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INTERNATIONAL SEDIMENT INITIATIVE

NEWSLETTER

Reporting ISI news to you quarterly

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IN THIS ISSUE

NEWS

China to improve flood defenses

Flood prevention projects on major rivers across China have performed badly, failing to meet national standards, Li Guoying, vice-minister of water resources on the International Yellow River Forum in Zhengzhou, Henan province said on Tuesday. But a flood and disaster prevention system due for completion in 2020 should improve the situation, he added.

Dikes along the Jingjiang part of the Yangtze River and lower reaches of the Yellow River have performed relatively well, protecting the area below them from major floods, which occur once every 100 years as a result of the Three Gorges project and Xiaolangdi Reservoir. However, flood prevention measures on other major rivers, including the Pearl and the Songhua rivers, are insufficient to resist large floods, he said. Small rivers across China are particularly prone to flooding due to illegal activity along them and poor defenses, he said.

Li pledged to strengthen flood defenses in the next 10 years and to improve the situation along small rivers with floodable areas larger than 200 square kilometers by 2015.

A high concentration of rain between July and September, when 60 to 80 percent of total rainfall occurs in China, is a major factor in frequent flooding and droughts across the country, the vice minister said. In the last 60 years China has built more than 294,000 kilometers of dikes and 89,000 reservoirs, which protect in excess of 600 million people and 467 million hectares of farmland from flooding. (Source: http://www.chinadaily.com.cn/)

ISRS2013 Secretariat Visits IRTCES

On September 12, 2012, Dr. Zhang Hao, Liaison Person of the Secretariat of the 12th International Symposium on River Sedimentation (ISRS2013), visited the International Research and Training Center on Erosion and Sedimentation (IRTCES) introducing the advancement of the ISRS2013 preparation and discussing issues related to paper selection for a possible publication in the International Journal of Sediment Research (IJSR). IRTCES Deputy Director Prof. Liu Guangquan welcomed the guest and had a discussion with him. IRTCES Deputy Division Chief Prof. Liu Cheng and IJSR Chief-Editor's Assistant Dr. Chen Yuehong participated in the discussion.

The ISRS2013 will be held in Kyoto, Japan on September 2-5, 2013. More than 280 abstracts had been received from 25 countries or regions by the end of August. The deadline for abstract submission has been extended to September 30, 2012, considering the large amount of requests.

Erosion hits a fourth of India's coastline: study

Over 40 per cent of Maharashtra's coastline, 89 per cent of Karnataka's, all of Lakshadweep's and 83.9 per cent of Kerala's have been affected by erosion, according to an analysis that concludes that developments across India's coastline are not sustainable. It is part of a massive coastal area mapping project, or CAMP, by Tata Institute of Social Sciences, Pondy Citizens' Action Network or PondyCAN, and Bombay Natural History Society. According to the findings, 23.4 per cent of India's coastline has been impacted by erosion. Of the erosion in Lakshwadeep, 55 per cent is severe, against 11.1 per cent in Maharashtra and 17.5 per cent in Karnataka.

The three organisations have been jointly working on creating a first-of-its-kind web database for coastal development in India. It is being worked into an online database that will be constantly updated, edited and reviewed and will be on the lines of Wikipedia.

"We are developing a GIS database for coastal development in India. Coastal environment plays a vital role in India's economy by virtue of the resources, productive habitats and rich biodiversity. India's coastline stretches about 7,500 km and supports almost 30 per cent of its human population. However, rapid and unplanned urbanisation, impact of poorly planned infrastructure projects like coastal power plants, ports and coastal erosion have led to degradation of India's coastline to alarming proportions. Our study reveals that the current developments are not sustainable and untenable," said Sudarshan Rodriguez, CAMP project coordinator from TISS. "The absence of interdepartmental and Centre-state coordination is the biggest obstacle to fostering a sustainable coastal management strategy. Proper planning can prevent turning these invaluable natural resources into biological and economic wastelands," he added.

The interactive and working database will consist of geo-spatial mapping of all developments across India's coastlines, both current and proposed, case studies of impacts of these developments on coastal ecosystems and communities. The full findings and the website will be launched during the 11th Conference of the Parties to the Convention on Biological Diversity in Hyderabad next month.

"The enforcement and monitoring systems are very weak. Widespread land near the coasts are being given away to corporates at a pittance, but the destruction thereafter has not been factored in," said Probir Banerjee, president of PondyCAN. "There also seems to be separate laws for fishing communities and the big corporates. The same coastal areas that are been declared unfit for habitation by fishing communities are being sold to private firms. But no one is calculating the cumulative impact of the numerous coastal projects and constructions."

The study says that 821.01 km of India's coastline stand protected. "By protection, one implies sea walls, which is very expensive and not a long-term sustainable solution," said Rodriguez. (Source: http://www.indianexpress.com/).

Sediment is eroding reservoir capacity (USA)

Water experts knew when it first spilled in May of 1962 that Paonia Reservoir would ultimately fill with sediment. Its main water source is, after all, affectionately called "The Muddy." True to its name, the turbid waters of Muddy Creek deposit several tons of sediment into the reservoir every year. Fifty years of sediment has reduced water storage capacity, and in a drought year such as this one, that capacity is desperately needed.

