

# INTERNATIONAL SEDIMENT INITIATIVE

# NEWSLETTER

*Reporting ISI news to you quarterly*

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## ORGANISATION: UNESCO

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

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## The 10th Anniversary Celebration of Issuing China Gazette of River Sedimentation and Seminar on Sediment Problems in China



On December 29, 2010, the 10th Anniversary Celebration of Issuing China Gazette of River Sedimentation and Seminar on Sediment Problems in China was held in Beijing. Mr. Liu Ning, Vice Minister of Water Resources (MWR), made a keynote report. MWR Chief Engineer Wang Hong attended the meeting and made an address for congratulation, and Mr. Deng Jian, Director-General of the Bureau of Hydrology of MWR, made a work report. The meeting was chaired by Prof. Kuang Shangfu, President of the China Institute of Water Resources and Hydropower Research (IWHR) and Director of the International Research and Training Center on Erosion and Sedimentation (IRTCES). Eight other keynote reports were made by famous Chinese experts including: Professor Han Qiwei, Academician of Chinese Academy of Engineering; Prof. Hu Chunhong, Vice President of IWHR and Deputy Director of IRTCES; Prof. Li Yitian, Wuhan University; and Prof. Xue Songgui, Chief Engineer of the Yellow River Conservancy Committee.

The meeting sponsored by the Bureau of Hydrology of MWR and organized by the IRTCES and IWHR. Over 100 experts, scholars and representatives from 7 river basins, bureaus of hydrology of 18 provinces, universities, research institutes and international organizations participated in the meeting.

Keynote reports are:

Mr. Liu Ning, Basic Situation of River Sedimentation in China;

Prof. Han Qiwei, Sediment Research and Management of Major Rivers in China

Prof. Hu Chunhong, Changing Trend of Runoff and Sediment Loads of Global Rivers

Prof. Li Yitian, Interaction of Water and Sediment Process Between Rivers and Lakes and Its Control

Prof. Guo Suoyan, Promoting Water and Soil Conservation Monitoring Further

Prof. Xue Songgui, Research and Practice on Management of the Yellow River Over the Past Decade

Prof. Wang Jun, Recent Changes of Runoff and Sediment Loads of the Yangtze River

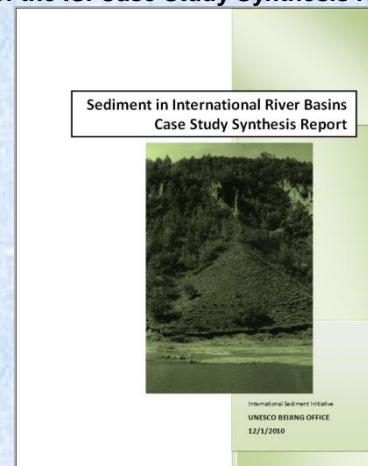
Prof. Lu Yongjun, Advances of Sediment Studies in Harbor and Waterway

Dr. Li Tiejian (on behalf of Prof. Wang Guangqian), Mechanism of Runoff and Sediment Yields and Its Numerical Model

(by Liu Cheng, IRTCES)



## Advance of the ISI Case Study Synthesis Report



The first draft of the ISI Case Study Synthesis Report has been completed by the end of 2010. The draft report has been sent out for comments and suggestions.

The ISI case studies for the Mississippi, Nile, Yellow, Rhine, Volga, Haihe and Liouhe rivers have been completed. ISI is synthesizing available Case Studies. In order to exploit fully the work undertaken in compiling the ISI Case Studies, there is a need to synthesize and analyze further the information presented. The synthesis will draw together the existing information from the Case Studies (e.g. by highlighting different sets of problems and different management approaches etc). The contents of the various case studies will be synthesized and integrated into an academic publication and an overview publication for policy makers, respectively.

The UNESCO Office in Beijing has secured the services of an Australian Youth Ambassador Ms. Marita Muller to work on this synthesis and analysis in cooperation with IRTCES and under the guidance of Professors M.Spreafico and D.Walling.

## LANDCON1010 and the 1st Council Meeting of WASWA in Xi'an, China

From Oct 12 to 14, International Conference on Combating Land degradation in Agricultural Areas(LANDCON1010) and The 1st Council Meeting of World Association of Soil and Water Conservation

( WASWC), initiated by WASWC and Chinese Society of Water and Soil Conservation (CSWAC), sponsored by Chinese Academy of Sciences, Ministry of Water Resources, the People's Government of Shaanxi province, hosted by Institute of Soil and Water Conservation, Chinese Academy of Sciences & Ministry of Water Resources (ISWC), were held in Xi'an. Almost 300 scholars, experts and leaders from the U.S, Australia, France, Germany, India, New Zealand, Thailand, the Netherlands and other 36 countries in the fields of land resource management, combating land degradation and land desertification control attended the conference. Among them, more than 100 are foreign delegates. Academician Ding Zhongli, the deputy director of the Chinese Academy of Sciences, vice minister Liu Ning of the Ministry of Water Resources, Yao Yinliang, the vice governor of Shaanxi People's Government, Academician Sun Honglie, the former vice director of the Chinese Academy of Sciences, Mr. Miodrag Zlatic, the president of WASWC, Prof. Coen Ritsema of Wageningen University, also the program sponsor of the EU FP6 Integrated Project on Desertification Mitigation and Remediation of Land (DESIRE), Prof. José Luis Rubio, the president of the European Land Conservation Association, the academician of Chinese Academy of Engineering Shan Lun attended the opening ceremony or made keynote speeches. The director of ISWC, researcher Liu Guobin presided the conference.



