



Swiss Confederation

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UNIVERSITÄT
BERN



German
IHP/HWRP National Committee



Ministry of Transport, Public Works and Water Management
Directorate-General for Public Works and Water Management

RIZA Institute for Inland Water Management and Waste Water Treatment

Circular International Workshop Erosion, Transport and Deposition of Sediments Berne, Switzerland 28-30 April 2008

Background

The International Sediment Initiative (ISI) is a UNESCO-programme, which has been set-up in September 2004. The mission of ISI is to organize and promote international information exchange and provide direct access to policy makers in Member States, while activating scientific and professional communities in all regions and countries concerned. ISI will promote the elaboration and monitoring of sediment data to develop appropriate methods and procedures in sediment management. The main activities and projects of ISI are: review of erosion and sediment-related research, global evaluation of sediment transport, setting-up of an erosion and sediment information system, development of case studies for large river basins, networking with other institutions in the field of sediments and education and capacity building.

The International Commission for the Hydrology of the Rhine Basin (CHR) is a cooperation of scientific institutions from Switzerland, Austria, Germany, France, Luxembourg and the Netherlands in the field of hydrology. The mission of the CHR is the expansion of the hydrological knowledge in the Rhine basin as well as the support of decision making in sustainable water resources management by solving of cross-border problems. CHR aims at the joint development of know-how and equipment for observation, quantification and forecasting of sediment transport.

Objectives of the workshop

- To present a state-of-the-art of sediment related problems
- To discuss present and future problems in relation to sediment management.
- To exchange knowledge about erosion, transport and deposition of sediment.
- To detect and discuss research needs.
- To discuss and solve specific problems in a Swiss alpine catchment area.

The International Commission for the Hydrology of the Rhine Basin (CHR) invites scientists, researchers, decision makers, consulting experts and stakeholders in the field of sediment management to discuss these issues during a three day workshop.

Structure and workshop themes

The workshop is divided in two plenary working sessions and a technical field trip.

Session 1: Experiences from the River Rhine basin

Keywords: Debris flows
Sediment transport during flood events
Reservoir sedimentation
Sediment problems in impounded reaches
Sediment quality
Sediment finger printing
Morphological processes at bifurcations
Navigation aspects of river and sediment management

Session 2: Experiences from other continents

Keywords: Soil erosion
Sediment management
Reservoir sedimentation
Time series and accuracy
Sediment balance

Technical field trip:

Keywords: Assessment of sediment processes in torrent catchments
Hazard maps
Sediment transport in rivers

The one day field trip will take place in the Lütschine basin in the Bernese Oberland

Provisional programme and timetable

Day 1 – 28 April 2008

Registration – from 08.30 a.m.

09.00	Welcome by Manfred Spreafico, president of CHR
09.10	Welcome by Anil Mishra, UNESCO / Division of Water Sciences, International Hydrological Programme, Section of Hydrological Processes and Climate, Paris, France
09.20	Welcome by Rolf Weingartner, Geographical Institute, University of Berne
<i>Session 1 – Experiences from the River Rhine basin</i>	
Rapporteur: Jens Turowski	
Chair: to be appointed	
09.30 – 10.00	Debris flows and sediment transport in steep catchments – Dieter Rickenmann, Swiss Federal Research Institute WSL Birmensdorf
10.00 – 10.30	Lake Brienz Project: An interdisciplinary catchment-to-lake study – Alfred Wüest, EAWAG, Dübendorf
10.30 – 11.00	Reservoir sedimentation – Anton Schleiss, EPF Lausanne
11.00 – 11.30	Tea/Coffee – Posters
11.30 – 12.00	Sediment problems in the Austrian Rhine catchment – Martin Weiß, International Rhine regulation, Lustenau
12.00 – 12.30	Sediment deposition and sediment management in the impounded section of the Upper Rhine, Stefan Vollmer, Federal Institute of Hydrology, Koblenz
12.30 – 14.00	Lunch
Chair: Eric Sprokkereef	
14.00 – 14.30	Contaminated sediments in the Rhine basin - relevant pollutants and resuspension risk – Martin Keller, Federal Institute of Hydrology, Koblenz
14.30 – 15.00	Finger printing of suspended sediment sources in the Luxemburg part of the Rhine catchment – Andreas Krein, Centre de Recherche Public Gabriel Lippmann, Belvaux
15.00 – 15.30	Sediment transport and sediment management in the free flowing German Rhine – Emil Gölz, Federal Institute of Hydrology, Koblenz
15.30 – 16.00	Tea/Coffee – Posters
16.00 – 16.30	Morphological processes at river bifurcations – Roy Frings, University of Utrecht
16.30 – 17.00	Navigation aspects of river and sediment management – Hendrik Havinga, Rijkswaterstaat Regional Directorate East-Netherlands, Arnhem
17.00 – 18.00	Discussion of session 1
18.00 – 18.30	Oral presentation of posters and poster session
19.30	Participants' dinner