On Aug. 4, the water that flows from the dam, which supplies the 488 shareholders of Fire Mountain Canal with supplemental irrigation water, ceased to flow. This is only the third time in the reservoir's 50-year history that storage water ran out before fall harvest, according to Trey Denison, project superintendent for the Fire Mountain Canal and Reservoir Company. The last time was in the drought year of 2002. In 1977 the reservoir never filled to capacity due to insufficient snow melt.

Sediment replacing storage capacity in reservoirs is a world-wide problem, said Denison, who attended the Bureau of Reclamation Reservoir Sustainability Workshop, held July 10-12 in Lakewood. Numerous water companies and governmental agencies were represented, and engineers and professors from around the world were in attendance. Much has been learned regarding sediment mitigation since Paonia Reservoir first began filling in 1961. The last decade has seen great advances in scientific understanding the problem,

Hydrology methods being tried in other reservoirs are likely to be used at the Paonia site. Those methods use water to draw sediment to the dam, then transfer it back into the river system during high water, which would naturally occur anyway, said Denison.

With financial help from the Colorado River Conservancy District, the Fire Mountain Canal and Reservoir Company hired an engineer firm to help study the problem. The district has partnered with other agencies to create a sediment survey of the reservoir that will help guide the company in addressing the problem.

"We're at a critical point, where the sediment level has reached the outlet," said Denison. Everything below the outlet tower, located just upstream from the spillway, is now filled with sediment. If that outlet were to become plugged, it presents a huge safety issue, since the dam could no longer be used to control flood waters. If that is allowed to happen, the government would begin a decommission process of the dam. Not only would that cost water users, said Denison, the water storage capacity would be lost forever.

"Reservoirs all over the world are filling up at quite a fast rate," said Denison. With climate change affecting water patterns and droughts becoming more common and more severe in the already arid west, storage is being lost when it is needed the most. The storage capacity lost in Paonia Reservoir over the last 50 years could have meant a full season of water for area users. A great deal of information came out of the July workshop, which focused on reservoir sustainability without losing storage capacity.

Tom Alvey, president of the North Fork Conservancy District, opened the history presentation at the 50th anniversary celebration of the reservoir and expansion of the Fire Mountain Canal on Aug. 6. Water users, the conservancy district, governmental agencies and citizen groups are coming together, with conservation efforts for Colorado's water storage units in mind, to create plans to solve sediment-related water storage problems. That may mean that, with some success, "the Paonia Project can continue providing water for the next 50 years," said Alvey.

Climate change will bring more heavy rains (China)

Climate change has triggered more floods in China and challenged drainage systems in big cities, experts say. "Although the rain is still more frequent in the south than in the north, there is a tendency that rainstorms sweeping northern provinces are as strong as those in the south," Wu Zhenghua, a researcher of the Beijing Meteorological Bureau and member of Beijing Disaster Relief Association, said at a news conference on coping with urban flood disasters held by the China Association for Science and Technology.

The record precipitation was 126.4 mm in one hour in Beijing, while it was not very different from the 115 mm record in Hong Kong, 107 mm in Wuhan, Central China's Hubei province, and 185 mm in Jinan, East China's Shandong province, Wu said. The July 21 rainstorm in Beijing, the heaviest in 61 years, caused precipitation as high as 541 mm in a township in Fangshan district, Wu said. The 16-hour rain brought 170 mm of precipitation on average to the city and killed at least 79 people. Statistics show that the rainfall intensity in northern provinces in China has increased in recent years, especially after 2008, Wu said.

"Global warming has increased the temperature in the middle and high latitudes of the Northern Hemisphere, resulting in more water-vapor exchange and heat exchange with low-latitude regions, and thus bringing more frequent heavy precipitation," he said. Wu said he is not sure whether the rainy climate will last for one or two decades, as some other experts say, but he suggests the government make long-term plans, including increasing the urban drainage capacity.

Since 2011, Shanghai, Wuhan and Guangzhou have announced multibillion-yuan projects to maintain and upgrade drainage systems. But these cities still suffered floods because their drainage systems were poor, said Fang Chuanglin, an urban-planning expert of the Institute of Geographic Sciences and Natural Resources Research under the Chinese Academy of Sciences. "The problems with the drainage systems include improper arrangement of pipelines and outdated design. Most pipes are designed for the worst rainstorm in three or five years, some can only cope with the heaviest rain once a year," he said.

According to a recent report from Science Technology Weekly magazine, more than 90 of Beijing's underpasses rely completely on water pumps to deal with heavy rain, and most drainage pipes in the city can only cope with 36 to 45 mm of rainfall per hour. The situation in Guangzhou is not much better, as 83 percent of the pipes are only capable of dealing with rain of 50 mm per hour.

"The design of Beijing's drainage system follows a standard published in 2006. We are not setting the standard of the pipelines according to the areas they cover. Instead, the standard is based on the significance of a road or an area," said Huang Qian, one of the designers of Beijing's drainage system, quoted by the Beijing News on Wednesday.

A new drainage standard published by the Beijing Municipal Commission of Urban Planning follows the old tradition the work area of central government bodies should be capable of resisting the worst rain in 10 years; municipal-level government and cultural relic sites should withstand the worst rain in five years; and the standard for other regions is to handle the biggest rain in three years. (Source: China Daily)

Singapore prepared against coastal erosion, says new study

On Singapore's coastal areas, houses are built higher and higher up in order to avoid the highest tide level and protect against coastal erosion. Since 1991, all reclaimed land in the island country has had to be built at least 1.25 meters above the highest tide level and in 2011, this was raised another meter up in an effort to protect against coastal erosion.

