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NEWSLETTER

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IN THIS ISSUE

News

- ✧ ISI Steering Committee welcomes Dr. Anil Mishra 1
- ✧ Advanced Training Workshop on Reservoir Sedimentation Management (Beijing, China, October 10-16, 2007) 1
- ✧ Elsevier to partner with the IRTCES 2
- ✧ Prof. M. Spreafico, Chairman of ISI Steering Committee visited IRTCES that acting as the ISI Technical Secretariat 2
- ✧ Meeting of Asia-Pacific Category II Water-Related Centers (Bangkok, Thailand; September 26-27, 2007) 2
- ✧ China says silt in Three Gorges Dam area under control 3

Conference Report

- ✧ Erosion and Torrent Control as a Factor in Sustainable River Basin Management (Belgrade, September, 25-28, 2007) 4
- ✧ Yellow River Initiative---Declaration of the 3rd International Yellow River Forum 5
- ✧ Synopsis of Outcomes from the International Bedload-Surrogate Monitoring Workshop (USA, April 11-14, 2007) 5

Coming Events

- ✧ International Conference on Fluvial Hydraulics (River Flow 2008) 7
- ✧ 8th International Conference on Hydro-Science and Engineering (ICHE-2008) 7
- ✧ 11th International Symposium on the Interactions between Sediments and Water 8
- ✧ International Conference on Hydrology and Climate Change in the Mountainous Areas 8
- ✧ International Symposium on Sediment Management 8
- ✧ 5th International SedNet Conference 27th-29th May 2008 9

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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.spreafico@bafu.admin.ch or ISI technical Secretariat at chliu@iwhr.com.

NEWS

ISI Steering Committee welcomes Dr. Anil Mishra

Anil Mishra was born in 1966 in Nepal. He has been involved in a number of international scientific research studies, including education, capacity building, co-operation and project development programmes in the fields of hydrology and water resources management in Asia and Africa.



He received training as a civil hydraulic engineer from the Byelorussian State Polytechnic Academy (Minsk, Belarus) in 1995. From 1996 to 2000, he joined the Department of Civil Engineering of Tribhuvan University (Nepal) as lecturer and taught undergraduate and graduate courses in the fields of hydraulics and fluid mechanics, hydrology, and irrigation engineering. In 2004, he obtained his PhD from the Division of Regional Environment, Kobe University, Japan. Mr Mishra did extensive research on hydrology and water resources management of the Nile basin in Africa. The work concentrated on the development of a coupled water balance and water transport model with GIS application for the Blue Nile river. He also studied low flows and developed recession flow forecasting models for the Blue Nile river.

From 2004-2006, Mr Mishra was a recipient of the Blaustein Postdoctoral Fellowship from the Jacob Blaustein Institute for Desert Research at Ben-Gurion University, Israel. As a postdoctoral research scientist, he was involved in hydrological, hydrochemical and isotopic study for a USAID-funded water resources project in the Ily-Balkhsash basin, Kazakhstan. In the Middle East, he studied groundwater-surface water interactions in the Jordan River basin.

He joined the UNESCO Almaty Cluster Office in Kazakhstan in February 2006 as a hydrology and science officer. Since June 2007, Mr Mishra has been transferred to the section of Hydrological Processes and Climate in the IHP secretariat in Paris.

Advanced Training Workshop on Reservoir Sedimentation Management (Beijing, China, October 10-16, 2007)

The Advanced Training Workshop on Reservoir Sedimentation Management was organized by the International Research and Training Centre on Erosion and Sedimentation (IRTCES) in Beijing, China on October 10-16, 2007. The workshop was sponsored by the International Sediment Initiative (ISI) of UNESCO-IHP and the Ministry of Water Resources of China, and co-sponsored by the World Association for Sedimentation and Erosion Research (WASER) and the Chinese National Committee for IHP. 29 participants from 12 countries including Afghanistan, DPRK, India, Iran, Madagascar, Malawi, Mongolia, Philippines, Russia, Sudan, Uzbekistan and China followed the training workshop. The lectures were given by experts from China and Switzerland.



Opening Ceremony

The Advanced Training Workshop on Reservoir Sedimentation Management is designed in fulfilling demands and needs for hydraulic engineers, managers, stakeholders and decision-makers in the countries suffering of serious reservoir sedimentation. Through lectures, discussions, exchanges and one-day field study the participants can improve their professional sediment theory and knowledge, get much latest concepts and techniques, and information and establish linkage among participants.

The Advanced Training Workshop on Reservoir Sedimentation was organized as a major activity of the International Sedimentation Initiative (ISI) of UNESCO for 2006-2007. It is designed in fulfilling demands and needs for hydraulic engineers, managers, stakeholders and decision-makers in the countries suffering of serious reservoir sedimentation. It meets the fourth objective of ISI "Education and capacity building for sustainable sediment management". Through lectures, discussions, exchanges and one-day field study the participants improved their professional sediment theory and knowledge, got much latest concepts and techniques, and information and established linkage among participants.