Day 2 – 29 April 2008

Session 2 – Experiences from other continents

Rapporteur: Jens Turowski

Chair: Manfred Spreafico

09.00 – 10.00	Soil erosion modeling and control in Brazil - Past, present and future - Henrique M. L. Chaves, School of Technology , University of Brasilia, Brazil
10.00 – 11.00	Sediment management in transboundary river basins - Challenges for management - Marcelo Gaviño Novillo, Departamento de Hidráulica Facultad de Ingeniería – University of La Plata, Argentina
11.00 – 11.30	Tea/Coffee – Posters
11.30 – 12.30	Changes in annual runoff and sediment loads of major rivers in China – Chunhong Hu, International Research and Training Center, Beijing, China
12.30 – 14.00	Lunch
14.00 – 15.00	Reservoir sedimentation - An overview - Gerrit Basson, Dept. of Civil Engineering, University of Stellenbosch, South Africa
15.00 – 16.00	Investigating the changing sediment loads of the world's rivers: Problems and Findings - Des Walling, Dept. of Geography, University of Exeter, United Kingdom
16.00 – 16.30	Discussion of session 2
16.30 – 17.00	Tea/Coffee – Posters
17.00 – 17.30	Summary and conclusions of the workshop by the rapporteur
17.30 – 18.30	Introduction to the pilot catchment of the Lütschine

Evening event

Participants' dinner near the conference centre on 28 April at 7.30 pm

Day 3 – 30 April 2008

Technical Field Trip

08.00	Departure by bus from the University of Berne to Grindelwald in the Bernese Oberland
09.30	Arrival at the Hotel Wetterhorn near to Upper Grindelwald Glacier General introduction into geology, geomorphology and hydrology Prof. Hans Kienholz, University of Berne Ms. Eva Gertsch, University of Berne
10.00	Coffee break in the Hotel Wetterhorn
10.30	Departure to Pfingstegg
10.45	Introduction to special sediment related problems - Glacier retreat - Rock gliding at Eiger mountain - Glacier lake outburst scenarios Dr. Christoph Lehmann, Hydrologie-Wasserbau

11.15	Departure to rail station Schwändi - Presentation of experiences with hazard maps in an alpine environment - Landslide Schwändibach Prof. Hans Kienholz Ms. Eva Gertsch
12.00	Lunch in Grindelwald Shopping
14.00	Departure from Grindelwald
14.15	Zentrale Kraftwerke Jungfraubahn, Lütschental - Presentation of processes caused by the flood of 2005 - Protection measures Dr. Christoph Lehmann
14.35	Departure to Innerer Blindlauigraben - Sediment monitoring and sediment retention basins. Example of a GHO-basin Prof. Dr. M. Spreafico
15.00	Departure to the hydrometric station Lütschine - Gsteig
15.15	Visit of the station Lütschine - Gsteig - Discharge measurement - Measurement of suspended sediment Mr. Karim Michel
15.30	Special event
16.15	Departure to Berne
17.30	Arrival at Berne

Language

Working language of the workshop will be English.

Working language during the field work will be English and German.

Registration and organizational details

Participation is limited to approximately 60 persons. Please confirm your participation to the workshop, indicating on the registration form if you would like to contribute with a poster.

Oral presentations will be given by invited speakers only. The standard time for presentations is 20 minutes, with additional 10 minutes for clarifying questions and discussion. At the end of the first day there will be time for a 2 minute oral presentation of your poster.

Speakers and participants who present a poster will be asked to submit an extended abstract of their contribution. The length of the abstract is limited to max 6 pages for oral contributions and max 2 pages for poster presentations. All abstracts will be collected in a book of abstracts and handed out to the workshop participants. Subject to the authors approval the abstracts as well as a pdf version of the contributions will be published on the CHR website. After the workshop a final report will be compiled by the rapporteur. This report will contain a synthesis of the contributions as well as the knowledge gaps and research needs that were found during the workshop.

Deadlines

Registration before **1st February 2008**

(or earlier if the maximum number of participants is exceeded)

Submission of extended abstracts of presentations and posters before **15th April 2008**

Venue

Main building of the University of Berne

Kuppelraum, Room 501

Hochschulstrasse 4

CH 3012 Bern

Fees

Most of the costs of the workshop will be covered by the organisers and sponsors. Participants have to pay a limited contribution for catering (luncheons, coffee breaks) and transport.

This contribution amounts to:

€150 for the two plenary working sessions and the field trip

€100 for only the two plenary working sessions

Tickets for the Conference Dinner on 28 April at the amount of **€50** must be purchased separately.

Cancellations must be submitted to the CHR Secretariat (info@chr-khr.org) before April 1, 2008 for a full refund less an administration fee of €50. After April 1, 2008 no refunds will be paid.

Overnight accommodation must be arranged and paid for by the participants themselves. Hotel accommodation can be booked on the internet site of the Berne tourist office www.berninfo.com.

Organisers and sponsors

The invitation to the event is issued by the International Commission for the Hydrology of the Rhine Basin (CHR) in cooperation with UNESCO International Hydrological Program / International Sediment Initiative, the University of Berne and the Swiss Federal Office for the Environment

Co-sponsors

- Hydrologic Commission of Switzerland
- National IHP-secretariats of the Netherlands, Germany and Switzerland
- Rijkswaterstaat - Center for Water management, Netherlands

For further information about CHR and about the workshop, please visit our website at www.chr-khr.org.

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For further information, please contact either the CHR/KHR secretariat or one of the members of the coordination committee.