During the session of three-day conference, the delegates exchanged ideas with regards to issues concerning the land degradation and its development process, the mechanism and driving factors of land degradation, control methods and its patterns of land degradation, the environmental effects of land degradation and the sustainable development of the regional economy, the global change and land degradation, and the prevention and control of land degradation. More than 80 people made reports in the 4 branch halls. This international academic conference provides a platform for domestic and foreign experts and scholars to exchange ideas and share their findings, promote the improvements of research levels in land degradation control and soil and water conservation. (Source: <http://english.iswc.cas.cn>)

### **Nomination of Researcher Li Rui as the president of WASWAC**

On the afternoon of Oct. 14, researcher Li Rui was pointed as the president of the Council Meeting of WASWAC for the next session by the Current president Mr Zlatic at the closing ceremony of Landcon 1010 & 1st Annual Council Meeting of WASWAC.

Researcher Li Rui long has engaged in the planning of water conservation, land resource investigation, remote sensing of the dynamics of soil and water erosion, and made great achievements in the research of regional soil and water conservation and the application of remote sensing in soil and water conservation. At the 10th session of the ISCO in 1999, appointed by ministry of water resources, he made a speech on the bidding for the ISCO on behalf of the Chinese Government and succeeded in getting the right for China to host the 12th ISCO. In 2002, he attended and helped the hosting of the 12th ISCO in Beijing. From 2003, he has been the Councilman of the WASWAC Council, the vice president of the Asian branch of WASWAC.

World Association Of Soil & Water Conservation (WASWAC) was established in Hawaii, U.S. in 1983Feb, with the advocating of the world-renowned experts in the field of soil and water conservation and the project executives of many development and protection programs. The goal of the WASWAC is to provide an exchanged platform for experts in this field from different countries, thus to promote world-wide soil and water protection for the wellbeing of humankind. The WASWAC has active member of over 5000, from more than 120 countries. The secretariat of WASWAC is affiliated to the International Research and Training Center on Erosion and Sedimentation (IRTCES). (Source: <http://english.iswc.cas.cn>)



### **Water level at Three Gorges Project hits full capacity (China)**



The water level at the Three Gorges Dam, the world's largest water control and hydropower project, reached its designed highest mark Tuesday. The water level hit 175 meters at 9 a.m. Tuesday, said Cao Guangjing, chairman of the China Three Gorges Project Corporation (CTGPC), the developer of the project. Raising water for the first time to 175 meters is "a milestone in the construction of the gigantic reservoir," Cao said, adding it will enable the project to fulfill its functions of flood control, power generation, navigation and water diversion. The new level does not mean complete success for the project. It does, however, allow for testing of various public concerns and

doubts raised since the very beginning, such as the function of many key equipment, geological disasters, water quality, and sediment situation, Cao said.

The 185-meter-deep reservoir, built on the upper middle-reaches of the Yangtze, China's longest river, began to store water in 2003. It was the third attempt to raise the water level in the dam to full capacity since 2008. In 2008, on the first attempt, the level was raised to 172.8 meters before geological hazards prevented it being raised further. On the second attempt, in 2009, because of droughts downstream, the level could only be raised to 171.43 meters. In September, the dam started holding more water back and discharging less. It reached full capacity after 47 days. The water level-raising process allows experts to observe, research and validate the dam's original design, according to Cao. So far, monitoring shows the dam is operating smoothly.

The water level will be maintained at 175 meters for about two months for surveillance and then be allowed to drop. In the future, the water level will be kept at between 145 meters and 175 meters, depending on flood control needs. That water-level fluctuation corresponds to 22.15 billion cubic meters of water, which will ensure water demand in the lower reaches during drought seasons. The dam has helped in about 10 flood-control campaigns since 2004, including seven this year. The embankment on the Jingjiang section, for instance, the most flood-prone section of the Yangtze, will now be able to withstand a once-in-a-century flood. It could previously withstand only a once-in-a-decade flood. A higher water level expands the navigable course of the reservoir 150 kilometers and raises ship-passing efficiency four times, cutting navigation costs by at least one third compared with the time when water level remained at 156 meters, a previous water-raising target before 2008. The project has generated about 440 billion kwh of electricity since its first started generating electricity in 2003. Now, the power plant will be able to realize its designed annual power-generation capacity of 84.7 billion kwh.

The Three Gorges Project was launched in 1993 with a budget equivalent to 22.5 billion U.S. dollars. It is a multi-functional water control system, consisting of a dam, a five-tier ship lock, and 26 hydropower turbo-generators. By 2012, six more hydropower turbo-generators will be installed. The project was constructed in three phases, and storing water at the 175-meter level was a requirement once the last phase of construction was complete. After nearly 16 years of construction, work on all the main sections of the project was completed last month. Some 1.24 million residents in Chongqing Municipality and Hubei Province were relocated to make way for construction of the dam.