The presentations of the lectures showed all relevant aspects of Reservoir Sedimentation Management. Not only the quantitative aspects of the reservoirs sedimentation management have been presented but also the social, economic and environmental impacts. The benefit and costs of erosion, transport and deposits of sediments have been shown.

Due to the fact that the participants covered all level from technicians to professor a lot of discussion and know-how transfer have taken place. The differences in capabilities of the different countries were clearly pointed out.

The Training Workshop is a starting point for cooperation of the participants within the framework of ISI, as pointed out by several participants.

It was stated, that the important content of the ISI conferences and ISI workshops should be made accessible to a broad community. At the moment only the workshop participants have access and this is not sufficient taking into account the efforts of the lecturers and the need for information in many countries. It was therefore proposed that the ISI Steering committee and UNESCO headquarter should discuss the possibility to set-up a data warehouse within the ISI Information system.

Details can be seen by visiting: <http://www.irtces.org/zt/training2007/>

(by Prof. Cheng Liu and Prof. Manfred Spreafico)



Training lecture



Field study

Elsevier to partner with the International Research and Training Center on Erosion and Sedimentation

Amsterdam, 30 October 2007 – Elsevier, leading publisher of scientific, technical and medical information, today announced a new partnership with the International Research and Training Center on Erosion and Sedimentation (IRTCES) and the World Association for Sedimentation and Erosion Research (WASER) with respect to the International Journal of Sediment Research starting in 2008.

This quarterly journal has an international editorial board and covers scientific and technical papers on all aspects of erosion and sedimentation, including the mechanics of sediment transport and fluvial processes. It also welcomes papers related to geography, geomorphology, soil erosion, watershed management, sedimentology, environmental and ecological impacts of sedimentation, social and economic effects of sedimentation and their assessment.

"This new partnership represents a unique opportunity for Elsevier to work closely with IRTCES, offering the necessary business expertise and publishing resources to provide the International Journal of Sediment Research with an international audience and certification, and to further establish its success and international profile" commented Dr. Christiane Barranguet, publisher of the journal. "In particular, our Academic Relations department and our innovative, reliable and market-leading electronic platform, ScienceDirect, are core to our partnership as they will ensure both certification and the widest possible dissemination of the

Journal among the Sedimentation Engineering and Water Management communities."

The *International Journal of Sediment Research* will be available to a global audience electronically via the premier online platform ScienceDirect.

(Source: <http://www.elsevier.com>)

Prof. M. Spreafico, Chairman of ISI Steering Committee visited IRTCES that acting as the ISI Technical Secretariat

On October 12, 2007, Prof. Manfred Spreafico, Chairman of UNESCO-IHP-ISI (International Sediment Initiative) Steering Committee and Head of Swiss National Hydrological Survey paid a visit to the IRTCES that acting as the ISI Technical Secretariat. Prof. HU Chunhong, Secretary-General and Deputy Director of IRTCES, Ms. TONG Yuling, Prof. WANG Yanguai and Prof. LIU Cheng welcomed and had a meeting with him. Prof. Hu expressed his sincere thanks to Prof. Spreafico for his coming to Beijing for lecturing at the Advanced Training Workshop on Reservoir Sedimentation Management that IRTCES was organizing, briefly introduced the activities within the framework of IHP that IRTCES carried out or involved in and activities that IRTCES acting as the ISI Technical Secretariat. Prof. Spreafico introduced the advances of the ISI and the ISI training workshops organized in Argentina and Mexico, and expressed his acknowledgement for the contributions that IRTCES acted as the secretariat. Relevant issues concerning compiling ISI case studies, information system, ISI expert workshop to be organized at Berne, Switzerland in next April and the 6th ISI Steering Committee Meeting to be held at Beijing, China in November 2008 were discussed. After the meeting, Dr. LIU Cheng showed Prof. Spreafico the Global Data on Erosion and Sedimentation, a database system that IRTCES is constructing. (Cheng LIU, IRTCES)



Meeting of Asia-Pacific Category II Water-Related Centers (Bangkok, Thailand; September 26-27, 2007)

The Meeting of Asia-Pacific Category II Water-Related Centers was held at the UNESCO Bangkok Office on September 26-27, 2007. Representatives participated at the meeting from five existing centres, International Research and Training Centre on Erosion and Sedimentation (IRTCES, China), Regional Humid Tropics Hydrology and Water Resources Centre (HTC, Malaysia), Regional Centre on Urban Water Management (RCUWM, Iran), International Center on Qanats and Historic Hydraulic Structures (ICQHHS, Iran), and International Centre for Water Hazard and Risk Management (ICHARM, Japan) and three

prospective centres to be established in the near future, Asia Pacific Centre for Ecohydrology (APCE, Indonesia), International Centre of Water for Food Security (IC Water, Australia) and Sustainable Water Engineering and Management Centre (SWEM, Thailand). Experts on water-related issues also participated in the meeting from UNESCO regional offices in Beijing, Jakarta, Samoa, New Delhi, and Teheran.

