

World Association for Sedimentation & Erosion Research – WASER

NEWSLETTER

Reporting WASER news to you regularly

2016 No.2

(July 11, 2016)

IN THIS ISSUE

President's Message

1

News

- ✧ WASER promotes exchange between organisations working in sediment research and technology 1
- ✧ Updated information of the ISRS 2016 3

News from the Sediment World

- ✧ IRTCES representatives visit the University of Caen, France to prepare for the 6th International Conference on Estuaries and Coasts 4
- ✧ Climate change speeds up gully erosion 4
- ✧ Yangtze soil erosion down by 27 percent 5
- ✧ Government decides against de-sedimentation of the Tarbela dam (Pakistan) 5

Publications

- ✧ Papers Published in IJSR, Volume 31, No. 1, 2016 7
- ✧ Papers Published in IJSR, Volume 31, No. 2, 2016 7
- ✧ Contents of ISWCR (Vol. 4, No.1, 2016) 8

Coming Events

- ✧ 13th International Symposium on River Sedimentation (Stuttgart, Germany, Sep. 19-22, 2016) 10
- ✧ CONSOWA 2017 (Spain, 12-16 June 2017) 11
- ✧ THESIS 2016 (Tokyo Japan, Sep. 12-14, 2016) 11
- ✧ River Flow 2016 (USA, July 11-14, 2016) 11

WASER mailing list request

14

世界泥沙研究学会简报

本期内容

主席致辞 新闻

1

- ✧ WASER 促进涉及泥沙研究与技术的学会间交流 1
- ✧ 第十三次河流泥沙国际学术讨论会最新信息 3

泥沙相关新闻

- ✧ 国际泥沙中心代表访问卡昂大学指导第六届河口海岸国际研讨会筹备工作 4
- ✧ 气候变化加速沟蚀 4
- ✧ 长江流域水土流失面积减少 27% 5
- ✧ 巴基斯坦：政府决定反对塔贝拉水库清除淤积 5

出版物

- ✧ 《国际泥沙研究》期刊 2016 年第 31 卷第 1 期论文目录 7
- ✧ 《国际泥沙研究》期刊 2016 年第 31 卷第 2 期论文目录 7
- ✧ 《国际水土保持研究》期刊 2016 年第 4 卷第 1 期论文目录 8

会议信息

- ✧ 第十三次河流泥沙国际学术讨论会(德国, 2016 年 9 月 19-22 日) 10
- ✧ 第一届全球变化下的水土保持世界大会(西班牙, 2017 年 6 月 12-16 日) 11
- ✧ 地理物理水流泥沙动力学两相流模拟(日本, 2016 年 9 月 12-14 日) 11
- ✧ 河流水流 2016(美国, 2016 年 7 月 11-14 日) 11

加入 WASER Community 的邀请函

14

PRESIDENT'S MESSAGE

Dear Colleagues,

As my second term as President of WASER is coming to an end, this is probably the last message that I will send to the WASER Community through our Newsletter. The election of WASER Officers and Council members for the next term 2016-2019 will soon be held and in a few weeks you will receive from the Executive Secretary an electronic ballot paper to record your votes.

Although the electorate should feel free to suggest other candidates, a slate of nominees has been compiled by the Nomination Committee, in accordance with the Statutes. The slate lists candidates for the positions of President, vice-Presidents and ordinary Council members. Those nominated are broadly representative of the present composition of our Association, in terms of discipline and links with different areas of the world. However, some of the names listed belong to disciplines and geographical areas that are seen as deserving representation within the Council.

The slate of candidates also includes representatives of the Local Organising Committees (LOC) of the upcoming and future International Symposia on River Sedimentation (ISRS), the triennial event that represents a key component of the scientific activities of WASER. Following the call for proposals to host the 14th ISRS in 2019, two proposals were received by the advertised deadline of March 31st, 2016. These came from Sichuan University in Chengdu, China and the University of Padua in Italy. After consultation, the Symposium co-sponsors, WASER and IRTCES, decided to accept the invitation from the University of Sichuan to host the 2019 ISRS. The other invitation, extended by the University of Padua in Italy, was subsequently modified to relate to the 15th ISRS to be held in 2022 and was also provisionally accepted.

The newly elected Council for the term 2016-2019 will take office during the upcoming 14th ISRS which will be held in Stuttgart, Germany, from September 18-22, 2016. The general theme of the Symposium is "Innovative Management Strategies in River Systems" and further details of the activities, including the Council meeting and the General Assembly of WASER, are reported in this Newsletter. Besides the regular and special technical Sessions devoted to various aspects of the field of erosion and sedimentation, I would particularly like to draw your attention to the "Workshop on International Sediment Advances"(WISA), in which six influential speakers belonging to various associations or organizations active in sediment research and technology will address a significant topic from the particular viewpoint of their organisation or association.

One of the aims of WASER is to foster inter-organisational collaboration within the wide multidisciplinary field of erosion and sedimentation and sediment studies. In this context, I would ask members of the WASER community to take a look to the short article below entitled: "WASER promotes exchange between organizations working on sediment research and technology".

I hope to meet you in Stuttgart in a few months time and I would like to take this opportunity to wish you well both personally and professionally,

Giampaolo Di Silvio, President of WASER

NEWS

WASER promotes exchange between organisations working in sediment research and technology

Not being limited by disciplinary constraints, WASER is well-placed to promote exchange between other associations and organisations also concerned with erosion and sedimentation, but whose perspectives are more specific.

With this purpose in mind, WASER organised, a Workshop on International Sediment Advances (WISA) during the last triennial International Symposia on River Sedimentation (ISRS) held in Kyoto, Japan. Participants included a number of invited speakers belonging to various associations

and organizations active in the sediment field. In their presentations, the speakers were asked to describe briefly their association's or organisation's perspective on sediment and what were seen as important recent developments and more particularly to introduce and discuss a particular topical issue which was central to the interests of their association or organisation in sediment. The contributions from the speakers were, however, very much their own view rather than that of the association or organisation that they nominally represented.