Some Chinese and foreign critics said the dam would cause environmental problems. Those concerns helped prompt the dam's authorities to take extra measures, ensuring the project's efficiency and safety.

(Source: Xinhua, <http://www.xinhuanet.com/>)

## **UN chief hails climate deal reached at Cancun**

UN Secretary-General Ban Ki-moon on Saturday hailed the outcome of the just-concluded UN climate change conference as an "important success for a world much in need of it." The secretary-general made the remarks in a statement issued here by his spokesman late on Saturday following the conclusion of the two-week UN

climate change conference in Cancun, Mexico, vowing to "strengthen our efforts in line with the scientific imperatives for action." "The UN climate change negotiations in Cancun, Mexico, have delivered important success for a world much in need of it," the statement said. "Governments came together in common cause, for the common good, and agreed on a way forward to meet the defining challenge of our time." "While there is much work yet to do, the success of the UN conference on climate change in Cancun has set the world on the path to a safer, more prosperous, and sustainable world for all," the statement said.

In Cancun, governments reached agreements on a package of measures to build a low-carbon, climate-resilient future together, the statement noted. Dubbed the "Cancun Agreements," the decisions include formalizing mitigation pledges and ensuring increased accountability for them, as well as taking concrete actions to protect the world's forests.

Delegates meeting at the 16th Conference of the Parties to the UN Framework Convention on Climate Change (UNFCCC) also agreed to ensure no gap between the first and second commitment periods of the Kyoto Protocol, an addition to the Convention that contains legally binding measures to reduce greenhouse gas emissions, and whose first commitment period is due to expire in 2012.

An agreement was also reached on establishing a fund for long-term climate financing to support developing countries, and bolstering technological cooperation and enhancing vulnerable populations' ability to adapt to the changing climate.

"The outcomes in Cancun have given us important tools," the statement said. "Now we must use them, and strengthen our efforts in line with the scientific imperatives for action." "I commend Governments for pursuing the path of compromise, a cornerstone of effective multilateralism," Ban said in the statement. "In so doing, they have proven that the United Nations can deliver results even on the most challenging global issues of the day."

The next Conference of the Parties to the UNFCCC is scheduled to be held in South Africa in 2011. (Source: Xinhua, <http://www.china.org.cn/>)

## **WAPDA plans Tarbela sediment management (Pakistan)**

The Water and Power Development Authority (WAPDA) will conduct a study to tackle the issue of decreasing water storage capacity in the Tarbela Dam reservoir due to sedimentation. Besides exploring ways and means to flush the sediments out of the reservoir, the study also aims at determining its impact on the downstream irrigation infrastructure.

According to a statement, the World Bank is providing funds required for the study through its water sector capacity building and advisory services project. In response to the expression of interest, WAPDA has short-listed five joint ventures comprising consulting firms of international repute to submit technical and financial proposals for the study.

The Tarbela Dam project, built in 1974, is considered to be the lifeline of the national economy. Tarbela Lake spreads over an area of 259 square kilometres, with maximum elevation of 1,550 feet above the sea level.

Average annual water inflow at Tarbela is 64 million acre feet (MAF), which brings along a huge quantum of sediments estimated at 200 million tonnes per year. These sediments have not only decreased the storage capacity of the reservoir, but is also posing a serious threat to the powerhouse structures.

Storage capacity of Tarbela Lake has gone down to 6.77MAF in 2010 from its original storage capacity of 9.68MAF, recording a 30 percent decrease during the last 36 years.

Earlier, WAPDA had carried out five studies related to the Tarbela Dam sediment management. The recent study was recommended by Dr George W Annandale, a known expert on sedimentation, in the fifth periodic inspection and the task force created in WAPDA in consultation with the international commission on irrigation and drainage.

(Source: Daily Times, <http://www.dailytimes.com.pk/>)

### More News in ISI Website

- Contents of IJSR (Vol. 25, No.4, 2010)
- The 10th Anniversary Celebration of Issuing China Gazette of River Sedimentation and Seminar on Sediment Problems in China
- New revision of Water and Soil Conservation Law adopted (China)
- Anti-erosion proposal targets China's agriculture sector (China)
- WAPDA plans Tarbela sediment management (Pakistan)
- 78,000 tonnes of garbage collected from Three Gorges Dam(China)
- UN chief hails climate deal reached at Cancun

- Earth's lakes are warming due to climate change: study
- Forestation holds back the encroaching desert (China)
- Over 4,000 dead or missing in floods this year (China)
- World Bank to assist Edo on erosion control(Nigeria)
- UN Climate Change Conference opens in Mexico (2010-11-30 17:33)
- Report confirms Mt Taranaki erosion getting worse (New Zealand)
- Vice Minister Liu Ning speeched at the International Conference on Combating Land Degradation (China)
- Vice Minister Hu Siyi presented at China Water Expo 2010 (China)
- Nomination of Researcher Li Rui as the president of WASWAC
- LANDCON1010 and the 1st Council Meeting of WASWA in XI'an
- Criticism of Three Gorges Project helps move forward hydro-power construction(China)
- 40% of Cuban agricultural land suffers erosion: expert
- Report warns of drastic glacier shrinkage in China
- Chinese scientist re-examines source of Indus River
- [PIC] Water level of Three Gorges Dam reaches maximum
- Water level at Three Gorges Project hits full capacity (China)
- Missouri River Dredging Report Tackles Sedimentation (USA)
- Nigeria: Erosion in Jigawa

More .....