Prof. Hu Chunhong, Prof. Wang Yangui and Prof. Liu Cheng from IRTCES and Prof. Chen Jianguo from IWHR attended the meeting. Prof. Hu Chunhong gave a presentation brief introducing IRTCES and its achievements over 23 years since its establishment, main activities within the framework of IHP during the 6th phase and IRTCES acting as the International Sediment Initiative (ISI) Secretariat. He appealed UNESCO IHP continue to support the ISI and sediment researches in the 7th Phase, and he expressed that IRTCES will make unremitting effort to bring into full play the leading role of IRTCES in international sediment research, consultation, training, communication and cooperation under the leadership of UNESCO and Ministry of Water Resources, P. R. China.

In the two days meeting, the representatives discussed the "Recommendations and follow-up" decided at the global meeting held at IHE, Delft, the Netherlands in June 2007, the relations between water centres and UNESCO field offices workplans, opportunities for collaboration and defined roles for each centre in multidisciplinary projects. To promote the 7th phase (2008-2013) of the International Hydrological Programme (IHP), it is much anticipated that collaboration would be strengthened among UNESCO centres as well as between those centres and UNESCO regional offices. (Cheng LIU, IRTCES)



Meeting



Participants from China

China says silt in Three Gorges Dam area under control

BEIJING, Nov. 27 (Xinhua) -- Silt accumulation will not be a problem for the massive reservoir of the Three Gorges dam project, Chinese officials said here on Tuesday.

Wang Xiaofeng, director of the office of the Three Gorges Project Committee of the State Council, said through careful planning silt accumulation at the 660-kilometer-long reservoir, the world's largest water conservation project in Hubei Province, was less than 40 percent of the annual projected figure.

"We anticipated the reservoir would accumulate 530 million tons of silt each year. But the actual figure is only 200 million tons annually according to our monitoring in 2003 and 2006," he said.

Pan Jiazheng, leader of the project's quality control panel who has been responsible for the construction of several hydroelectric power stations around the country, said the problem of silt accumulation had been at the forefront since the start of the project.

Chinese engineers have had great experience in tackling silt accumulation since the early 1960s with the opening of the Sanmenxia Power Plant. The Yellow River dam in Shaanxi Province accumulated 1.5 billion tons of silt within two years of its 1960 opening, raising the river's bed significantly.

To alleviate the problem, holes were drilled at the bottom of the dam to let the silt pass through.

At the Three Gorges, 23 big holes have been built at strategic parts within the dam. The passages are opened in the rainy season when there is more silt in the water.

Pan said in-depth research into the problem had been conducted before the project's launch and the current situation was under control. "The project is working even better than we had expected."

He was also confident that the Three Gorges dam would not be troubled by accumulations. He added "close monitoring" needed to be paid to the silt as the stored water level gradually reached its highest point.

Since 2002, China has allocated 200 million yuan (about 27.06 million U.S. dollars) to monitor the river's silt levels.

Wang said that the project's influence on the ecological environment generally fell within the scope the feasibility report had estimated.

He added with the area's soil erosion under control, the Yangtze water quality remained the best among China's major rivers.

China has allocated a total of 2 billion yuan to the project in effort to protect the soil and water in the upper reaches of the river. It has also increased its financial support for an ambitious tree-planting project along the Yangtze River valley.

Statistics indicated that until 2006 soil erosion has been reduced by one percent annually in the area of the Three Gorges.

CONFERENCE REPORT

Erosion and Torrent Control as a Factor in Sustainable River Basin Management (Belgrade, September, 25-28, 2007)

In order to mark the hundred years of erosion control works in Serbia (1907-2007), the Conference was initiated by the Ecological Engineering Department for the Protection of Land and Water Resources, Faculty of Forestry. The Conference was organized jointly with the following international organizations and associations: World Association of Soil and Water Conservation (WASWC) , World Association for Sedimentation and Erosion Research (WASER) , International Sediment Initiative (ISI) of UNESCO.

The International Scientific Committee of the Conference was composed of distinguished experts in the fields of erosion and sediment transport: D.E. Walling , M.J. Haigh, V. Golosov, J. Huebl, I. Hannam, M. Miloradov, S. Bruk, H. Hurni , J. Křeček , S Kostadinov, S. Petković, M. Zlatić , H. Rubio, M. Janeček, I. Blinkov , I. Marinov, S. Hacıyakupoglu.