According to a new American study, sea levels across the planet are expected to continue to rise over the next 100 years, and could be rising two to three times as much as previous studies reported. Still, experts said that Singapore has already implemented a number of initiatives, including building higher than tide levels, to combat the possibility of coastal flooding. Flash floods in Singapore's central shopping district in recent years were caused by heavy rain and not rising sea levels, the report said, allaying fears that Singapore was already under threat.

Experts did warn that coastal flooding would be similar to the floods that have hit the city-state. Wetland Scientist at the National University of Singapore Daniel Friess said in comments to Channel News Asia that "a coastal flood is basically an unexpected high tide. You've got elevated tides, elevated waves. They're all going to contribute to a surge of water in low lying areas by the coast. The impact of a coastal flood is in many respects similar to an inland flood where you have a large body of water flooding shops and businesses and residences, you also often experience a lot of erosion on the coast."

With new data on the melting of polar ice caps, a new US National Research Council study predicts global sea levels could rise between 50 and 140 centimeters by the turn of the century. That's higher than the 2007 UN estimate of between 18 and 59 centimeters.

Singapore's National Environment Agency study in 2007 predicted that the sea levels around Singapore would rise slightly more – between 24 and 65 centimeters by 2100.

Local experts said there's no need to panic. Principal Project Manager, Coastal Management, Building & Construction Authority, Ho Chai Teck, said: "About 70 percent of the coast line is already protected by hard structures like sea walls or stone embankments, which help protect against coastal erosion. For these structures we're cautiously optimistic that they will continue to function well and protect us against any phenomena in the near term."

For now, Singapore appears to be safe, but with climate change and carbon emissions continuing to remain at staggeringly high levels, island countries like Singapore do face threat. (Source: http://www.bikyamasr.com)

More News in ISI Website

- China to improve flood defenses
- Contents of IJSR (Vol. 27, No.3, 2012)
- Interview: UN to launch global network to support sustainable development agenda
- Report: Healthier Mississippi River faces plenty of issues (USA)
- Danish Minister for the Environment visits China
- Erosion hits a fourth of India's coastline: study
- Practical training course on sustainable sediment management with the Sava River Basin as a showcase (Croatia, 15 – 18 Oct. 2012)
- ISRS2013 Secretariat Visits IRTCES
- BASEGRAIN: a MATLAB-based automatic object detection software tool for granulometric analysis of top-view photographs of fluvial gravel beds
- Deadline for ISRS2013 abstract submission extended to Sep. 30, 2012
- New film for the protection of world's freshwater (UNESCO)
- Announcement for Special Journal Issue for G-WADI in International Journal on "Sciences in Cold and Arid Regions"
- Sediment Sample from Dead Sea Provide Insight into Climatic Past
- Shifting Sands: San Francisco Begins Huge Erosion-Control Project (USA)
- Towards Sustainable Sediment Management in the Sava River Basin (ISI & SedNet)
- Climate change will bring more heavy rains (China)
- Sediment is eroding reservoir capacity (USA)
- Sheboygan begins process of dredging contaminated sediment (USA)
- Vice Minister Jiao Yong met with WWF Director General James Leape (China)
- IWHR Attends the 80th ICOLD Executive Meeting in Kyoto
- Singapore prepared against coastal erosion, says new study (Singapore)
- Researchers excited by early signs of Elwha changes (USA)
- Sediment seminars aim to better protect water (New Zealand)
- Laos vows to address Mekong dam fears

More ……
(http://www.irtces.org/isi/)

CONFERENCE REPORT

The 5th International Yellow River Forum

The 5th Yellow River Forum was held in Zhengzhou, the capital of Central China's Henan province, from Sept 24-27, 2012. The forum focus on hot spots of water issues related to integrated water resources and river basin management. Facing the deterioration of the natural environment, and taking into account the water needs of both the environment and human society, there is a need to protect river ecosystems and provide for the sustainable development of rivers in order to provide positive support for the human development.

Chen Lei, Minister of Water Resources
Li Ke, Henan Province's executive vice governor

Ida Auken Danish Minister for the Environment
Michael Walsh Deputy Commander for United States Army Corps of Engineers

Tony Burke Minister for Sustainability, Environment, Water, Population and Communities, Australia
Samuel Sipepa Nkomo Minister of Water Resources Development and Management of Zimbabwe

Loïc Fauchon President of the World Water Council
Georg Martin Schwede Deputy Director of WWF

Sediment seminars aim to better protect water (New Zealand)

About 50 Northland contractors and consultants are attending a series of Whangarei-based seminars designed to better protect the region's waterways from harmful sediment runoff.

Franco Meyer, an Environmental Monitoring Officer with the Northland Regional Council, says although soil is a natural substance, few people realise it has long been one of the most serious and common pollutants of Northland's waterways. For that reason, under both the Resource Management Act and the regional council's Water and Soil Plan, people have a legal obligation to minimise/manage sediment discharges. Those found breaching the rules risk penalties ranging from $750 'instant fines' to prosecution. After a number of incidents involving unauthorised sediment discharges, the regional council in 2010 began offering a series of day-long seminars to help bring people up to speed on the rules and the latest sediment control methods.