In addition to WASER, the six speakers at the Kyoto Workshop were drawn from IAHS (The

International Association of Hydrological Sciences), IAHR (The International Association for Hydro-Environment Engineering and Research, ICOLD (The International Commission on Large Dams), ISI (The International Sediment Initiative of UNESCO) and the LOC of the ISRS (on behalf of the Japanese sediment community). An overview of international cooperation in the area of sediment research was provided by Manfred Spreafico, the chair of the UNESCO ISI. The theme of the Panel discussion was "Impact of dams and sediment management", a sensitive issue embracing both the potential impact of planned reservoirs and the operation of existing dam structures. It was apparent that the various disciplinary communities often hold different views or at least have different priorities. The presentations of the individual speakers focused on:

"Sustainable dams and creative financing" by Rollin H. Hotchkiss (IAHR);

"Reservoir sedimentation and water supply" by Mike Stone (IAHS);

"Catastrophic events and reservoir sedimentation" by Hajime Nakagawa (LOC);

"Grainsize segregation in reservoirs and sediment management" by Giampaolo Di Silvio (WASER);

"Morphological impact of dams on rivers" by Gerrit Basson (ICOLD).

Another WISA event with the same overall objectives will be staged in September 2016, at the 13th ISRS to be held in Stuttgart, Germany. The list of speakers includes several new persons, reflecting a slightly different set of international bodies. The Panel discussion will be devoted to another theme of increasing interest to those working on sediment, namely, "Hydraulic, morphological and biological interactions in sediment management".

The presentations will include:

"Material fluxes in river eco-systems with special attention to reservoirs", by Manfred Spreafico (ISI-UNESCO);

"Eco-sedimentology. A new area in sediment studies" by Zhaoyin Wang (IAHR);

"Changing perspectives on the suspended sediment load of rivers" by Des Walling (IAHS);

"Hydrological processes in soils of sloping lands as a basis for sediment production and sediment yield" by Ildelfons Pla Sentis (CONSOWA);

"Influence of morphological changes on ecology: a cascade of scales" by Silke Wieprecht (LOC);

"A hydro-, morpho-, bio-dynamic model for long-term, basin-scale river simulations" by Giampaolo Di Silvio (WASER);

Other topics could be suggested for future WISA events bringing together speakers from different associations and organisations linked to erosion and sedimentation. For example, an interesting topic has already emerged from the theme to be discussed in Stuttgart. This relates to the notion of 'space- and time-scales' and the associated concept of 'equilibrium (or stationary) conditions'. When considering process interactions (e.g. between hydraulic, morphological and biological processes) the usual approach taken by the specialist in describing the evolution of the process that is of interest is to treat the other processes as being 'in equilibrium (or stationary)'. Although this hypothesis is implicitly assumed to be valid in all circumstances, it is in fact acceptable only if the scales of the processes involved are quite different. In any case, the problem of 'upscaling' and 'downscaling' the interacting scales coexisting in river dynamics is quite complex and would probably merit a specific WISA event.

It should also be noted that to date the speakers invited to WISA events belong to organisations having a membership rather similar to that of WASER, basically comprising hydraulic engineers, hydrologists, geographers, geomorphologists etc., namely with a disciplinary background related to the 'geophysical sciences'. With the exception of a few forest and agricultural engineers, the WASER Community currently includes virtually no specialists from the 'life sciences' with interests in sediment (e.g. aquatic and benthic ecologists, experts on riparian and submerged vegetation, marine or fluvial biologists etc.). At the opposite end of the disciplinary spectrum, there are also specialists dealing with industrial applications linked to sediment (e.g. transport of granular material, dredging machinery, mining industries etc.) who are poorly represented in WASER and who have not as yet been invited to a WISA event.

I feel that a greater involvement of these areas of interest and expertise in WASER would be extremely productive, even for the present majority of members. In particular, closer contact with specialists working on the biological processes that interact with hydrological and morphological processes may be crucial for more accurate simulation of river systems. Equally, an understanding of the dynamics of industrial particles (even if quite different from traditional sediment) in fluids (even if not water) may open new perspectives for both geomorphologists and hydraulic engineers.

In conclusion, while the autonomy of WASER from a defined specialisation could be seen as facilitating its role in promoting interdisciplinary interaction and collaboration, the presence of a wider range of different areas of expertise in its membership would certainly further promote such important activities. (Giampaolo Di Silvio, President of WASER)

Updated information of the 13th International Symposium on River Sedimentation (ISRS 2016)



The 13th International Symposium on River Sedimentation (ISRS 2016) will be held from September 19 to 22, 2016 in Stuttgart, Germany. The symposium aims at providing a platform for scientists, engineers and opinion leaders for an in-depth and stimulating exchange of information. The objectives are to develop sustainable revitalization and management strategies that address the ongoing negative effects of anthropogenic activities whilst improving river systems towards a healthy ecological status. The fundamental research and understanding of interactive processes between water and sediments is as important as the sharing and exchange of knowledge in applied projects.

Topics of nature-orientated use of water bodies with a focus on the connection between ecological needs and the structural and hydraulic requirements are a main theme of the symposium. Besides the spatial scale (from the initiation of motion of single grains to processes occurring at the catchment scale), the temporal scale plays an important role. While typical morphological structures are formed over years, hydrodynamic considerations may concentrate on processes occurring at short timescales (seconds). For example, eddy structures can be defined in very high-resolutions, which is one pre-condition for a detailed description of the interaction between water and sediments.