BACKGROUND

The significance of sediment issues for river basin management is widely recognized. As sediment problems are strongly related to erosion, sediment yield and torrent processes in the upland areas of river basins, erosion and torrent control is an important element of river basin management plans. The appropriate approach to this problem should be based on the assessment of the land degradation processes in the river basin, and their monitoring and modeling. The design of erosion and torrent control works should include risk analysis involving all mountain hazards, and encompass the different measures of soil conservation, sediment management and ecological engineering. In the view of the complexity of erosion and torrent control issues, river basin management plans should take into consideration the social and economic aspects of these activities

CONFERENCE TOPICS

A. DEGRADATION PROCESSES : Soil erosion (water and wind erosion) ; Impact of global changes on erosion processes; Landslides and rockfalls; Torrents and torrential floods; Hydrological processes; Sediment transport and sedimentation processes; Impact of soil erosion and sediment transport on water quality; Monitoring of erosion and sedimentation processes; Modeling of erosion and sedimentation processes; Vegetation, biodiversity and slope stability ; Eco-engineering and land restoration.

B. EROSION AND TORRENT CONTROL WORKS - WATERSHED MANAGEMENT; Risk analysis and risk management of mountain hazards; Erosion control works; Soil conservation; Torrent control works; Sediment management; Effects of erosion and torrent control works; Wind erosion control; Ecological engineering for erosion and torrent control; Impact of land use on soil erosion and sediment transport

C. SOCIAL AND ECONOMIC ASPECTS OF EROSION AND TORRENT CONTROL: Soil erosion and torrents as a social problem; Economic effects of erosion and torrent control works; Project management for soil and water protection; Strategy for erosion and torrent control in view of sustainable development of mountain regions; Legal

background and normative acts for erosion and torrent control; Institutional aspects of erosion and torrent control

PARTICIPATION

Over 80 scientists and professionals took part in the event, with 35 participants from 22 different countries of Europe, Asia, Australia. A one-day excursion for the participants was organized within the programme, visiting erosion and torrent control works in localities about 100 kilometers from Belgrade.

Out of the 80 papers submitted to the Conference 44 papers were presented orally, and 12 in the form of posters. The full papers are available at the CD, whereas the abstracts were published in a booklet distributed to the participants. Both the booklet and the CD have been registered at the National Library of Serbia.

KEYNOTE LECTURES

The topics were introduced by keynote lectures:

Desmond E. Walling: Tracing versus monitoring: new approaches to studying the fine sediment dynamics of catchments and river basins.

Martin Haigh: Estimating Sediment Mobilisation from Torrent and Gully Deposits: Field Studies.

Stanimir Kostadinov: Erosion and Torrent Control in Serbia: Hundred Years of Experience.

Wojciech Froehlich: Erosion, Sedimentation and Catchments Management in Mountain Environments: the Polish Experiences.

Zhao-Yin Wang, Guo-An Yu: Step-pool System for Erosion Control and Ecological Restoration.

Miodrag Zlatić: Strategy/Policy on Land Use Management and Soil Conservation.

ACCENTS TO RECALL

By unanimous opinion of the participants, the Conference was highly successful. The Conference brought forward several important points which could be taken into account in the follow-up of the event. Some of the accents merit to be recalled below, for further attention:

Importance of erosion phenomena for watershed management: efficient watershed management needs full assessment and evaluation of erosion and torrent control in the watersheds. It should be noted that the papers presented and ensuing discussions underlined the multidisciplinary character of erosion and sediment research. Thus, in order to facilitate the cooperation of very different scientific disciplines, the preparation of a multidisciplinary glossary could be of great use.

Assessment of the origin of sediments by tracing methods: at the Conference efficient tracing methods were presented to identify the origin of sediment in different parts of the river system and watershed. It has been agreed that these methods need full attention of researchers and managers concerned with control of erosion and sedimentation phenomena in rivers and watersheds.,

Application of remote sensing and GIS. Several papers highlighted the advantages of using remote sensing and GIS technologies for the identification and mapping of sediment phenomena in river basins and watersheds. The

papers at the same time, underlined the need for further research to make these methods applicable in different physical and socio-economical settings.

Ecological Engineering: The Conference has called attention to the increasing importance of ecological engineering in dealing efficiently with erosion phenomena and control. The substance and definition of the notion of ecological engineering would merit further attention, for more efficient dealings with watershed management.

FIELD TRIP

Surroundings of Valjevo town in western Serbia; Afforestation of the erosion area; Dam "Rovni" in construction; River engineering structures on the Kolubara river.



Further information about the Conference can be obtained at the website: <http://www.sfb.bg.ac.yu/erosion2007>, or by direct contacts with the organizers: Prof. Dr. Stanimir Kostadinov (kost@EUnet.yu) and Prof. Dr. Nada Dragović (nadad@verat.net)

Yellow River Initiative---Declaration of the 3rd International Yellow River Forum



During October 15-19, 2007, experts, scholars and representatives from over 60 countries and regions gathered together in Dongying at the Yellow River Delta to attend the 3rd International Yellow River Forum.

Facing huge problems of the rivers in the world, which makes us worry too much, considering from perspective of society, environment, economy, history, science and ethic, on the basis of deep discussion on economic and social development of river basin and maintaining the healthy life of rivers, we recognized these same problems inspired the adoption of "Yellow River Initiative-Declaration of the 3rd International Yellow River Forum" as below by delegates coming from all over the world.