The seminars are held annually during winter and Mr Meyer says the council is already noticed pleasing and significant improvements in the way earthworks are being managed in the region.

Mr Meyer says the latest seminars began yesterday (subs: Tues 03 July) and are also being held today and tomorrow (subs: Weds 04 & Thurs 05 July) with an estimated 50 participants in total paying $250 each to take part. He says as part of the training, participants are also undertaking visits to the construction site for the Whangarei District Council's new Hatea Bridge crossing in Whangarei. "This is a great example of sediment and control measures which have been installed correctly and

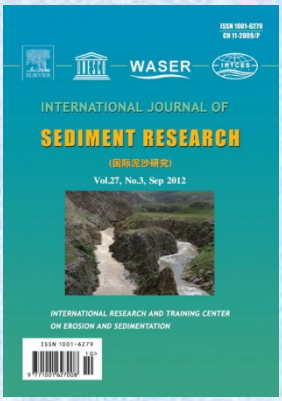
are working well, despite the very large scale of the works and the recent wet weather. They're a credit to the contractors Transfield and McConnell Dowell."

Mr Meyer says nationally, more than 200 million tonnes of soil is lost every year to the ocean, with Northland believed to contribute significantly towards that figure. " Our high rainfall, diverse soil types and typography means sediment runoff can be more of a problem here than many other parts of New Zealand."

Mr Meyer says when not controlled properly, sediment can not only affect water quality and the creatures living in the region's waterways, it can also silt up estuaries and harbours and smother shellfish and eelgrass beds. " Soil particles can also carry nutrients like phosphate (which can be detrimental to waterways in large enough amounts) and potentially carry harmful micro-organisms." (Source: http://www.scoop.co.nz/)

PUBLICATION

Papers Published in Issue 2 Volume 27, 2012, International Journal of Sediment Research



Volume 27, Number 3 Sep. 2012

Technical Papers

Shaping and maintaining a medium-sized main channel in the Lower Yellow River
Chun-hong HU, Jian-guo CHEN, and Qing-chao GUO

Identifying and mitigating dam-induced declines in river health: Three case studies from the Western United States
Ellen WOHL

Principle of equivalency of bed structures and bed load motion
Zhao-yin WANG and Kang ZHANG

Formation process of meandering channel by a 2D numerical simulation
Yi XIAO, Xue-jun SHAO, Hong WANG, and Gang ZHOU

Effects of submerged flexible vegetation and solid structure bars on channel bed scour
Su-chin CHEN, Yi-Ming KUO, and Hsiao-Chia YEN

Live-bed scour downstream of block ramps for low densimetric Froude numbers
Stefano PAGLIARA, Michele PALERMO, and Iacopo CARNACINA

Numerical simulation of low-flow channel evolution due to sediment augmentation
Hiroshi MIWA and Gary PARKER

Estimating sediment deposition volume in a reservoir using the physiographic soil erosion-deposition model
Ching-hsien WU, Ching-nuo CHEN, Chih-heng TSAI, and Chang-tai TSAI

Technical Notes

Contributions of burst-sweep cycles to Reynolds shear stress over fluvial obstacle marks generated in a laboratory flume
H. MAITY and B. S. MAZUMDER

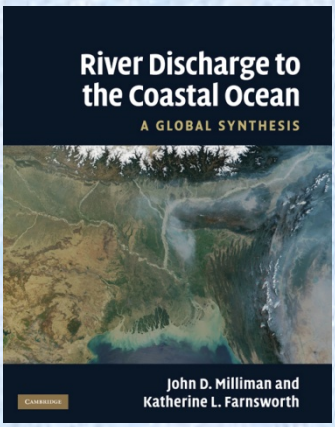
A study on rainfall, runoff, and soil loss relations at different landuses – A case in Hilkot watershed in Pakistan
ZOKAIB S. and NASER Gh.

Simultaneous use of cable and collar to prevent local scouring around bridge pier
Elham IZADINIA and Manouchehr HEIDARPOUR

Characterisation of sediments polluted by acid mine drainage in the Northeast of Algeria
Chahrazed BOUKHALFA and Mounia CHAGUER

Cover Photo: The Nigardsbreen glacier in Norway

River Discharge to the Coastal Ocean: A Global Synthesis



- John D. Milliman, College of William and Mary, Virginia
- Katherine L. Farnsworth, Indiana University of Pennsylvania
- Cambridge University Press, 2011

Rivers provide the primary link between land and sea, annually discharging about 36 000 km3 of freshwater and more than 20 billion tonnes of solid and dissolved sediments to the global ocean. Utilizing the world's largest database – 1534 rivers that drain more than 85% of the landmass discharging into the global ocean – this book presents a detailed analysis and synthesis of the processes affecting the fluvial discharge of water, sediment, and dissolved solids to the coastal ocean. The ways in which climatic variation, episodic events, and anthropogenic activities – past, present, and future – affect the quantity and quality of

river discharge are discussed in the final two chapters. The book contains 26 tables and more than 165 figures – most in full color – including global and regional maps. The book's extensive appendix presents the 1534-river database as a series of 44 tables that provide quantitative data regarding the discharge of water, sediment and dissolved solids. The appendix's 140 maps portray the morphologic, geologic, and climatic character of the watersheds. A complete GIS-based online database is available through a Cambridge University Press website.