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## CONFERENCE REPORT

### Missouri River Dredging Report Tackles Sedimentation (USA)

Dr. William Graf of the University of South Carolina presented the finding Wednesday as part of the National Academy of Sciences (NAS) report. Graf and other NAS team members addressed by speaker phone the Missouri River Recovery Implementation Committee (MRRIC) at South Sioux City, Neb. The three-day meeting concludes today (Thursday) at the Marina Center.

"The rivers are like a trap," Graf said. "Gavins Point Dam (near Yankton) stores and also traps sediment." Dredging could make the dams, including Gavins Point, more "sediment neutral," he said. "It's not a crazy goal. It's an engineering possibility, but it's the cost," he said. "Not only is it a complicated engineering effort with the dams, but there are also the economic problems with its removal."

Another option calls for reducing or preventing sediment before it enters the river, Graf said. "You could try to control the sediment in the tributaries," he said. "But they are controlled by the dams, and you have the same inherent problems with removal."

For many in attendance, Wednesday's meeting provided the first in-depth look at the sediment study. At the request of the U.S. Army Corps of Engineers, the National Research Council convened a committee of experts to assess the importance of sediment in the Missouri River system. The experts also evaluated habitat restoration projects and other possible sediment management actions, along with considering implications for water quality in the river and in the northern gulf.

Satisfying all parts of the basin remains difficult because the situation varies greatly from one region to another, he said. "It's like realtors say — location, location, location — when you are talking sediment." Over time, the amount of sediment reaching the delta has declined, according to NAS committee chairman Leonard Shabman of "Resources for the Future" in Washington, D.C.

"If you take all the sediment behind Gavins Point and dumped it into the river, there would be little impact on the delta," he said. "It will take a long time for that material to move down to the delta, maybe 15 or 20 years or more." To improve habitat conditions for endangered bird and fish species, the Corps of Engineers initiated projects to reconstruct emergent sandbar and shallow water habitat, and in this process has discharged sediment into the Missouri River.

The committee reviewed alternatives for improved management of these current projects, and possible future actions to reintroduce sediment to the Missouri River. Options include removal of bank stabilization structures, changes in commercial dredging, bypassing sediment around dams, removing dams and increasing the flow of sediment from tributaries. Several financial and technical constraints would hamper implementing any of the alternatives, the NAS report said.

The report also recommends that the Corps of Engineers and the U.S. Geological Survey better collect sediment data in a centralized place and develop an

accounting for the length of the Missouri River. The report also recommends continuing assessment of the effectiveness of (MRRIC), established by Congress in 2008 as a multi-stakeholder group for the entire basin.

During a break in Wednesday's meeting, MRRIC chairman John Thorson of Montana told the Press & Dakotan that the NAS report clarified many things. "We try to make recommendations to the federal government about recovery and about endangered species such as the tern and plover, as it relates to the ecosystem," he said. "We are learning more about sedimentation through the National Research Council's study."

The November elections could change MRRIC funding, Thorson said, but he believes Congress will come through with the \$70 million both the House and Senate for Missouri River recovery. MRRIC seeks consensus and will take time by its very nature, Thorson said. "Things are going very well. The amount of trust (among members) has risen considerably," he said.

Wednesday's session raised interesting points for Sandra Korkow of Springfield, a member of the Missouri Sedimentation Action Coalition (MSAC). Korkow told the Press & Dakotan that she supported centralized collection of data. "There is a lot of data being collected and a lot of research going on. It needs to be put together so we come up with a plan." She released an MSAC statement for both the MRRIC meeting and Wednesday night's Annual Operating Plan (AOP) public hearing conducted by the Corps. "We know sediment accumulates in our reservoirs at a rate of 89,700 acre-feet per year. We lose storage of enough water, each year, to supply more than 800,000 people with 100 gallons per day for an entire year," the statement said. "We already lose enough space to store a flood equivalent to 100 miles long, 10 miles wide, with an average depth of 7 1/2 feet." That can have tremendous consequences for flood control, MSAC said.

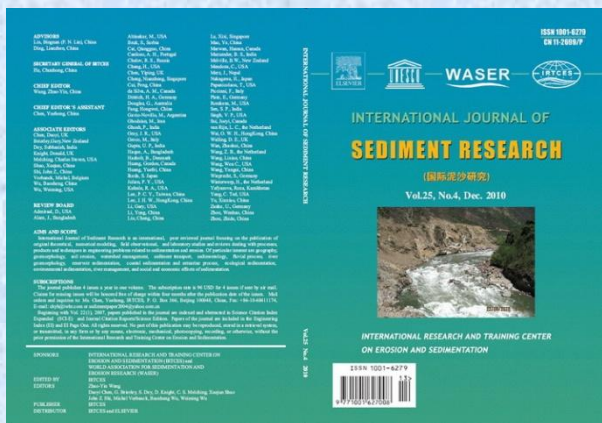
"Flooding caused by inflow from tributaries below Gavins Point Dam would have been much worse if the Missouri River dams would not have been able to hold and store runoff water within and above the system," the statement said.