We recognized:

River has life. River is a continuous, intact and clean life system. It is the continuous and recycling life system that

creates colorful and magnificent natural scenery, and nourishes the ecosystem and human being. Human being has no any excuse and right to ruin the life of rivers.

River nurtures great civilization of human being. Civilization starts from the side of rivers. Nations grows on the bank of rivers. Culture and emotion, history and reality accumulate, settle, fluctuate and mingle here. Human being and rivers live mutually-dependent. Therefore, the relationship between human being and rivers should change from opposition into harmony. Rivers should be considered as a life body. Human being's consciousness of respecting rivers should be raised. A threshold line should be set down for stop blindly outstretching of human activities.

Rivers should greatly support gigantic ecosystem and economic development. The prerequisite is they should be healthy rivers. It is an obligatory mission of present generation to set up a vision of life value of rivers, respect rivers' right of keeping continuous, integrate and clean, and maintain the healthy life of rivers.

It is right time to call for action. We should shoulder the following responsibilities and duties:

Recognizing the significance of rivers to human being and publicizing it ardently, cherishing rivers' life like ourselves, devoting to river protection consciously, and promoting the maintenance of healthy life of rivers;

Acting well as a representative for rivers, carrying out training, development and management of rivers in a scientific way, optimizing water allocation, integrating and harmonizing development of economy, ecology and environment development in river basin, balancing the relationship of stakeholders, and promoting the development of society;

Jointly forging the platform for international river management exchange, carrying out exchange, dissemination, and cooperation on river basin management experiences and technology, awarding contributors with outstanding performance, promoting the maintenance of healthy life of rivers with an effective mechanism;

Appealing governments, international societies and people from all sectors of the world to make concerted efforts, take active action hand in hand, strive for the protection and the great rejuvenation of the rivers-the cradle of human civilization!

Wish the rivers for both nature and human society in the planet flushing forever! (Source: YRCC)

Synopsis of Outcomes from the International Bedload-Surrogate Monitoring Workshop (USA, April 11-14, 2007)

The International Bedload Surrogates Monitoring Workshop¹, organized by the Bedload Research International Cooperative (BRIC) on April 11-14, 2007, in Minneapolis, Minnesota, USA, was held to: a. determine the extent to which available bedload-surrogate technologies have progressed to wise usage based on calibration under laboratory and field conditions; b. further the development and verification of novel bedload-surrogate technologies and methodologies toward their routine application in large-scale monitoring programs; and c. identify needs related to international standards on bedload data-collection, -storage, and -dissemination protocols.

About 50 geomorphologists, sedimentologists, hydraulic engineers, hydrologists, and others with expertise and (or)

interest in bedload monitoring representing nine countries convened at the St. Anthony Falls Laboratory⁵. Others from around the world participated via live webstream on April 11-13, which was archived for perpetuity.

Outcomes from the workshop include proceedings to be released by 2008 with at least 25 peer-reviewed papers primarily dealing with issues of calibration of bedload-surrogate technologies and state of the art bedload-surrogate monitoring. It will also include the principal workshop recommendations; identification of compelling bedload-surrogate technologies and related issues in data acquisition; recommendations of methods to bring selected technologies to fruition; and identification of other issues and needs germane to the international bedload-research community.

The workshop was predicated on recognition of the research community's long-standing inability to resolve a variety of difficulties in measuring and monitoring bedload discharge (transport), particularly in gravel and mixed gravel-sand bedded rivers. Direct bedload measurements, particularly during medium and high flows when most bedload occurs, tend to be time-consuming, expensive, and potentially hazardous. Indirect or surrogate technologies developed largely over the last decade and used at a number of research sites around the world show considerable promise toward providing relatively dense, robust, and quantifiably reliable bedload datasets. However, information on the relative performance, scope of applicability and ultimate efficacy of selected technologies for use in monitoring programs is needed, as is identifying methods for bringing the most promising and tractable of the technologies to fruition.

Three principal recommendations emanated from the workshop:

1. Provide Access to Bedload and Ancillary Data

Worldwide: The desire for access to a broad spectrum of bedload data from around the world was unanimous among workshop participants. Anticipated limitations in resources seem to preclude development, population, and maintenance of a central database. An alternate approach to bedload-data access was described as follows: a. Form an ad hoc committee to define the objectives and approach toward accessing bedload and ancillary data worldwide. Identify potential partners in this effort, such as the National Center for Earth-surface Dynamics. b. Locate and post on-line static (historical) bedload and ancillary databases that do not require refreshment and maintenance. c. Identify and access dynamic databases with bedload and ancillary data worldwide, such as the U.S. Geological Survey's National Water Information System. Provide metadata on each database, including protocols by which the data were collected and analyzed. d. Develop sequential query language or other script-type language that can extract data on request from the static and dynamic databases. e. Enable access or make available information related to access to the suite of bedload and ancillary databases through the Bedload Research International Cooperative home page free-of-charge.