During the ISRS2016 six main topics are addressed:

- A. Integrated Sediment Management in River Basin Scale
- B. Sediment Transport
- C. River Morphodynamics
- D. Hydromorphology meets Ecology
- E. Reservoir Sustainability
- F. Social, Economic and Political Aspects of Sediment Management

Furthermore, special topics are discussed which are in the focus of research in Germany as well as worldwide:

- SS 1 Hydropower and Sediment Management
- SS 2 Navigation and River Morphology
- SS 3 Innovative Measurement Techniques
- SS 4 SEDITRANS – Sediment Transport in Fluvial, Estuarine and Coastal Environment
- SS 5 Sustainable Land Management

The Local Organizing Committee of ISRS2016 received 303 abstracts from 51 countries and regions, of which 269 full papers were requested after the first round of peer review by 70 members of the Review Board. The full papers submissions were subsequently subjected to a second peer review by 67 experts from around the world. Based on the comments of the reviewers, the board finally selected 185 full papers together with their respected extended abstracts as well as 47 extended abstracts to be included in the symposium proceedings published by CRC Press/Balkema (Taylor and Francis Group). Among the accepted full papers, those that were exceptionally good were selected for publication in a special issue of one of four international peer-reviewed journals (Journal of Applied Water Engineering and Research – JAWER, International Journal of Sediment Research – IJSR, International Journal of River Basin Management – JRBM, and Journal of Soils and Sediments - JSS). The accepted contributions cover the broad spectrum of river sediment related issues and are presented by the corresponding authors during the four day symposium either in oral or poster presentations.

In the context of three keynote lectures representing the wide spectrum of sediment transport worldwide leading experts in their field report about their actual scientific results. Bruce W. Melville from New Zealand talks about "Local scour at hydraulic structures", David M. Paterson from Great Britain gives an insight in "Form, function and physics" and Weiming Wu from United States of America shares his knowledge about "Advances and challenges in mixed cohesive/non-cohesive sediment transport research".

A special "Workshop on International Sediment Advancements" (WISA) is launched on the second day of the symposium. The workshop, under the headline of "Hydraulic, morphological and biological interactions in sediment management", is proposed by Prof. Giampaolo Di Silvio. He is the current president of WASER and full of enthusiasm and ideas to promote the topic of sediment transport and its related processes. He puts great effort in the international exchange and is a major

contributor to the success of this Symposium. This inter-organizational workshop, under the auspices of UNESCO-IHP-ISI is devoted to disseminate beyond the limits of each membership the most significant progress attained by several scientific associations operating in the field of sediment research and management. We are pleased that Manfred Spreafico (ISI-UNESCO) talks about "Material fluxes in river eco-systems with special attention to reservoirs", Zhaoyin Wang (IAHR) discusses "Eco-sedimentology. A new area in sediment studies", Desmond Walling (IAHS) refers to "Changing perspectives on the suspended sediment load of rivers", Ildefonso Pla Sentis (CONSOWA) speaks about "Hydrological processes in soils of sloping lands as a basis for sediment production and sediment yield", Silke Wieprecht (LOC) shares ideas about "Influence of morphological changes on ecology: a cascade of scales" and finally Giampaolo Di Silvio (WASER) addresses the subject of "A hydro-, morpho-, bio-

dynamic model for long-term, basin-scale river simulations".

(LOC Team of ISRS 2016)



ISRS 2016 Venue

NEWS FROM THE SEDIMENT WORLD

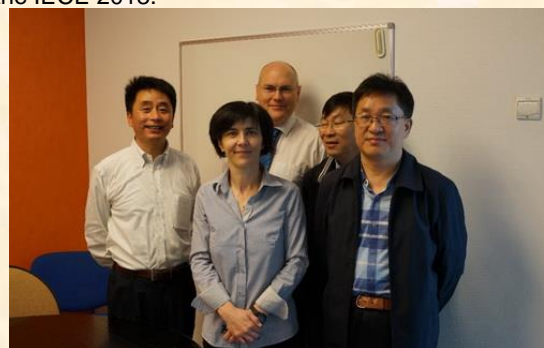
IRTCES representatives visit the University of Caen, France to prepare for the 6th International Conference on Estuaries and Coasts

On June 16, 2016, Prof. Liu Guangquan, Deputy Director, and Prof. Liu Cheng, Deputy Division Chief of IRTCES visited the University of Caen, France to prepare for the 6th International Conference on Estuaries and Coasts (ICEC 2018) to be held in 2018 in Caen, France.

Ms. Anne Guesdon, Vice President of the University of Caen, welcomed the IRTCES delegation and had a friendly meeting with participants including Prof. Kim Dan Nguyen, Executive Director of the Scientific Interest Group "Hydraulics for Environment and Sustainable Development" (GIS HEDD) which is the co-organizer of ICEC 2018, and Dr. Sylvain Guillou, University of Caen (Normandie). Prof. Liu Guangquan expressed appreciation to the University of Caen and GIS HEDD for the warm reception, briefed on the IRTCES and the ICEC, and discussed specific issues relating to preparation for the ICEC 2018 and made some suggestions on the conference organization. Ms. Guesdon introduced the history and development of the University, and invited Prof. Nguyen to present the progress of the ICEC 2018 preparation and plans for the conference organization. Conference details concerning the date, schedule, participants, keynote presentations, co-sponsors, proceedings and technical tours were discussed. After the meeting, the IRTCES delegation visited the place for registration, the conference hall for plenary sessions, the meeting rooms for parallel sessions, and the room for post sessions, accompanied by French colleagues. The specific layout and the arrangement for the conference were discussed. Mont Saint-Michel and the Couesnon Sluice, places of interest for the ICEC 2018 technical tour were visited.

The ICEC is a series of international conferences sponsored by IRTCES, and five ICECs have been successfully organized in China's Hangzhou and Guangzhou; Sendai, Japan; Hanoi, Vietnam; Muscat, Oman in 2003, 2006, 2009, 2012 and 2015, respectively. The 6th conference ICEC 2018 will be hosted by GIS HEDD and University of Caen in 2018 in Caen, France.