MSAC calls for the Corps AOP to include sedimentation problems and steps to remove sediment and put it back into the river below Gavins Point Dam. MSAC also supports a life-cycle approach for managing the river system. Korkow told the Press & Dakotan that she found interest in keeping the dams "sediment neutral."

"Trapping sediment in the reservoirs behind the dams already negatively impacts the river's benefits," she said. "We cannot afford not to pursue sediment management. The cost of not doing it is much higher." (By Randy Dockendorf)

(Source: Dredging Today,  
<http://www.dredgingtoday.com>)

**Papers Published in Issue 4 Volume 25, 2010,  
 International Journal of Sediment Research**



Volume 25, Number 4

Dec. 2010

Md. Azharul HOQUE, Bobita Golam AHAD, and Ejria SALEH

Reduction of local scour around bridge pier groups using collars  
 Manouchehr HEIDARPOUR, Hossein AFZALIMEHR, and Elham IZADINIA

Water yield reduction due to forestation in arid mountainous regions, northwest China  
 Pengtao YU, Yanhui WANG, Xudong WU, Xiaohong DONG, Wei XIONG, Gaowa BU, Shunli WANG, Jinye WANG, Xiande LIU, and Lihong XU

**TECHNICAL NOTES**

Three dimensional hydrodynamic modeling over bed forms in open channels  
 K. EL KHEIASHY, J. MCCORQUODALE, I. GEORGIU, and E. MESELHE

Cover Photo: Bed structures consisting of boulders in the Yalutsangbu Grand Canyon consume flow energy and protect the bed from erosion

**Technical Papers**

People's perception and socioeconomic determinants of soil erosion: A case study of Samanalawewa watershed, Sri Lanka

E. P. N. UDAYAKUMARA, R. P. SHRESTHA, L. SAMARAKOON, and D. SCHMIDT-VOGT

Geochemical baselines of major, minor and trace elements in the tropical sediments of the Terengganu River basin, Malaysia

Khawar SULTAN, Noor Azhar SHAZILI

Variation of turbidity during subsurface abstraction of river water: A case study

A. K. THAKUR and C. S. P. OJHA

Numerical simulation of channel pattern changes. Part I: Mathematical model

Hong WANG, Gang ZHOU, and Xuejun SHAO

Numerical simulation of channel pattern changes. Part II: Application in a conceptual channel

Hong WANG, Gang ZHOU, and Xuejun SHAO

Study on the stability of non-cohesive river bank

Minghui YU, Hongyan WEI, Yanjie LIANG, and Chunyan HU

Hydrodynamics and suspended sediment transport at tidal inlets of Salut Mengkabong Lagoon, Sabah, Malaysia

**Publications in ISI Information System**

- Reservoir Sedimentation in Brantas River Basin, Indonesia
- Contaminated Sediments in European River Basins(SedNet)
- Integration of Sediment in River Basin Management (SedNet)
- Bedload-Surrogate Monitoring Technologies (Gray et.al)
- Effects of Urbanization, Construction Activity, Management Practices, and Impoundments on Suspended-Sediment Transport in...
- Storminess and Environmental Changes in the Mediterranean Central Area (Diodato & Bellocchi)
- International Sediment Initiative (ISI) Case Study Report: Volga River
- Climate Change and Adaptation for Water Resources in Yellow River Basin, China (UNESCO)
- Integrated Urban Water Management: Humid Tropics (Parkinson et al.)
- Soil, Groundwater and Sediment Quality Criteria in Ontario (B. Edwards)
- Erosion, Transport and Deposition of Sediment - Case Study Rhine (Spreafico & Lehmann)

More .....

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

## COMING EVENTS

### International Conference on the Status and Future of the World's Large Rivers (Vienna, 11-14 April 2011)

**Date:** 11-14 April 2011

**Venue :** University of Natural Resources and Applied Life Sciences, Vienna

**Summary:** 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. The International Conference on "The Status and Future of the World's Large Rivers" 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. A statement, agreed by the participants, will be produced to assess the existing and future needs of large rivers in order to better integrate their use, protection and restoration and to devise an action plan.

The conference is sponsored by: UNESCO, IAHR, IAHS and WASER

The conference is organised by BOKU - University of Natural Resources and Applied Life Sciences, Vienna. Take the opportunity to participate in the conference on the World's Large Rivers, to be held from 11 – 14 April 2011, and visit the beautiful city of Vienna. We look forward to welcoming you to Vienna!