Publications in ISI Information System

- River Discharge to the Coastal Ocean: A Global Synthesis (Milliman and Farnsworth)
- Geomorphic Response of the Sandy River, Oregon, to Removal of Marmot Dam (USGS)
- Sediment Issues & Sediment Management in Large River Basins Interim Case Study Synthesis Report (ISI)
- Distribution, sources and ecological risk assessment of heavy metals in surface sediments from Lake Taihu, China (Yin et al.)
- The 4th edition of the UN World Water Development Report (WWDR4)
- Sediment dynamics of an impounded river: Yegua Creek, Texas (Martinez)
- Suspended sediment transport in the Ganges-Brahmaputra River System, Bangladesh (Rice)
- Nutrient and Suspended-Sediment Trends in the Missouri River Basin, 1993–2003 (USGS)
- Trends in Streamflow and Nutrient and Suspended-Sediment Concentrations and Loads in the Upper Mississippi, Ohio, Red...(USGS)

More ……
(http://www.irtces.org/isi/info.asp)

COMING EVENTS

4th International Conference on Estuaries and Coasts (Vietnam, Oct.8-11, 2012)

Date: 8-11 October 2012
Venue : T45 Conference Hall, Water Resources University, Hanoi, Vietnam
Summary: The 4th International Conference on Estuaries and Coasts (ICEC-2012) will be held in Hanoi, Vietnam, co-organized by Water Resources University and the International Research and Training Center on Erosion and Sedimentation (IRTCES). The ICEC2012 aims at providing a forum for discussion and exchange among researchers and scientists in the field of estuary and coast.
Organizer: Water Resources University, Vietnam
Sponsors: International Research and Training Centre on Erosion and Sedimentation (IRTCES)
Co-Sponsors: UNESCO, IAHR, IAHS, WASER, and other institutes and organizations to be invited
Secretariat: Water Resources University, Vietnam
Permanent Secretariat: IRTCES
Conference Themes: Vision and Imagination – Water in an Era of Change, with sub-themes

Climate Change
Water Resources and Hydrology
Environmental and Ecological Hydraulics
Coastal and Estuarine Hydrodynamics
Estuarine and Coastal Management
Design, Maintenance and Management of Waterways in Estuaries and Harbors
Research Technologies for Estuarine Engineering
Coastal Structures
Coastal Hazard

URL: http://www.icec2012.edu.vn/
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12th International Symposium on River Sedimentation (Kyoto, Japan, Sep. 2-5, 2013)

Date: Sep. 2-5, 2013
Venue: KYOTO TERRSA, Kyoto, Japan
Summary: Erosion and sedimentation processes in river catchments as well as their management are of global importance. The social, economic, environmental and political impacts of these processes are significant. They pose great challenges for our human society on the way to the mid-21st century. The issue calls for integrated and sustainable solutions. On behalf of the entire Local Organizing Committee, we would like to take our great pleasure in inviting you to the 12th International Symposium on River Sedimentation (ISRS2013), September 2-5, Kyoto, Japan. Organized triennial from 1980 under the auspices of IRTCES (the International Research & Training Center on Erosion and Sedimentation), the ISRS symposia have been successfully held in China, USA, Germany, India, Egypt, Hong Kong (China), Russia and South Africa, the symposium series provide an important forum for scientists, engineers and policy-makers to exchange ideas, share information and make collaborations. Japan experienced and is still experiencing a lot of challenges in erosion and sedimentation. With the rapid change of global climate, there is a greater demand on the improvement of sediment management know-how and practices. The Kamo River in the city of Kyoto provides an excellent demonstration on typical sediment-related problems & management methods in Japan. As the location resulted in the famous Kyoto Protocol to the UN Framework Convention on Climate Change, we hope that the 12th ISRS in Kyoto will also become an event of special meaning. Kyoto University is one of the leading institutions in research & education on sediment hydraulics, erosion control engineering and river morphology. The University has a staff of well reputed scholars, capable students and is located in an excellent environment with advanced facilities.
The city and the university are ready to welcome participants from all over the world.
The online abstract submission system is open NOW and will be closed on 31 August, 2012. Accepted abstract will require a full paper to be submitted. Full papers will be peer-

reviewed and be published in the symposium proceedings. ISRS2013 features Best Paper Award and Young Researcher Paper Award to award authors with superior quality paper submission to the symposium. Selected papers will be considered for a possible publication in the International Journal of Sediment Research.
Organizer: Research Center for Fluvial & Coastal Disasters Disaster Prevention Research Institute, Kyoto University
Sponsors: International Research and Training Centre on Erosion and Sedimentation (IRTCES); World Association for Sedimentation and Erosion Research (WASER)
Co-Sponsors: UNESCO; International Sediment Initiative (ISI); IAHR; Japan Society of Civil Engineers (JSCE); Japan Society of Erosion Control Engineering (JSECE); Japan Society for Natural Disaster Science (JSNDS); Japan Society of Dam Engineers (JSDE); Ecology and Civil Engineering Society (ECES); Japan River Association (JRA)
Secretariat: Kyoto University
Permanent Secretariat: IRTCES
Theme and Topics: The theme of the symposium is Integrated Sediment Management for River Basin Sustainability: Challenges & Prospects towards Mid-21st Century
Under this theme, the symposium topics include
1.Integrated sediment management in river basin scale
2.Sediment yield
3.Sediment transport & morphology in rivers & lakes
4.Local scour & erosion
5.Reservoir sedimentation and management
6.Sediment issues in estuarine & coastal area
7.Environmental & ecological aspects of sediment management
8.Modeling & measurement techniques
9.Sediment related disasters
10.Social, economic & political problems related to sediment management.
URL: http://www.dpri.kyoto-u.ac.jp/~ISRS2013/
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E-mail: isrs2013@uh31.dpri.kyoto-u.ac.jp