UNESCO-IHP-ISI, IAHR, WASER and other organizations and institutions will be invited as co-sponsors of the ICEC 2018.



Group photo after the meeting
(from left to right: C. Liu, A. Guesdon, S. Guillou, K.D. Nguyen, G.Q. Liu)

Climate change speeds up gully erosion

The erosion of large natural channels by flowing water—gully erosion—can wreak havoc on fields, roads, and buildings. In some cases, the sudden expansion of gullies even claims human lives. Geographers from KU Leuven, Belgium, are the first to show a worldwide link between heavy rainfall and the speed at which gullies

expand. With predicted climate change, gullies may erode up to three times faster.

Researchers Matthias Vanmaercke and Jean Poesen from the Division of Geography and Tourism joined forces with an international team to collect and analyse measurements from 26 countries all over the world. Their study shows that rainfall has a much bigger impact on gully erosion than was previously assumed.

"We already knew that gullies can suddenly expand significantly during heavy rainfall", says Matthias Vanmaercke." In a tropical area, a gully can sometimes grow up to 100 metres in length due to one downpour. This may have serious consequences in populated areas. Our study is the first to provide exact numbers. The model that we developed shows that even relatively small changes in rainfall intensity can have major consequences for gully expansion."

This process comes with challenges. "A widely accepted climate projection predicts that rainfall intensities will increase in most regions worldwide", Vanmaercke continues. "Gully expansion rates could double in Western Europe and the US, where rainfall intensity is expected to go up by 10 to 15% by 2060. In regions such as Ethiopia, gully erosion rates may even triple. This would not only have a detrimental effect on agriculture and water quality, but could also entail problems such as muddy floods and the destruction of roads and other infrastructure."

The good news is that gully erosion can often be stopped. This study is an important step in the right direction, as the proposed model and the data collected make it possible to better predict the expansion of gullies. As a result, more adequate measures can be taken in terms of soil and water conservation practices.

More information: Matthias Vanmaercke et al, How fast do gully headcuts retreat? *Earth-Science Reviews* (2016). DOI: 10.1016/j.earscirev.2016.01.009



"In a tropical area, a gully can sometimes grow up to 100 metres in length due to one downpour. This may have serious consequences in populated areas," says researcher Matthias Vanmaercke. The picture shows a gully in Mbuji-Mayi, Congo. Credit: © Matthias Vanmaercke

(Source: <http://phys.org/>)

Yangtze soil erosion down by 27 percent

The area of land that suffers from soil erosion in the Yangtze River valley has been reduced by 146,000 square kilometers, a reduction of 27 percent since 2000, according to the Ministry of Water Resources.

Protective measures have been applied to 70,000 square km of land along China's longest river since 2011, when the Law on Water and Soil Conservation took effect, the ministry said.

Local governments have allotted millions of yuan to the cause. Chongqing Municipality has planted trees on slopes,

constructed terraced fields to retain water, installed irrigation facilities, and funded fruit and vegetable cultivation to stabilize the soil.

Wang Zewen, a farmer in Chongqing's Zhongxian County, started to plant nectarines in 2012.

"The government has spent big money on irrigation facilities for my village. It has had a great effect in improving the environment," he said.

The county's efforts have reduced the amount of mud and sand slipping into the Yangtze by seven million cubic meters every year.

The Ministry of Water Resources plans to plant trees or use other protective measures on a further 85,000 square km of land along the river by 2020. (Source: Xinhua News)

Government decides against de-sedimentation of the Tarbela dam (Pakistan)



With the Tarbela Dam having lost over 35 per cent of its storage capacity, the government has decided against de-sedimentation of the reservoir, fearing an irreparable loss to downstream river, irrigation and engineering systems.

The decision has been taken on the basis of the latest hydrographic survey and sedimentation study, according to Water and Power Minister Khwaja Mohammad Asif.

In a written report submitted to the Senate, the minister confirmed that the dam had lost over 35pc of water storage capacity since its inception due to silting.

"Hydrographic survey 2015 reveals that the gross and live storage capacities of Tarbela reservoir since its impounding have reduced from 11.616 million acre feet (MAF) to 7.271 MAF (37 per cent) and 9.692 MAF to 6.328 MAF (35pc), respectively," he said.

Khwaja Asif said that the Water and Power Authority had in the past considered de-sedimentation of the dam through excavation of silt to reclaim lost storage capacity, but decided that it was not worth the effort.

The sedimentation study was conducted in 2013 to examine the techno-economic viability of evacuation of sediments deposited in Tarbela reservoir since its construction. "The study concluded that sediment flushing is technically difficult and uneconomical with a negative rate of return," the minister wrote.

The study also held that flushing would impact on the downstream river system, increase sediment load entering canals, changing bed levels in the river channel and necessitating additional sluicing to clear canal head regulator pockets.

At Chashma, the study warned, there might be head loss into the power station and increased sediment load would pass through turbines and potentially damage the structure. This could also lead to loss of electricity at

Tarbela and the Ghazi Barotha project and loss of water storage for irrigation at the Chasma barrage.

The minister said the inflow of soil or sediment was a natural phenomenon and could not be prevented. However, the construction of upstream storage and watershed management can reduce the sediment inflows. In principle, sediment inflows can be reduced either by catchment management or by construction of check dams.

In this specific case, the minister explained that in 94% of the total area of the upper catchment of the Indus, the runoff was dominated by snowmelt from the Himalayan and Karakoram mountain ranges and hence it was considered impractical to implement catchment management measures over such an inaccessible and extensive area.