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

**Contacts:** [worldslargerivers@boku.ac.at](mailto:worldslargerivers@boku.ac.at)

### RCEM2011 - The 7th IAHR Symposium on River, Coastal and Estuarine Morphodynamics (Beijing, Sept. 6-8, 2011)

**Date:** Sept. 6-8, 2011

**Venue :** Beijing, China

**Summary:** The IAHR Subcommittee on River, Coastal and Estuarine Morphological processes (RCEM) held the first 6 of this successful series of conferences in Genova, Italy; Obihiro, Hokkaido, Japan; Barcelona, Spain; UIUC, Illinois, USA; Enschede, the Netherlands; and Santa Fe City, Argentina. The language of the conference is English. The IAHR Symposia on River, Coastal and Estuarine Morphodynamics provide a forum for the scientists and river engineers to share ideas and research results on river, coastal and estuarine morphodynamics. Tsinghua University will host the 7th IAHR Symposium on River, coastal and estuarine morphodynamics in the year 2011. The central theme of this conference is "Impacts of Hydro-Projects on River, Coastal and Estuarine Processes".

**Organizer:** Tsinghua University, Beijing, China

**Themes:** The scope of the conference will be broad, covering all issues related to river, coastal and estuarine morphological processes. Specific themes include, but are not limited to:

Processes

Sediment yield and sediment transport

Incised rivers

Alluvial rivers

Deltas, estuaries, bays

Responses of river and estuaries to floods and storms  
Environmental and ecological aspects of morphological processes

Field investigations, experiments, and simulations

Impacts of catastrophic events on morphological processes

Landslide and debris flow

Turbulent flow in rivers and coastal areas

Modeling of catchment and fluvial processes

Man-nature interaction

Impacts of large hydraulic structures on catchment, fluvial and coastal processes

Disturbance of stream-lake systems and its environmental and ecological impacts

Sedimentation processes in large reservoirs

River engineering and restoration, habitat protection, environmental flows

Focuses

River confluences, tributaries and distributaries

Bedforms, bars and braiding

River bends and meandering, scouring and bank erosion

Turbidity currents and submarine morphodynamics

Tidal flats, coastal and shelf bedforms

**URL:** <http://sklhse.tsinghua.edu.cn/rcem2011/rcem2011.html/>

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### 7th International SedNet conference (Venice, 6-9 April 2011)

**Date:** 6-9 April 2011

**Venue :** Venice, Italy

#### Background

Sediment is an integral part of the ecosystem and directly affects biodiversity through hydromorphology, habitat formation and associated pollutants. Using Water Framework Directive definitions, it can be said that sediment affects good ecological and chemical status of water bodies: impacts can be both positive and negative. These impacts are particularly evident in shallow water bodies such as rivers, lagoons and coastal areas. Sediment Management is therefore much more than dealing with more or less contaminated sediment that needs to be dredged for navigation or construction but is more a way of working with nature, finding self-sustaining solutions for the evolution of water bodies in a highly dynamic environment.

The integration of sediment management into river basin management plans, thus supporting the joint implementation of the Water Framework Directive and Floods Directive, is a perfect context to put this holistic approach into practice.

The Mediterranean Sea and its coastal areas present unique challenges for sediment management as compared with other EU ecoregions; this is coupled with the need for a whole-basin view, involving both the EU countries and the non-EU neighbours of the southern and eastern coastline.

In most cases the targets for sediment management are strongly connected with different uses of water bodies and



with interventions to promote socio-economic development and competitiveness, such as port dredging and beach nourishment. In such contexts, the need for good science to inform decisions and policy is crucial in order to promote sustainable, cost-effective and environmentally sound solutions.

Against this background SedNet is organising an event on 6-9 April 2011 in Venice, which represents a paradigm for all Mediterranean coastal areas due to its cultural heritage, its precious lagoon and its challenges toward climate change adaptation.

#### Call for Abstracts

SedNet would be pleased to receive abstracts for platform presentations and posters for the Open Conference. Abstracts related to the main issues of the Conference with a special focus on the Mediterranean area will be particularly welcomed.

Issues to be addressed are:

- \* Biodiversity and sediment management (sediments, hydromorphology, habitats)
- \* Sediment management measures and cost-benefit analysis
- \* Climate change and sediment: effects on bioavailability and contaminant biogeochemical cycles
- \* Sediment in coastal zone management and Marine Strategy Framework Directive (e.g. sediment reuse for coastal protection and restoration)
- \* Sediment Environmental Quality Standards and monitoring
- \* Sediment and contaminant transport modelling
- \* Ecological risk assessment of contaminated sediment
- \* Mine tailings (historical contamination, soil erosion)

#### Submission of abstracts

Abstracts can be sent to the SedNet Secretariat: [marjan.euser@deltares.nl](mailto:marjan.euser@deltares.nl).

Deadline for abstract submission: **1 September 2010.**

URL: <http://www.sednet.org/conference2011.htm>

### 34th IAHR Biennial Congress (Australia, 26 June-1 July 2011)

**Date:** 26 June-1 July 2011

**Venue:** Brisbane, Australia at the Brisbane Convention and Exhibition Centre

**Summary:** The 34th Biennial Congress of the International Association of Hydraulic Engineering and Research (IAHR) will be held in Brisbane, Australia at the Brisbane Convention and Exhibition Centre on 26 June-1 July 2011. Engineers Australia and its National Committee on Water Engineering (NCWE) are collaborating with IAHR to organize the 34th IAHR Biennial Congress together with the 33rd National Hydrology and Water Resources Symposium and the 10th National Conference on Hydraulics in Water Engineering.