The 2nd WASWAC World Conference (Thailand, May 13-18, 2013)

From 2013-05-13 **to** 2013-05-18
Venue: Bangkok, Thailand
Summary: The main theme of the conference includes following subthemes:
- Situation and evolution of land degradation
- Control measures to prevent and mitigate land degradation (mechanical, biological, agronomical, management) and to restore degraded land
- Evaluation of impact of land degradation on food production and the environment
- Effects of global climate change on land degradation and food security
- Law and policy to prevent and mitigate land degradation
- Water resource management

Invitation: You are cordially invited to participate in the International Conference on “The Threats to Land and Water Resources in the 21st Century: Prevention, Mitigation and Restoration” and the Second Councilor Meeting of WASWAC (LANDCON1305) to be held in Bangkok, Thailand from May 13-18, 2013. Land is foundation of human survival and development, but the degradation of land is intensifying in many parts of the world because of many reasons, including the improper land use and global climate change. Land degradation could induce the deterioration of the ecological functions and productivity of land. Land degradation has been threatening the socioeconomic and cultural development at regional and global scales. Fortunately, the increasing attention has been paid in combating land degradation all over the world that there have been a number of projects being operated by many agencies in various regions to cope with such problems. It is therefore timely to organize the next WASWAC World Conference (WASWAC WC) in May 2013, which will coincide with the 50th Anniversary Celebrations of the Land Development Department of Thailand, our main host. We look forward to welcoming you in Thailand.
Organizers:
• Land Development Department (LDD), Bangkok, Thailand
• Soil and Water Conservation Society of Thailand (SWCST)
• Soil and Fertilizer Society of Thailand (SFST)
• International Research and Training Center on Erosion and Sedimentation (IRTCES)
• Institute of Soil and Water Conservation, Chinese Academy of Sciences (ISWC-CAS), Shaanxi, China
• Guangdong Institute of Eco-Environmental and Soil Sciences (GIEESS), Guangzhou, China
• World Association of Soil and Water Conservation (WASWAC)
E-mail: waswac2@ldd.mail.go.th
URL: http://www.ldd.go.th/web_waswac2/

35th IAHR World Congress: The Wise Find Pleasure in Water (China, Sept. 8-13, 2013)

From 2013-09-08 **to** 2013-09-13
Venue: Chengdu, China
Summary: The congress will focus on: Water Science and Civilization; Hydro-Environment and Eco-hydraulics; Hydraulic Engineering and Integrated River-basin Management; Maritime Hydraulics and Coastal Engineering; Water Resources and Hydroinformatics Technology; and Hazards, Extreme Events and Adaptation to Climate Change.
Invitation: On behalf of the **35th IAHR World Congress Organizers** and **IAHR**, we would like to invite you to join us in Chengdu, China for the 35th World Congress of the International Association for Hydro-Environment Engineering and Research (IAHR). The Congress will be held with the central theme of "THE WISE FIND PLEASURE IN WATER" *(Confucius, BC 552-BC 479)*. The congress will focus on: Water Science and Civilization; Hydro-Environment and Eco-hydraulics; Hydraulic Engineering and Integrated River-basin Management; Maritime Hydraulics and Coastal Engineering; Water Resources and Hydroinformatics Technology; and Hazards, Extreme Events and Adaptation to Climate Change. Chengdu is a charming city with a long history, fast advancing development, unique culture as well as delicious food. It will surely provide every delegate with a memorable experience. The congress will be accompanied with fascinating technical tours to Three Gorges, Tibet, Ancient Dujiangyan Irrigation Project and Chengdu Panda Base as well as the newly completed earthquake museum. The congress is co-hosted by three major Chinese universities and one research institute in water and environment science, namely, China Institute of Water Resources and Hydropower Research (IWHR), Sichuan University (SCU), Tsinghua University (THU) and The University of Hong Kong (HKU). We look forward to welcoming you in September 2013 to what we are confident will be one of the most successful IAHR World Congress.

Organizers: International Association for Hydro-Environment Engineering and Research (IAHR)
Contact Name: Congress Secretariat
E-mail: iahr2013@vip.163.com
URL: http://www.iahr2013.org/

International Symposium on Erosion and Sediment Yields in the Changing Environment (China, Oct. 11-15, 2012)

From 2012-10-11 **to** 2012-10-15
Venue: Chengdu, China
Summary: The International Commission on Continental Erosion (ICCE) is one of five commissions of the International Association of Hydrological Sciences (IAHS). The field of interests of the ICCE may be broadly defined as including the erosion, transport and deposition of sediment and the interaction of these processes with other components of the environment. The Chengdu ICCE'2012 Symposium will focus on both erosion and sediment yields in the changing environment, considering:
- Dynamic processes of erosion and sediment transport in fluvial systems;
- Impacts of climate change and human activities on erosion and sediment yields;
- Erosion and sediment yields modeling, mountain hazards and debris flows; and
- Monitoring and tracing methodology.