In the lower catchment, which forms only 6% of the total area, various measures have already been undertaken. To be effective over a considerable period, check dams would require a storage volume approaching that of Tarbela itself to store the average sediment inflow of 150,000,000 cubic meters.

The only potential dam impounding such a volume that has been identified is the Diamer-Basha Dam (DBD). The effect of Basha on sedimentation of Tarbela has been investigated and it has been estimated that the life of the Tarbela Dam will increase by 35 years on the construction of DBD.

However, it was not yet certain when the construction of DBD could be implemented.

The minister said DBD would require land acquisition of about 37,419 acres, including 35,991 acres in Gilgit-Baltistan and 1,428 acres in Khyber Pakhtunkhwa. The land acquisition process in KP is moving at a snail's pace, while GB is at an advanced stage of completing the land acquisition process.

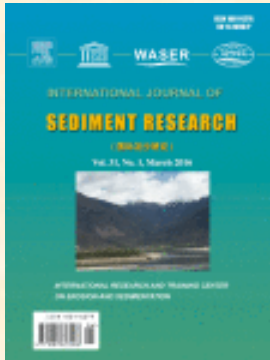
Khwaja Asif said the KP government was required to acquire 989 acres of government and 439 acres of private land for the multi-billion dollar project, but it had so far acquired only 162 acres (37%) from private citizens, while the acquisition of the government land was outstanding.

On the other hand, 10,093 acres (more than 56%) of the 17,918 acres of private land and 17,214 acres (more than 95%) of the 18,073 acres of government land have so far been acquired for the DBD.

The total project cost, according to the plans approved in 2009 by the Executive Committee of the National Economic Council, was Rs895 billion, including land acquisition and resettlement through the Public Sector Development Programme.

The minister said major construction work – main dam construction – had not been yet started because of absence of commitment of funds by international lending agencies for which the government was consistently pursuing them. Whenever the financial commitments are available, he said, the revised cost estimates would be approved and the construction would take nine years to complete. (Source: <http://www.pakistanherald.com/>)

PUBLICATIONS



Papers Published in the International Journal of Sediment Research (The official journal of WASER), Volume 31, No. 1, 2016

Volume 31, Number 1 Mar 2016

An experimental study on the effects of physical, mechanical, and electrochemical properties of natural cohesive soils on critical shear stress and erosion rate

Pages 1-15

Navid Kimiaghali, Shawn P. Clark, Habib Ahmari

Derivation and verification of minimum energy dissipation rate principle of fluid based on minimum entropy production rate principle

Pages 16-24

Guobin Xu, Lina Zhao, Chih Ted Yang

Suspended sediment transport in the Magdalena River (Colombia, South America): Hydrologic regime, rating parameters and effective discharge variability

Pages 25-35

Aldemar Higgins, Juan Camilo Restrepo, Juan Carlos Ortiz, Jorge Pierini, Luis Otero

A three-dimensional model for suspended sediment transport based on the compact discontinuous Galerkin method

Pages 36-43

Zhangyi Zhao, Qinghe Zhang, Hongbo Zhao, Hua Yang

Polychlorinated biphenyl and organochlorine pesticide residues in surface sediments from the Mediterranean Sea (Egypt)

Pages 44-52

Ahmed El Nemr, Manal M. El-Sadaawy

Experimental study of cohesive sediment consolidation and its effect on seepage from dam foundations

Pages 53-60

Guangming Tan, Yiming Chen

Polybrominated diphenyl ethers (PBDEs) and hexabromobiphenyl in sediments of the Diep and Kuils Rivers in South Africa

Pages 61-70

Adegbenro P. Daso, Olalekan S. Fatoki, James P. Odendaal

Rheological study of mudflows at Lianyungang in China

Pages 71-78

Jingyu Xu, Aode Huhe

Representative sediment sizes in predicting the bed-material load for nonuniform sediments

Pages 79-86

Wan Hanna Melini Wan Mohtar, Junaidi, Suraya Sharil, Muhammad Mukhlisin

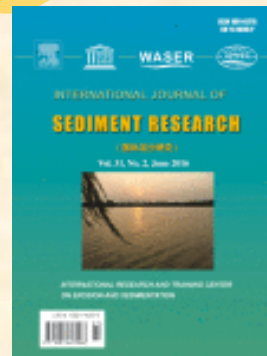
An experimental study of sediment transport in channel confluences

Pages 87-96

Abolfazl Nazari-Giglou, Aidin Jabbari-Sahebari, Ahmad Shakibaenia, Seyyed Mahmood Borghei

Full papers are available at ScienceDirect:

<http://www.sciencedirect.com/science/journal/10016279>.



Papers Published in the International Journal of Sediment Research (The official journal of WASER), Volume 31, No. 2, 2016

Pages 97-194

Volume 31 Number 2 June 2016

A comparison between different methods for determining grain distribution in coarse channel beds

Pages 97-109

Alessio Cislighi, Enrico Antonio Chiaradia, Gian Battista Bischetti

A review of ecological restoration techniques in fluvial rivers

Pages 110-119

Baozhu Pan, Jianping Yuan, Xinhua Zhang, Zhaoyin Wang, Jiao Chen, Jinyou Lu, Wenjun Yang, Zhiwei Li, Na Zhao, Mengzhen Xu

An investigation into the effects of particle texture, water content and parallel plates' diameters on rheological behavior of fine sediment

Pages 120-130

Masoumeh Moayeri Kashani, Lai Sai Hin, Shaliza Binti Ibrahim, Nik Meriam Binti Nik Sulaiman, Fang Yenn Teo

Morphological responses in a meandering and island-braided reach of the Middle Yangtze River to the Three Gorges Reservoir impoundment

Pages 131-138

Dongdong Jia, Xuejun Shao, Xingnong Zhang, Yongjun Lu, Pengfei Hei

Muskingum equation based downstream sediment flow simulation models for a river system