This concept has been articulated in some detail by Gray and Osterkamp (2007). Collaborators that have expressed some level of interest include the National Center for Earth-surface Dynamics and the World Association for Sedimentation and Erosion Research.

2. Develop and Implement a BRIC Benchmark

Network: A number of bedload researchers have developed novel techniques for intermittently or continuously monitoring bedload transport. However, some lack the capacity or access to appropriate facilities to compare their techniques to "ground truth." Ironically, there are a large number of sites – both controlled, such as laboratory flumes equipped with sediment-measuring devices; and uncontrolled, such as Reid-type (formerly termed Birkbeck) slot samplers set in natural channels and operational during runoff – where reliable bedload-transport rates can be derived.

Recognizing this fundamental need and the availability of a number of facilities capable of providing bedload-transport ground truth, the workshop attendees were unanimous in their recommendation for the BRIC to develop a Bedload Benchmark Network. Such a network would consist of sites and facilities that: a. possess the facilities and capabilities that enable reliable computations of bedload transport; b. agree to join and collaborate as part of the BRIC Benchmark Network; and c. is coordinated by a BRIC-organized committee to help researchers in the selection of an appropriate bedload-research venue.

At least 20 such venues have already been identified as potential BRIC Benchmark Network research sites.

3. Summarize the Status of Progress in Bedload-Surrogate Technologies:

A primary thrust of the workshop was to compile and evaluate information on bedload-surrogate technologies and to identify those that show the most promise for monitoring bedload as part of operational programs in a quantifiably reliable way. Papers presented at the workshop will be published in a USGS Scientific Investigations Report, on a wide range of technologies, most of which were based on active or passive hydroacoustic techniques. Surrogate technologies based on magnetic and impact sensing are presently less developed for use in the near future. The hydroacoustic technologies are summarized below:

Active Hydroacoustics: This technology focused on stationary deployment of an acoustic Doppler Current Profiler (ADCP) in sand-bed systems. The net downstream movement of near-bed sediments causes a bottom-referenced ADCP to incorrectly infer that the device is moving in the upstream direction. Hence, for ADCP flow measurements, a "moving-bed correction" is required (Mueller and Wagner, 2006). The "moving-bed correction" is being used to infer bedload transport in conjunction with bedload measurements, such as in a flume with a slot-sampler, or otherwise using a portable bedload sampler.

Passive Hydroacoustics: This technology uses hydrophones or geophones to measure the intensity of natural sounds emitted in gravel-bed channels during runoff. The sound intensity is related to bedload-transport rates, and has been shown to be the case in a field and a flume study. Geophones resting on the bed and consisting of a pipe or impact plate and hydrophones deployed within the water near the bed have been tested. Geophones have been satisfactorily calibrated either in the lab (plates) or also in Nature (pipe).

(John R. Gray, Jonathan B. Laronne and Jeffrey G.D. Marr)

COMING EVENTS

International Conference on Fluvial Hydraulics (River Flow 2008)

From: 2008-09-03 to 2008-09-05

Venue: Altinyunus Hotel, Çeşme-İzmir-Turkey

Summary: Rivers are continuously eroding or depositing under normal natural conditions. However, these changes can be either reversible or irreversible. Reversible changes result from the natural cycle of water and sediment runoff from a catchment. However, irreversible changes normally occur under natural conditions in the upper or lower reaches of a river. Within the context of reversible and irreversible water-sediment processes, Fluvial Hydraulics was born as one of the fundamental discipline in engineering practice and scientific research. Recent developments in fluid and sediment mechanics have provided Fluvial Hydraulics the integration of basic phenomenal knowledge into practical engineering works. New engineering tools revealed from advances in physical understanding, computation methods and measuring techniques. River Flow 2008 will be organized with the support of Fluvial Hydraulic Section (FHS) of the International Association of Hydraulic Engineering and Research (IAHR). This conference intends to be a forum for all researchers involved in River Hydraulics studies. It would be an opportunity to meet together for scientists working on both complementary aspects of hydrodynamic processes and sediment transport phenomena in rivers, using theoretical, experimental or numerical approaches. The conference will concentrate on the hydraulics fundamentals, its application in engineering or environmental related problems.

The conference, River Flow 2008 in Turkey, will be a three-day-long simulation of the work of the scientists studying on Fluvial Hydraulics. The conference will begin on Wednesday, September 3. Technical sessions will be held in four parallel tracks from Wednesday to Friday. During the conference, one or two plenary lectures will be planned each day to deliver by expert scientists. Master classes, which are an important feature of the River Flow Conference Series, will be held the day preceding the formal opening of the Conference.