Organizers: The International Commission on Continental Erosion (ICCE) of the International Association of Hydrological Sciences (IAHS); Chengdu Institute of Mountain Hazards and Environment (IMHE).
Contact Name: Prof Xiubin He
E-mail: xiubinh@imde.ac.cn
URL:
http://www.iahs.info/conferences/2012_Chengdu_ICCE.pdf

Special Seminar "Challenges and Issues in Water Resources Management in Africa" in the 35th IAHR Congress (China, Sep.8-13, 2013)

From 2013-09-08 **to** 2013-09-13
Venue: Chengdu, China
Summary: Many global issues such as water and food security involve Africa. Many African countries also have abundant water resources; the sustainable development of these countries involve many challenges and issues in water resources management – ranging from cross‐border issues on the Nile to coastal developments. It is timely for IAHR to be more pro‐active in engaging Africa on global issues such as water and food security. To this end, it is proposed to organize a special seminar on African issues to: (i) initiate a dialogue between IAHR and water researchers and professionals in Africa; (ii) to develop long term academic and professional exchanges between IAHR members and Africa; and (iii) to present opportunities for young researchers to connect to the global community of hydro‐environment experts for scientific capacity building and research collaboration. This is envisioned to be a 2 hour seminar with 8‐10 papers presented by experts on African issues.
Convenor: Prof Mohamed Ghidaoui (Email: ghidaoui@ust.hk)
Submission of abstracts: Abstracts must be submitted online before December 1, 2012 (http://online.iahr2013.org/)
URL: http://www.iahr2013.org/

International Workshop of Acoustic and Seismic Monitoring of Bedload and Mass Movements (Switzerland, Sep. 4-7. 2013)

Date: Sep. 4-7. 2013
Venue: Zürich, Switzerland
Summary: The difficulties in directly monitoring traction processes - bedload and mass movements - have prompted research into surrogate monitoring technologies, among which acoustic methods (geophones, hydrophones, ADCPs) are presently most developed, as demonstrated in the 2007 International Bedload Surrogate Monitoring Workshop held in Minneapolis. Since then it is apparent that acoustic techniques have been further developed with increasing interesting results in seismics. Hence, the objectives of this workshop are to (1) present first-hand principles of acoustics and seismics, (2) discuss first-hand signal processing techniques relevant to surrogate monitoring of bedload and mass movements, (3) consider calibration issues, and (4) describe monitoring methods that have been recently developed or improved. Workshop topics will encompass surrogate monitoring of bedload transport (river and coastal), debris flows, snow avalanches, landslides and rock avalanches with acoustic and seismic devices. Invited and submitted presentations will concentrate on research using acoustic and some relevant seismic methods.
Workshop's provisional timetable:
Oral and poster presentations 4 - 5 Sept. 2013
Field trip 1: Bedload transport and geophone measurements in the Erlenbach 6 Sept. 2013
(Alptal valley, near Zürich)
Field trip 2: Debris-flow monitoring installations in the Illgraben (Rhone valley, 7 Sept. 2013 near Sion)
Organizers: Dieter Rickenmann (WSL Birmensdorf, Switzerland), dieter.rickenmann@wsl.ch Jonathan Laronne (Ben Gurion University of the Negev, Israel), john@bgu.ac.il Jens Turowski (WSL Birmensdorf, Switzerland), jens.turowski@wsl.ch Damia Vericat (University of Lleida, Spain), dvericat@macs.udl.cat
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More Coming Events in ISI Website

- International Conference on Climate Change, Water and Disaster in Mountainous Areas (Nepal, Nov.27-29, 2013)
- 35th IAHR World Congress: The Wise Find Pleasure in Water (China, Sept. 8-13, 2013)
- Special Seminar "Challenges and Issues in Water Resources Management in Africa" in the 35th IAHR Congress (China, Sep.8-13, 2013)
- International Workshop of Acoustic and Seismic Monitoring of Bedload and Mass Movements (Switzerland, Sep. 4-7. 2013)
- 12th International Symposium on River Sedimentation (Kyoto, Japan, Sep. 2-5, 2013)
- The 2nd WASWAC World Conference (Thailand, May 13-18, 2013)
- 3rd International Conference on Managing Rivers in the 21st Century (Malaysia, Dec. 6-9, 2012)
- Sediment Transport Modeling in Hydrological Watersheds and Rivers (Turkey, Nov. 14-16, 2012)
- Tenth International Conference on Hydroscience & Engineering (USA, Nov. 4-7, 2012)
- Practical training course on sustainable sediment

management with the Sava River Basin as a showcase (Croatia, 15 – 18 Oct. 2012)

- International Symposium on Erosion and Sediment Yields in the Changing Environment (China, Oct. 11-15, 2012)
- 4th International Conference on Estuaries and Coasts (Vietnam, Oct.8-11, 2012)

More ……
(http://www.irtces.org/isi/)