Pages 139-148

Briti Sundar Sil, Parthasarathi Choudhury

Coupling the k-nearest neighbor procedure with the Kalman filter for real-time updating of the hydraulic model in flood forecasting

Pages 149-158

Kailei Liu, Zhijia Li, Cheng Yao, Ji Chen, Ke Zhang, Muhammad Saifullah

The effect of relative surface roughness on scour dimensions at the edge of horizontal apron

Pages 159-163

Parisa Koochak, Mahmood Shafai Bajestan

Distribution and ecological risk assessment of some heavy metals in coastal surface sediments along the Red Sea, Egypt

Pages 164-172

Ahmed El Nemr, Ghada F. El-Said, Azza Khaled, Safaa Ragab

Dynamics of algae growth and nutrients in experimental enclosures culturing bighead carp and common carp: Phosphorus dynamics

Pages 173-180

Suiliang Huang, Min Wu, Changjuan Zang, Shenglan Du, Joseph Domagalski, Magdalena Gajewska, Feng Gao, Chao Lin, Yong Guo, Baoyan Liu, Shaoming Wang, Yang Luo, Adam Szymkiewicz, Romuald Szymkiewicz

Bedrock control on the Assu Incised Valley morphology and sedimentation in the Brazilian Equatorial Shelf

Pages 181-193

Moab Praxedes Gomes, Helenice Vital, Karl Statteger, Klaus Schwarzer

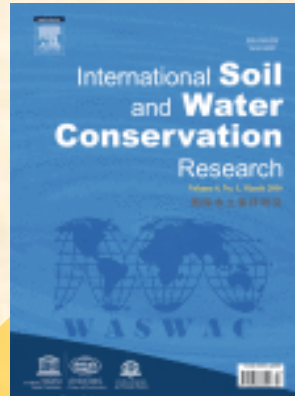
Erratum to "Recent surface marine sediments of Cocos Island in Costa Rica" [Int. J. Sediment Res. 29(1) (2014), p. 63]

Page 194

Jeffrey A. Sibaja-Cordero, Jesús S. Troncoso, Eddy Gómez-Ramírez

Full papers are available at ScienceDirect:

<http://www.sciencedirect.com/science/journal/10016279>, with free access to the paper abstracts.



Contents of ISWCR (Vol. 4, No.1, 2016)

International Soil and Water Conservation Research
Volume 4, Issue 1, Pages 1-84 (March 2016)

A nitrogen index for improving nutrient management within commercial Mexican dairy operations

Pages 1-5

Uriel Figueroa-Viramontes, Jorge A. Delgado, Juan I. Sánchez-Duarte, Esmeralda Ochoa-Martínez, Gregorio Núñez-Hernández

Monitoring and predicting the soil water content in the deeper soil profile of Loess Plateau, China

Pages 6-11

Aijuan Wang, Baoyuan Liu, Zhiqiang Wang, Gang Liu

Efficiency test of modeled empirical equations in predicting soil loss from ephemeral gully erosion around Mubi, Northeast Nigeria

Pages 12-19

Ijasini John Tekwa, Abubakar Musa Kundiri, Alhaji Maigana Chiroma

Assessing the costs and benefits of improved land management practices in three watershed areas in Ethiopia

Pages 20-29

Abonesh Tesfaye, Roy Brouwer, Pieter van der Zaag, Workneh Negatu

Identification and prioritization of subwatersheds for land and water management in Tekeze dam watershed, Northern Ethiopia

Pages 30-38

Kidane Welde

Designing terraces for the rainfed farming region in

Iraq using the RUSLE and hydraulic principles

Pages 39-48

Mohammad H. Hussein, Ibrahiem M. Amien, Tariq H. Kariem

Explaining the evaporation paradox in Jiangxi Province of China: Spatial distribution and temporal trends in potential evapotranspiration of Jiangxi Province from 1961 to 2013

Pages 49-55

Xianghui Lu, Hua Bai, Xingmin Mu

Evaluation of reference evapotranspiration methods for the northeastern region of India

Pages 56-67

Pankaj K. Pandey, Parmendra P. Dabral, Vanita

Pandey

Sustainability issues on rice–wheat cropping system

Review Article

Pages 68-83

Rajan Bhatt, Surinder S Kukal, Mutiu A Busari, Sanjay Arora, Mathura Yadav

Free full papers and open access are available at ScienceDirect :

<http://www.sciencedirect.com/science/journal/20956339>

WASER

COMING EVENTS

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

Date: September 19 – 22, 2016

Venue: Stuttgart, Germany

Summary: The 13th International Symposium on River Sedimentation (ISRS 2016) will be held from September 19 to 22, 2016 in Stuttgart, Germany. Held triennially since 1980 under the auspices of the International Research & Training Center on Erosion and Sedimentation (IRTCES), the symposium series provides an important forum for scientists, engineers and policy-makers to share information, exchange ideas and collaborate in the field of erosion and sedimentation processes.

Sediment dynamics in fluvial systems is of high ecological, economic and human-health-related significance worldwide. Appropriate management strategies are needed to limit maintenance costs as well as minimise potential hazards to the aquatic and adjacent environments. Human intervention, ranging from nutrient / pollutant release to physical modifications, has a large impact on sediment quantity and quality and thus on river morphology as well as ecological functioning. Truly understanding sediment dynamics requires multidisciplinary approaches. But how do we transfer new insights on complex interactions in fine sediments into sustainable management strategies?