The Congress theme "Balance and Uncertainty: Hydraulic Engineering in a Changing World" focuses on the central roles of hydraulic engineering, hydrology, and water resources for our changing world, and how these roles link to the broader issues. A balance is continually being sought between competing values in water engineering, including the environment, the economy, tourism, social and indigenous values, health aspects, aesthetics, and the needs of current and future generations. Careful management and innovative solutions are required to balance these competing values, and these solutions must be able to deal with the uncertainty in the natural world as well as the changing human world.

By 2011, it will have been 26 years since an IAHR Biennial Congress was held in Australia. The last time was Melbourne in 1985.

URL: <http://www.iahr2011.org/>

Contacts: [info@iahr2011.org](mailto:info@iahr2011.org)

### APAC2011 - The 6th International Conference on Asian and Pacific Coasts (Hong Kong, Dec. 14-16, 2011)

**Date:** Dec. 14-16, 2011

**Venue:** Hong Kong, China

**Summary:** Hong Kong, widely celebrated as Asia's world city, is increasingly integrated with the Pearl River Delta Region of China. Sustainability of Hong Kong depends on coastal developments that require engineering solutions. The issues of concern include coastal reclamation, offshore wind farms, coastal water quality, Hong Kong-Zhuhai-Macau Bridge, and other coastal infrastructure projects. This international conference hosted by The University of Hong Kong will be a platform for engineers and researchers to keep abreast of the current scientific and technological advancements in coastal, port, ocean engineering, and other related fields. The University of Hong Kong is organising the 6th International Conference on Asian and Pacific Coasts in December 2011, which will be a platform for engineers and researchers to keep abreast of the current scientific and technological advancements in coastal, port, ocean engineering, and other related fields.

**Organizer:** University of Hong Kong

**Themes:** The scope of the conference will be broad, covering all issues related to coastal, harbour, and ocean engineering. Specific themes include, but are not limited to:

- Beach erosion and sediment transport
- Climate change and sea level rise
- Coastal infrastructure developments
- Hydrodynamics of offshore structures
- Lowland development and reclamation
- Marine ecology and environments
- Marine and offshore wind energy
- Oil spill and environmental hazards
- Port works (dredging, seawall design, etc.)
- Sea water intrusion
- Tsunami, waves and tides
- Wastewater disposal
- Wetlands

URL: <http://www.civil.hku.hk/apac2011/>

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### ISELE - International Symposium on Erosion and Landscape Evolution (Alaska, USA, September 18-21, 2011)

**Date:** Sept 18-21, 2011

**Venue:** Anchorage, Alaska, USA

**Summary:** Soil erosion caused by water and/or wind is a continuing problem throughout the world that threatens the capacity of the Earth to produce food, fiber, and renewable sources of energy for an ever-increasing population. Additionally, eroded sediment is a major air and water

pollutant, causing many detrimental off-site impacts. Erosion by wind and/or water processes continually impacts the evolution of landscapes. With global climate change, erosion and landscape evolution may be accelerated, particularly in regions such as Alaska, where increases in air temperature of just a few degrees may shift large landscape areas from frozen to thawing and more erodible conditions. This symposium provides a forum for participants to discuss the current status and the future of soil erosion research. This international conference is hosted by the American Society of Agricultural and Biological Engineers (ASABE) and held in conjunction with the Association of Environmental and Engineering Geologists (AEG) annual meeting. Submission deadline for paper abstracts is December 31, 2010.

**Organizer:** American Society of Agricultural and Biological Engineers (ASABE)

**Themes:** The scope of the conference will be broad, covering all issues related to water and aeolian soil erosion, and subsequent landscape evolution. Specific themes include, but are not limited to:

- Erosion Processes (Detachment, Transport, Deposition)
- Prevention and Control of Upland and In-Stream Erosion
- Highly Disturbed, Urban Areas, and Arid Lands
- Erosion Processes in Wetlands, Coastal, and Glacial Areas
- Aeolian Erosion and Fugitive Dust Emission
- Impacts of Global Change on Erosion Processes and Landscape Evolution

**URL:** <http://twosweet.bse.vt.edu/ISELE2011/index.html>

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## 12th International Symposium on the Interactions between Sediments and Water (Dartington, England, 19-23 June 2011)

**Date:** 19-23 June 2011

**Venue:** Dartington, Devon, England

**Summary:** 12th International Symposium on the Interactions between Sediments and Water, Dartington, Devon, England. Organised by the International Association for Sediment Water Science (IASWS)

**URL:** <http://www.IASWS.org>

and [www.geog.plymouth.ac.uk/IASWS2011](http://www.geog.plymouth.ac.uk/IASWS2011)

## 5th International Conference on Flood Management (Japan, Sept.27-29, 2011)

**Date:** 27-29 September 2011

**Venue:** . Tsukuba, Japan

**Summary:** International Conference on Flood Management (ICFM) is the only recurring international conference wholly focused on flood related issues. It is designed to bring

together practitioners and researchers alike, including engineers, planners, health specialists, disaster managers, decision makers, and policy makers engaged in various aspects of floodplain management. It provides a unique opportunity for these various specialists to come together to exchange ideas and experiences.