Organizer: Local Organizing Committee (LOC) for River Flow 2008 of Turkey. The LOC members consist of the following Universities/ Institutions:

State Hydraulic Works of Turkey
Middle East Technical University (METU)
Gazi University (GU)
Istanbul Technical University (ITU)
Dokuz Eylül University (DEU)
İzmir Institute of Technology (IYTE)
Cukurova University (CU)
The University of Mississippi, USA

Sponsors/co-sponsors:

International Association of Hydraulic Engineering and Research (IAHR)-Fluvial Hydraulics Committee (FHC)
UNESCO- International Hydrological Programme-(IHP)
International Sedimentation Initiative (ISI)-IHP

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URL: <http://riverflow2008.org/>

8th International Conference on Hydro-Science and Engineering (ICHE-2008)

From 2008-09-8 to 2008-09-12

Venue: Nagoya, Japan

Summary: On behalf of the International and the Local Organizing Committees of the 8th International Conference on Hydro-Science and Engineering (ICHE-2008), we cordially invite you to participate in the conference to be held on September 8-12, 2008 in Nagoya, Japan. It is great honor for us to be your hosts at this important event in which our primary goals are the sharing of scientific and professional experiences and recent advances in our engineering discipline. The conference is hosted by Nagoya University, School of Civil Engineering, and organized locally by an organizing committee composed of faculty members from Nagoya University and other universities in the region.

The ICHE-2008 will extend the series of biennial conference started in Washington, D.C (1993), continued in Beijing (1995), Cottbus (1998), Seoul (2000), Warsaw (2002), Brisbane (2004), and Philadelphia (2006). These conferences have acted in the past as a welcome forum to report and discuss the latest advancements in Hydro-Science and Engineering and as such have always been highly valued by all participants. Undoubtedly, the ICHE-2008 will provide an opportunity for making numerous personal and professional contacts. The theme of this conference is "New Challenge of Hydro-Science and Engineering toward Sustainability through Flood Risk, Water Resources & Ecosystem Assessment ". Though the topics discussed in this conference are wide as listed below, they will be organized as several mini-symposia to clarify the direction of the new challenge. In addition to personal and professional contacts during the technical sessions, the conference offers its participants a chance to attend specialized technical visit that will demonstrate "New Challenge of Hydro-Science and Engineering toward Sustainability through Flood Risk, Water Resources & Ecosystem Assessment".

Sponsors: International Association of Hydraulic Engineering and Research (IAHR), Nagoya University, Japan Society of Civil Engineers (JSCE), Ecology and Civil Engineering Society (ECES), Japan Water Forum, Chinese Hydraulic Engineering Society (CHES), Korean Association for Water Resources (KWRA), Canadian Society for Civil Engineering (CSCE), American Society of Civil Engineers (ASCE), World Association for Sedimentation and Erosion Research (WASER), National Center for Computational Hydroscience and Engineering, the University of Mississippi (NCCHE)

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11th International Symposium on the Interactions between Sediments and Water

From 2008-02-17 to 2008-02-22

Venue: Esperance, Australia

Summary: Management objectives for aquatic systems are increasingly highlighting the importance of sediment-water interactions in controlling nutrient and pollutant cycling.

The 11th International Symposium on the Interactions between Sediments and Water will explore our current understanding of process interactions across multiple space and time scales. Interactions at the microscale will be explored alongside interactions at catchment scale. The impact of extreme, short-lived events, such as a tsunami, will be compared to the impact of long-term drivers, such as climate change. We will also examine how sediment and water link terrestrial, freshwater, and marine ecosystems. The Symposium will be held in Esperance, Western Australia, where ancient soils, sediments and catchments maintain in a fragile balance with modern land uses and tourism. Mid-symposium field trips will provide opportunities to experience and engage with this fascinating area.

Sponsors : International Association for Sediments Water Science (IASWS); The University of Western Australia; School of Environmental Systems Engineering (SESE); Faculty of Engineering, Computing & Mathematics; Department of Conservation and Land Management; Skywest; Perth Convention Bureau

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International Conference on Hydrology and Climate Change in the Mountainous Areas

Date : November 15 to 17, 2008 and abstract dead line : 31 January, 2008

Venue: The conference will be held in Kathmandu, the capital city of Nepal. Draped along the greatest heights of the Himalaya, Nepal is a land of sublime scenery, timeworn temples, and some of the best walking trails on earth. November is the best season for tourist and trekkers because of likely no rains and neither hot nor cold. It is a best season to enjoy lots of green and blue sky as well as for out door activities like trekking, rafting, and wild life jungle safari.

Organized by: SOHAM-NEPAL and in collaboration with DHM

Supports : UNESCO, NAST, NEA, DWIDP have expressed their interest too support this conference SOHAM-Nepal invites and welcomes supports and cooperation from local and international agencies, scientific communities and individuals.