Symposium Topics:

- A. Integrated Sediment Management at River Basin Scale
 - A1. Sediment sources and management strategies influencing sediment yield
 - A2. Coupling of watershed processes with stream dynamics
- B. Sediment Transport
 - B1. Mechanics of sediment transport
 - B2. Local scour, bank erosion and protection measures
 - B3. Measurement techniques and monitoring strategies
- C. River Morphodynamics
 - C1. River morphology and morphodynamics
 - C2. Numerical modelling of fluvial processes
 - C3. River training and management
- D. Hydromorphology meets Ecology
 - D1. Ecological aspects of hydraulic and transport processes
 - D2. From macro- to microscale to impact stability
 - D3. Morphology and water quality
 - D4. Modelling tools for river habitat management
 - D5. River restoration measures
- E. Reservoir Sustainability
 - E1. Reservoir sedimentation and density currents

- E2. Reservoir management strategies
- F. Social, Economic and Political Aspects of Sediment Management
 - F1. Competing uses of rivers
 - F2. Assessment and policy on hydro-environment
 - F3. Natural hazards and extreme events

Special Sessions:

- SS 1 Hydropower and Sediment Management
- SS 2 Navigation and River Morphology
- SS 3 Innovative Measurement Techniques
- SS 4 SEDITRANS – Sediment Transport in Fluvial, Estuarine and Coastal Environment
- SS 5 Sustainable Land Management

Keynote Presentations:

- Bruce W. Melville, The University of Auckland: *Local scour at hydraulic structures*
- David M. Paterson, University of St Andrews: *Form, function and physics*
- Weiming Wu, Clarkson University: *Advances and Challenges in Mixed Cohesive/Noncohesive Sediment Transport Research*

WISA (Workshop on International Sediment Advancements):

Hydraulic, morphological and biological interactions in sediment management
Giampaolo Di Silvio (WASER), Silke Wieprecht (LOC), Manfred Spreafico (ISI), Desmond E. Walling (IAHS), Zhaoyin Wang (IAHR), Ildefonso Pla Sentis (CONSOWA)

Technical Tours:

- Iffezheim barrage, a hydropower station with one of the largest fish passages in Europe
- Schluchseewerk AG with its five pumped storage power stations on the High Rhine in the southern Black Forest

Organizer: University of Stuttgart, Germany

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

Symposium Secretariat:

Institute for Modelling Hydraulic and Environmental Systems
University of Stuttgart
Pfaffenwaldring 61
D-70569 Stuttgart
Germany

Contacts:

Email: isrs2016@iws.uni-stuttgart.de

Tel: +49-711-685-64777

Fax: +49-711-685-64746

CONSOWA 2017 (Spain, 12-16 June 2017)

1st World Conference on Soil and Water Conservation under Global Change

Date: 12-16 June 2017

Venue: Lleida, Spain

Summary: A joint Conference of the “International Soil Conservation Organization” (19th ISCO Conference), the “World Association for Soil and Water Conservation” (Conference on Soil and Water Conservation of WASWAC), the “European Society for Soil Conservation” (8th ESSC Congress), the “International Union of Soil Science (USS-Commissions 3.2, 3.6), the Soil and Water Conservation Society (SWCS), the “International Erosion Control Association” (IECA) and the “World Association for Sedimentation and Erosion Research” (WASER), in parallel with the VIII Simposio Nacional sobre Control de la Degradación y Restauración de Suelos (SECS).

Sponsors: Universitat de Lleida (UdL), Spanish Society of Soil Science (SECS), ISCO, WASWAC, ESSC, IUSS, SWCS, WASER, IECA and ICEA

URL: <http://www.consowalleida2017.com/>

Contacts:

Email: fundacio@udl.cat

THESIS 2016 (Tokyo Japan, Sep. 12-14, 2016)

THESIS 2016, TWO-PHASE MODELING FOR SEDIMENT DYNAMICS IN GEOPHYSICAL FLOWS

Date: September 12 - 14, 2016

Venue: Tokyo Japan

Invitation: On behalf of the Local Organizing Committee, we would like to inform you of the 3rd symposium on Two-phase modelling for Sediment dynamics in geophysical flows, THESIS-2016.

THESIS symposia (THESIS-2011, THESIS-2013) were successfully held in Chatou, France, to provide a forum for discussing and exchanging experience and knowledge within the international research community, with the goal of developing two-phase approaches to sediment dynamics in geophysical flows. THESIS-2016 will be held in Tokyo, Japan, September 12-14, 2016. This symposium will focus on the state-of-the-art of the two-phase approach for sediment dynamics. The symposium is hosted by Research and Development Initiative (RDI), Chuo University with the co-hosts of Japan Society of Civil Engineers (JSCE), International Association of Hydraulic Research (IAHR), and the Society Hydrotechnique de France (SHF).

For a list of the main topics, important dates and further details of the symposium, please visit our symposium

web-site: <http://c-faculty.chuo-u.ac.jp/~ths2016/> or read the Flyer of THESIS-2016 in

Tokyo: http://c-faculty.chuo-u.ac.jp/~ths2016/downloads/Flyer_thesis-2016.pdf

We hope you will accept our invitation to participate in the symposium.

Please circulate this announcement to colleagues who may be interested in this symposium.

Please feel free to contact us if you have any questions at: ths2016@tamacc.chuo-u.ac.jp

Sincerely yours,

Shoji Fukuoka

Chair, Local Organizing Committee of THESIS-2016 in Tokyo

Workshop: The workshop will focus on both conventional and novel models for sediment transport to enhance their accuracy and application to geophysical flows.

Date: Tuesday, 13 September 2016

Time: 15:20-17:20 in Room 1 (main room)

Workshop Topics: Conventional and novel sediment transport models, bed load and suspended load, and sediment mixture and armoring

Symposium Topics: This symposium will cover the following research topics, all of which are based on the perspective of a two-phase approach to sediment dynamics, in which the dynamics of water and the solid-particles phases are considered with interphase interactions and momentum transfer.