The 5th International Conference on Flood Management (ICFM5) marks the continued advancement of flood management practices and policies around the world. The name change from "Defence" as used in the previous four events to "Management" is reflective of the more integrative approaches to flood management that nations are increasingly employing. The first International Symposium on Flood Defence, held in Kassel, Germany in 2000, emphasized flood defence measures with each successive event (Beijing 2002, Nijmegen 2005 and Toronto 2008) evolving towards more integrative approaches, including risk, vulnerability and capacity building.

The ICFM5 theme is "Floods: From Risk to Opportunity", reflective of the continued trend towards a broader understanding of how we collectively make use of the opportunities provided by floods and flooding, cope with risks posed by them and plan for and respond to flood events.

**Organizer:** International Centre for Water Hazard and Risk Management (ICHARM)

**URL:** <http://www.ifi-home.info/icfm-icharm/icfm5.html>

**Contacts:**

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Tel: +81 29 879 6809

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E-mail: [info\(at\)ifi-home.info](mailto:info(at)ifi-home.info)

## Coastal Sediments'11 (USA, May 2-6, 2011)

**Date:** May 2-6, 2011

**Venue :** Miami, Florida, USA

**Summary:** The conference Organizing Committee welcomes you to the Seventh International Symposium on Coastal Engineering and Science of Coastal Sediment Processes—Coastal Sediments '11!

The Coastal Sediments'11 conference is the seventh in the series following the inaugural conference in 1977. The Coastal Sediments technical specialty conferences provide an international forum for exchange of information among coastal engineers, geologists, marine scientists, shallow-water oceanographers, and others interested in the physical processes of coastal sediment transport and morphology change.

Coastal Sediments 11 will continue to maintain the high quality of presentations and Proceedings which has made the event a valuable professional learning experience with a legacy of a frequently consulted Proceedings volume.

**URL:** <http://coastalsediments.cas.usf.edu/>

**Contacts:**

Coastal Sediments '11

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## Symposium on Two-phase Modelling for Sediment Dynamics in Geophysical Flows (France, April 26-28, 2011)

**Date:** April 26-28, 2011

**Venue :** Electricité De France Research & Development, Paris, France

**Summary:** Sediment transport is key to many geophysical applications: sediment deposition and resuspension processes in rivers and estuaries, morphological evolution of waterways and coastal zones, formation and displacement of turbidity maxima in estuaries, impacts of sediment drainage, breaching process in dyke- and dam-break flows, etc. In this research field, two-phase approaches have been more and more developed since they describe the physical processes responsible for sediment transport more realistically than a single-phase approach.

The THESIS-2011 (Symposium on Two-phase Modelling for Sediment Dynamics in Geophysical Flows) has the following objectives:

1. To establish a forum for discussing and exchanging experience and knowledge within the international research community for developing two-phase approaches applicable to sediment dynamics in geophysical flows;
2. To review the state-of-the-art of the two-phase approach for sediment dynamics;
3. To promote international cooperation and promote development of a research agenda for this research domain.

**URL:** [http://www.shf.asso.fr/upload/manifestation\\_programme112.pdf](http://www.shf.asso.fr/upload/manifestation_programme112.pdf)

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### More Coming Events in ISI Website

- APAC2011 - The 6th International Conference on Asian and Pacific Coasts (Hong Kong, Dec. 14-16, 2011)
- 5th International Conference on Flood Management (Japan, Sept.27-29, 2011)
- ISELE - International Symposium on Erosion and Landscape Evolution (Alaska, USA, September 18-21, 2011)
- RCEM2011 - The 7th IAHR Symposium on River, Coastal and Estuarine Morphodynamics (Beijing, Sept. 6-8, 2011)
- 34th IAHR Biennial Congress (Australia, 26 June-1 July 2011)

- 12th International Symposium on the Interactions between Sediments and Water (Dartington, England, 19-23 June 2011)
- Coastal Sediments'11 (USA, May 2-6, 2011)
- Symposium on Two-phase Modelling for Sediment Dynamics in Geophysical Flows (France, April 26-28, 2011)
- International Conference on the Status and Future of the World's Large Rivers (Vienna, 11-14 April 2011)
- 7th International SedNet conference (Venice, 6-9 April 2011)
- The 4 th International Symposium Water Resources and Sustainable Development (Algeria, Feb., 2011)

More .....

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

### Newsletter Layout and Production:

ISI Technical Secretariat

The ISI Newsletter is sent quarterly to ISI-Steering Committee members and interested experts. Please send your contributions to the Chairman of ISI SC at [manfred.sprefico@googlemail.com](mailto:manfred.sprefico@googlemail.com) or ISI technical Secretariat at [chliu@iwhr.com](mailto:chliu@iwhr.com)



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