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Practical training course on sustainable sediment management
with the Sava River Basin as a showcase
Zagreb, Croatia, 15 – 18 October 2012

ANNOUNCEMENT

It is my privilege to announce to you, on behalf of the International Sava River Basin Commission (ISRBC) and UNESCO Venice Office, together with the UNESCO International Sediment Initiative (ISI) and the European Sediment Network (SedNet), the

Practical training course on sustainable sediment management with the Sava River Basin as a showcase

which will be held at the

Four Points by Sheraton Panorama Hotel, Trg Krešimira Ćosića 9, Zagreb, Croatia
starting **Monday, October 15, 2012 (14.00),** ending **Thursday, October 18, 2012 (17.30).**

Top experts from Europe and the United States will teach in this part I of the course the theoretic fundamentals on: a) sediment balance throughout the river system; b) sediment monitoring; and c) evaluation of sediment quality and quantity. Furthermore, national experts from the Republic of Slovenia, the Republic of Croatia, Bosnia & Herzegovina and the Republic of Serbia will present the state-of-the-art related on these three topics (a-c) for their country. Then 'theory' and 'practice' will be combined by the course participants by transferring their learning experiences into draft practical guidance on how to sustainably manage sediment in the Sava River Basin. The course connects perfectly to the implementation of the *Protocol on Sediment Management* which would be part of the *Framework Agreement on the Sava River Basin*.

The course is made possible through the kind contribution of a variety of sponsors. Some more details on this course and its background are described in the attached document, i.e. the course related article in the most recent issue of the *Sava Newsflash*.

The course aims to train local experts from the Sava River Basin, involved in sediment management. However, **there is room for – and we would warmly welcome – a limited number of participants NOT originating from the Sava region to join this course**. Participation is free of charge, but travel and lodging costs are at own account.

If you are interested to participate to this course, then please as soon as possible for further, practical details directly address the contact person at the ISRBC: **Samo Grošelj**, phone: +385 1 488 69 60; +385 1 488 69 67, e-mail: sgroselj@savacommission.org or isrbc@savacommission.org

Yours faithfully,

Dejan Komatina

Dr. Dejan Komatina
Secretary of the ISRBC

TOWARDS SUSTAINABLE SEDIMENT MANAGEMENT IN THE SAVA RIVER BASIN

One of the essential parts of the river system is sediment, which forms a variety of habitats and environments. Nevertheless, its important role has been somehow forgotten many times. Consequently, there are as yet no examples of the fully-fledged integration of sediment management into river basin management. This was a key driver for UNESCO's International Hydrological Programme (IHP) to establish the global International Sediment Initiative (ISI), and to – independent of, and complementary to, ISI – establish the European Sediment Network (SedNet). Both ISI and SedNet promote and provide ample arguments for sustainable sediment management (SSM).

On the other hand, within the implementation of the *Framework Agreement on the Sava River Basin* (*FASRB*), the Sava countries have drafted the *Protocol on Sediment Management to the FASRB*, which will provide a legal basis for future cooperation of the countries on the development of the *Sediment Management Plan for the Sava River Basin* (*Sava SM Plan*). The *Protocol* highlights comparable guiding principles to SSM as those endorsed by ISI and SedNet.

These 'shared' principles set an excellent condition for cooperation among the Sava countries that will implement the *Protocol*, and ISI and SedNet to support that implementation through the project entitled *Towards Practical Guidance for Sustainable Sediment Management using the Sava River as a Showcase*. The project will bring together the state-of-the-art in scientific as well as practical knowledge on SSM and make that knowledge available through a practical training course. Therefore, the ISRBC, ISI and SedNet teamed up to jointly look for funding to develop the course and to apply the practical SSM guidance – as trained in the course – in the Sava river basin as a showcase. It is expected that such an experience will inspire other river basins (globally) to apply the SSM guidance, as well.

A sponsorship has been kindly offered by IHP-Germany, SedNet, ISI, UNESCO Venice Office, BRGM and Deltares, while the ISRBC offered an in kind support by assisting in the organization and execution of the planned activities. This combined offer covers the first two steps of the project. Thus, it was decided to start with the implementation in April 2012.

The first step includes the development and execution of the first part of the SSM course, as well as the drafting of the corresponding guidance document. It will address the sediment balance throughout the river system, sediment monitoring and sediment quality and quantity evaluation, i.e.

the first three elements of a SM plan, as foreseen by the *Protocol*. In the course, planned to be held in October 2012, experts assigned by ISI and SedNet will train the state-of-the-art related to these issues, while the participants – local experts from the Sava river basin, involved in sediment management – will transfer their learning experiences into the draft practical guidance. In the second step, starting just after the course, the local experts will apply that draft guidance to elaborate the first elements of the *Sava SM Plan*, under the coordination of the ISRBC.

All the parties involved are optimistic to find the remaining funding needed to develop the second part of the project, which will address measures, dredging, sediment disposal, treatment and use, as well as institutional arrangements, and then again apply the lessons learned in the Sava practice to facilitate further development of the *Sava SM Plan*.

Jos Brils, *Deltares, SedNet Steering Group*

Anil Mishra, *UNESCO Paris, International Sediment Initiative*

Dr. Dejan Komatina, *Secretary, Secretariat of the ISRBC*