Introduction: To emphasize the reality that water is critical for sustainable development, environmental integrity and the eradication of poverty and hunger, UN General Assembly the Fifty-eighth session, agenda item 95 targeted years 2005-2015 as "International Decade for Action-Water for Life". Changes in the environment have been worrying issues to the scientific communities and planners. In order to open forum in these pertinent topics, SOHAM-Nepal is organizing an international conference on "Hydrology and

Climate Change in the Mountainous Areas". The proposed conference date is November 2008. The main objective of the conference is to involve scientists, engineers, development workers and planners as well as experts on related fields and create an opportunity for discussion and sharing information on observations, researches, best practices, lessons learnt etc. Broadly, the conference aims to address on - review the available technology in the field related to climate change and its impact on snow, glaciers and hydro-meteorological processes, assessment of the impact of sediment on water resources, environment, and socio-economy and to look for a mechanism for research and capacity building on understanding of hydrological system of mountainous areas. The main topics of the conference are: 1) Climate change impacts and adaptations 2) Snow and glacier hydrology, 3) Sedimentation and Mass wasting, 4) Hydrological modeling 5) Flood forecasting and early warning systems 6) Water induced disaster management 7) Droughts and low flows

Contact & Conference Secretariat

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International Symposium on Sediment Management

From 2008-07-10 to 2008-07-12

Venue: I2SM, Lille, July 10-12th, 2008, France

Summary: For many decades, waterways have been exposed to a wide variety of contaminants. Over the ages, river estuaries have given economic prosperity to those who live on their embankments. Much of this prosperity is based on the sediments brought by the rivers.

Even if regulations and a better control of contaminants have been established to reduce their emission, many contaminants are still present in bottom sediments. In fact, some of them are persistent and continue to pose a risk to the environment.

Since contaminated sediment problematic is extended throughout the world, this symposium will be international event. The symposium will review recent advances on sediments management related research and focus on engineering aspects. It will provide a unique opportunity for experts and engineers all over the world to meet and share their experience.

The organising committee cordially invites you to attend I2SM, which will be held on July 10 -12th 2008 in Lille, France

Organizer: Ecole des Mines de Douai France,
Co-sponsors : Région Nord-Pas de Calais, ADEME and Europe

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5th International SedNet Conference 27th-29th May 2008

Hosted and co-organised by: the Norwegian Geotechnical Institute, Oslo, Norway

Urban Sediment Management and Port Redevelopment

Summary: In urbanised areas sediments in rivers, harbours and marine coastal zones are often historically contaminated as a result of industrial activities, dockyard and harbour operations as well as discharges of municipal wastewater and urban surface water run-off. These 'legacies of the past' complicate the redevelopment of harbour areas and the waterfront of cities for housing or commercial purposes. A proper sediment management strategy is required that takes into account environmental risks associated with the sediments as well as identifying appropriate remediation options for use in the urban environment. Furthermore, European legislation increasingly requires the involvement of stakeholders, who may have conflicting viewpoints and concerns. How to manage such complexity? What challenges with regard to the management of contaminated sediments have been met and what experiences gained in port redevelopment cases and urban areas? This will be the topic for the 1st and 2nd day of the SedNet Conference. Sediment in River Basin Management Plans: The 3rd day of the SedNet Conference will be dedicated to the state-of-the-art on sediment management in river basin management planning. One of the main objectives here is to encourage presentations from ongoing, major EC projects such as AquaTerra, Modelkey, RISKBASE etc. Which sediment related results of these projects may (or should) find their way into river basin management plans or their future updates? Also an update will be given of the 4th SedNet Conference on sediment management as essential element of River Basin

Management Plans, which took place in Venice in 2006. What are recent developments in European River Basins, are sediments considered in management plans? What are experiences and challenges? Are there needs towards European policy?

Call for Abstracts: We would be pleased to receive abstracts for oral and poster presentations in which case studies, especially from Scandinavia, will be explicitly welcomed. The SedNet steering group will select the most appropriate oral presentations that best address the aims of the conference. Furthermore, the SedNet steering group will invite some key note speakers.

Please see www.sednet.org for the template for submission of abstracts by e-mail to the SedNet secretariat: marjan.euser@tno.nl.

Abstracts should be submitted by October 29th, 2007.

The Programme: Poster sessions will be held during all days. Oral presentations will be divided into 3 to 4 sessions each day. The social programme will include an Ice-Breaker at the Viking Ship museum in Oslo, an excursion to the Oslo Fjord and a Conference dinner. We anticipate the conference programme to be available by December.

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ISI Technical Secretariat

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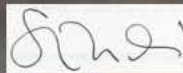
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Dear friends,

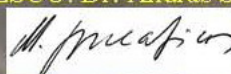
Thank you very much for your support to UNESCO – IHP - ISI in the past one year, and look forward to more successful collaboration in the coming years!

On the occasions of the Christmas and New Year, wish you and your family a

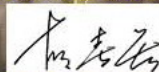
*Merry Christmas and a Very
Happy New Year!!!*



UNESCO: Dr. Andras Szollosi-Nagy



ISI Steering Committee: Prof. Manfred Spreafico



ISI Technical Secretariat (IRTCES): Prof. Chunhong Hu

UNESCO ISI Website: <http://www.irtces.org/isi/>