A. Fundamentals

Physical processes, mathematical formulations and parameterizations, analytical solutions

B. Modelling

Numerical simulation, turbulence modelling

C. Measurements

Experimental techniques in the laboratory, measuring methods in the field

D. Environmental applications

(D1) Sheet flows, highly concentrated flows, Nutrient/contaminants transported by sediments

(D2) Internal flows (erosion around pipelines and hydraulic sluices) and groundwater flows (porous media), Vegetated channels, riverbank restoration, Landslide/debris flows, Breaching processes in dyke-overlap and dyke-break flows, Tsunami with sediment transport

Form and size of the Symposium:

- Language: English

- Presentation forms: Oral and posters

- Four plenary key-lectures and a workshop

- Duration: 3 days with plenary and parallel sessions

URL: <http://c-faculty.chuo-u.ac.jp/~ths2016/>

Contacts:

Email: ths2016@tamacc.chuo-u.ac.jp

River Flow 2016 (USA, July 11-14, 2016)

Date: July 11-14, 2016; Master classes: July 10

Venue: Saint Louis, USA

Summary: On behalf of the IAHR Committee on Fluvial Hydraulics it is our pleasure to invite you to participate at River Flow 2016 the 8th International Conference on Fluvial Hydraulics at Saint Louis, Mo, USA River Flow is the major international meeting in the area of river engineering and fluvial hydraulics. The conference will focus on the latest advances in experimental, theoretical, and computational tools in the field of fluvial hydraulics. River Flow 2016 will include special sessions dedicated to the Upper Mississippi River Basin, one of the largest of its kind

in the world. Several master classes for graduate students and young researchers will be organized and led by recognized international experts on topics in river hydrodynamics, morphology, and sediment transport.

Organizer: River Flow 2016 is co-organized by IIHR, Hydroscience & Engineering, the University of Iowa (UI), the Ven Te Chow Hydrosystems Laboratory of the University of Illinois at Urbana-Champaign (UIUC), and Saint Louis University (SLU), in partnership with the National Great Rivers Research and Education Center (NGRREC) at Alton, Illinois.

Theme and Topics:

- A. River Flow and Transport Processes
- B. Sediment Transport and River Morphodynamics
- C. River Floods
- D. River Management, Ecology and Restoration

URL: <http://www.riverflow2016.org>

Contacts:

Email: riverflow2016@uiowa.edu

Phone: + 319 384 0630 (G. Consatantinescu, Conference Chair)

WASSER

World Association for Sedimentation & Erosion Research

Chunhong Hu (Secretary General) China
Cheng Liu (Executive Secretary General and
Treasurer) China



WASER COUNCIL

President

Giampaolo Di Silvio Italy

Vice Presidents

Ulrich C.E. Zanke Germany
Zhao-Yin Wang China

Council Members

Grant Douglas Australia
Helmut Habersack Austria
Geraldo Wilson Junior Brazil
Yitian Li China
Shoji Fukuoka Japan
Silke Wieprecht Germany
Nikolay I. Alexeevsky* Russia
Mustafa Altinakar USA
M.J.M. Romkens USA

* Deceased (see Obituary on page 6, WASER Newsletter 2015 No.1)

Co-opted Council Members

Chunhong Hu (Secretary General) China
Desmond E. Walling (Immediate Past President) UK
Chih Ted Yang (Past Vice President) USA
Gerrit Basson (Past Vice President) South Africa

WASER SECRETARIAT



United Nations
Educational, Scientific and
Cultural Organization



International Research and
Training Center on Erosion
and Sedimentation

International Research and Training Center on
Erosion and Sedimentation (IRTCES)
under the auspices of UNESCO
P.O. Box 366, 20 Chegongzhuang West Rd.
Beijing, 100048, China
Fax: +86-10-68411174
<http://www.irtces.org/>

CONTACTS

Prof. HU Chunhong
P.O. Box 366, 20 Chegongzhuang West Rd.
Beijing, 100048, China
Fax: +86-10-68411174

Prof. LIU Cheng
P.O. Box 366, 20 Chegongzhuang West Rd.
Beijing, 100048, China
Tel: +86-10-68786410(O)
Fax: +86-10-68411174
E-mail: chliu@iwahr.com; cliu.beijing@gmail.com

WASER URL: <http://www.waser.cn>

=====
Editor: Liu Cheng
P.O. Box 366, 20 Chegongzhuang West Rd.
Beijing, 100048, China
Fax: +86-10-68411174
E-mail: chliu@iwahr.com
Advisor: Prof. Des. E. Walling

Newsletter Layout and Production:

WASER Secretariat
The WASER Newsletter is sent regularly to members
of the WASER community and interested experts.
Please send your contributions to the WASER
Secretariat at chliu@iwahr.com.
=====

WASER mailing list request

Dear Colleague,

We hope that you will have received the WASER Newsletter that was recently circulated by email to persons who had attended past International Symposia on River Sedimentation sponsored by WASER or who we thought might have an interest in the activities of the Association. The rejuvenation of the Newsletter is part of a wider initiative to improve communication within the WASER community and to strengthen the administrative base of the Association. The circulation list for the Newsletter was based on a variety of sources and we are conscious that addresses may have changed and that peoples' interests may have shifted. We are therefore wish to generate an up-to-date list containing the confirmed current email and postal addresses of all persons who are interested in the activities of the Association and its community and who wish to receive future Newsletters and related communications.

To assist us in this task we would be very grateful if you would complete and return the short form attached to this email to signify your interest in the activities of WASER and in joining the WASER community and your wish to be added to the new mailing list. This list will be used only for the purposes of identifying those people with an interest in the Association and facilitating communication within the WASER community. It will not be made available to others.

With kind regards



Giampaolo Di Silvio,
President of WASER

Attached Form

PLEASE RETURN THIS FORM TO: chliu@iwahr.com.

I am interested in the activities of WASER and its community and I request that my name be added to the WASER mailing list.

NAME	Country	Organisation	Current Position	Postal Address	Email Address