastewater Reuse across the USA //Prof. Paul Westerhoff, Arizona State University, USA

Sediment Flux into the Great Barrier Reef Lagoon in Australia – the Controlling Factors //Prof. Bofu Yu, Griffith University, Australia

Impacts of Major Hydraulic Projects on Flow, Sediment and Geomorphology Processes in the Yangtze Estuary //Prof. Yitian Li, Wuhan University, China

Organic Matter Dynamics in the Amazon Basin //Prof. Marc Benedetti, Université Paris Diderot, France

An Integrated Study of River-Groundwater Interactions under the Influence of Climate Change and Human Activities // Prof. Chunmiao Zheng, Peking University, China

Hydrological Fluxes in the Xiangxi River //Prof. Gordon Huang, University of Regina, Canada

Effects of Habitat Connectivity on Biodiversity of Benthic Invertebrates //Prof. Zhaoyin Wang, Tsinghua University, China

Exploring Bacterial Diversity, Identifying Pathogens and Detecting Antibiotic Resistance Genes Using Next Generation Sequencing //Prof. Tong Zhang, The University of Hong Kong, China

Mechanistic Quantitative Prediction of Nano- and Micro-Particle Retention in Porous Media: Contaminant Removal during Hyporheic Exchange, Riverbank Filtration, and Other Contexts //Prof. William P. Johnson, University of Utah, USA

The Impact of Different Aquatic Colloids on the Behavior and Fate of Pharmaceutical Contaminants in the Yangtze Estuary //Prof. Junliang Zhou, East China Normal University, China

Analytical Monitoring of Emerging Contaminants and Assessment of Their Environmental Transformation //Prof. Ching-hua Huang, Georgia Institute of Technology, USA

Looking beyond struvite for P-recovery //Prof. Xiaodi Hao, Beijing University of Civil Engineering and Architecture, China

Sediment Flux and Its Environmental Implications //Prof. Alistair Borthwick, University of Edinburgh, U.K

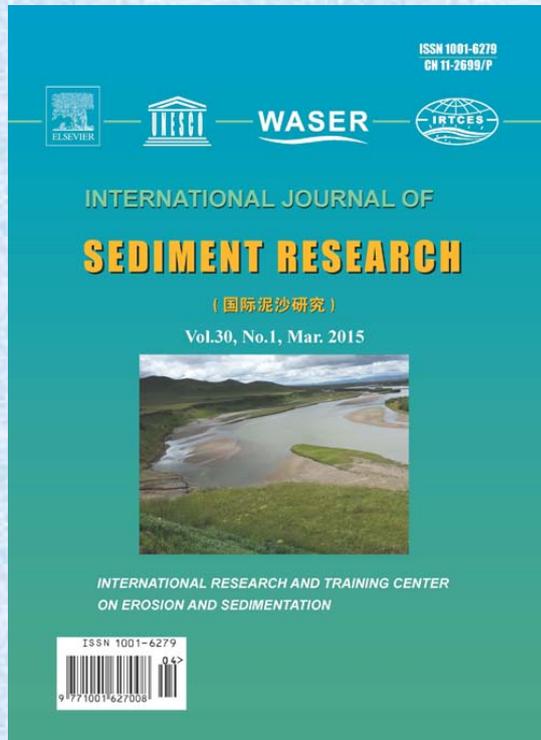
Prediction of Budget and Fate of Persistent Toxic Pollutants in Water Bodies //Prof. Yifan Li, Harbin Institute of Technology, China

Harmful Algal Blooms in Lakes and Rivers and their Impact in Drinking Water Quality: The Need for Effective Treatment of Cyanotoxins //Prof. Dionysios D. Dionysiou, University of Cincinnati, USA

Structure of Riverine Ecological Flux: Concept, Measurement, and Operation Objectives //Prof. Jianbo Chang, Institute of Hydroecology, Ministry of Water Resources and Chinese Academy of Sciences, China

## PUBLICATION

### Papers Published in Issue 1 Volume 30, 2015, International Journal of Sediment Research



Volume 30, Number 1 March 2015

#### Technical Papers

Sediment load calculations from point measurements in sand-bed rivers  
Seema C. SHAH-FAIRBANK and Pierre Y. JULIEN 1–12

Numerical modelling of channel migration with application to laboratory rivers  
Jian SUN, Bin-liang LIN, and Hong-wei KUANG 13–27

Evaluation of geochemical behavior and heavy metal distribution of sediments: The case study of the Tirumalairajan river estuary, southeast coast of India  
Senapathi VENKATRAMANAN, Sang Yong CHUNG, Thirunavukkarasu RAMKUMAR, Gopalakrishnan GNANACHANDRASAMY, Tae Hyung KIM 28–38

Local scour around bridge abutments under ice covered condition – an experimental study  
Peng WU, Faye HIRSHFIELD, and Jueyi SUI 39–47

Sediment resuspension under action of wind in Taihu Lake, China  
Sha-sha ZHENG, Pei-fang WANG, Chao WANG, and Jun HOU 48–62

#### Technical Notes

Sediment transport in ice-covered channels

Ian KNACK and Hung Tao SHEN 63–67

Determination of recovery factor for simulation of non-equilibrium sedimentation in reservoir  
Jungkyu AHN and ChihTed YANG 68–73

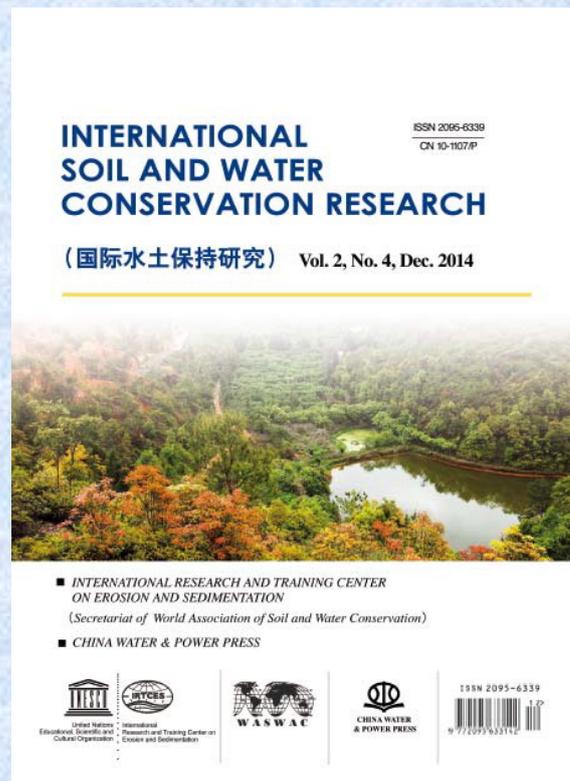
Apparent redox potential discontinuity (aRPD) depth as a relative measure of sediment oxygen content and habitat quality  
Travis G. GERWING, Alyssa M. ALLEN GERWING, Diana J. HAMILTON, and Myriam A. BARBEAU 74–80

Experimental study on the bank erosion and interaction with near-bank bed evolution due to fluvial hydraulic force  
Ming-hui YU, Hong-yan WEI, and Song-bai WU 81–89

Book Review of “Fluvial Hydrodynamics: Hydrodynamic and Sediment Transport Phenomena”, 2014. Springer Verlag, 687 pages, ISBN 978-3-642-19061-2, by Subhasish Dey.  
Zhao-yin WANG and Hong-wei FANG 90–91

Cover Photo: Sediment-depositing side of bend at Nuogai, Sichuan province, China

### Contents of ISWCR (Vol. 2, No.4, 2014)



The fourth issue of ISWCR for the year 2014 was published in the beginning of January, 2015. Eleven authors contributed 7 academic papers in this issue.

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

**INTERNATIONAL SOIL AND WATER  
CONSERVATION RESEARCH**

Volume 2

Number 4

December 2014

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| Quality indicators in subtropical soils of Formosa, Argentina: Changes for<br>agriculturization process<br><i>Juan Esteban Baridón and Roberto Raúl Casas</i> .....                  | 13 |
| Land Use-Land Cover dynamics of <i>Huluka</i> watershed, Central Rift Valley, Ethiopia<br><i>Hagos Gebreslassie</i> .....  | 25 |
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| Land husbandry: an agro-ecological approach to land use and management – Part 2:<br>Consideration of soil conditions<br><i>T. F. Shaxson, A. R. Williams, and A. H. Kassam</i> ..... | 64 |
| Cover photo: The treated Hesi Small Watershed in Mei County, Guangdong Province,<br>China. Photographed by Pan Zheng.  |    |

**Publications in ISI Information System**

- Compilation, quality control, analysis, and summary of discrete suspended-sediment and ancillary data in the United States, 1901-2010 (USGS)
- Sediment Transport and Capacity Change in Three Reservoirs, Lower Susquehanna River Basin, Pennsylvania and Maryland, 1900–2012 (USGS)
- Quantifying human impacts on rates of erosion and sediment transport at a landscape scale
- River Dynamics and Integrated River Management (Wang, Lee and Melching, 2015)
- 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

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:**

Institute for Modelling Hydraulic and Environmental Systems  
University of Stuttgart  
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### 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=iccec2015>

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Dr. Mahad Baawain  
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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:**

LOC IAHR2015  
 E-mail: [iahr2015@unesco-ihe.org](mailto:iahr2015@unesco-ihe.org)  
 Tel: +31 15 2151 747  
 LinkedIn: <http://linkd.in/1gl3TnO>  
 Twitter: IAHR2015  
 Facebook: IAHR2015

## 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:**

Ms. Wang Yue , Ms. Peng Cong  
 Tel: +86-791-88179373, +86-791-88126011  
 E-mail: [IYFSWCinf@nit.edu.cn](mailto:IYFSWCinf@nit.edu.cn)

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

More .....

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



**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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| Zhao-Yin Wang            | China        |

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Sediment-depositing side of bend at Nuogai, Sichuan province, China