

AGENDA

International Conference

Ecohydrological Processes and Sustainable Floodplain Management

***Opportunities and Concepts for Water Hazard Mitigation, and Ecological
and Socioeconomic Sustainability in the Face of Global Changes***

*under the auspices of
International Hydrological Programme UNESCO
and
InterAcademy Panel Water Programme*

19-23 May 2008, Lodz, Poland

*Conference dedicated to the 50th Anniversary of Scientific Activity
of Professor John E. Thorpe*

Honorary Patronage:

Ministry of Science and Higher Education of the Republic of Poland

Ministry of the Environment of the Republic of Poland

Mayor of the City of Lodz

RAMSAR Convention

Organisers:

International Institute Polish Academy of Sciences European Regional Centre for
Ecohydrology under the auspices of UNESCO, Lodz, Poland

Department of Ecology, University of Lodz, Poland

US Corps of Engineers, USA

International Centre for Water Hazard and Risk Management u/a of UNESCO,
Tsukuba, Japan

UNESCO-IHE, The Netherlands

Joint Research Centre, European Commission, Ispra, Italy

University of Algarve, Portugal

Tours University, France

Sunday, 18th May 2008, 8 pm		Welcome Drink: European Regional Centre under the auspices of UNESCO (3 Tylna Str.)		
	Monday 19 th May 2008	Tuesday 20 th May 2008	Wednesday 21 st May 2008	Thursday 22 nd May 2008
Venue	Museum of the History of the City of Lodz Registration 9.00 – 10.00	Conference Centre, University of Lodz	Pilica Demonstration Site, Conference Centre, Bronisławów	Conference Centre, University of Lodz
Morning sessions	Opening and Introduction (Chairman: M. Zalewski)	S2: Ecohydrology – link between conservation of ecological functions of floodplains and enhancement of sustainable economical development. Closing session of the IHP-VI EH PROGRAMME dedicated to the memory of prof. Zdzisław Kaczmarek and dr Frederic Fournier (Chairman: W. Junk)	Technical Trip Visit to the Pilica Catchment Demonstration Site (A. Bednarek)	S5: Provision of ecological services and decision making process for sustainable development of floodplain areas (Chairman: K. Takeuchi)
	Special Lecture dedicated to the 50th Anniversary of Scientific Activity of Professor John Thorpe F. Schiemer			
	Opening lecture J. Thorpe	S3: Sustainable management of floodplains in the face of climate change (Chairman: W. Mitsch)		
Lunch	PRESS CONFERENCE (A. Tokarczuk)	POSTER SESSION	Lunch	POSTER SESSION <i>Final Drafting of Floodplain Declaration (Advisory & Steering Committees, invited institutions)</i>
Afternoon sessions	S1: Hydro-geomorphological processes and ecological engineering in floodplain formation (Chairmen: M. Zalewski / E.Z.Stakhiv)	S3 -cont: Sustainable management of floodplains in the face of climate change – methodological issues (Chairman: G. Janauer)	S4: Continental Perspectives – Case Studies: S4a. Arid & semi-arid zones (Chairman: D. Harper, L. Chicharo) S4b. Tropical zones (Chairman: W. Junk; A. Agostinho) S4c. Temperate zones (Chairman: F. Schiemer, K. Krauze)	S6: Floodplain and fisheries (Chairman: J. Thorpe)
	Floodplain Declaration – Rationale (I. Wagner)	Floodplain Declaration – State of Art and introduction to the process (I. Wagner)		
	Meeting of Advisory & Steering Committees on drafting Floodplain Declaration	17:15: The European Workshop of the InterAcademy Panel Water Programme: Ecohydrology and ecosystem biotechnologies: framework and tool for IWRM (J.G. Tundisi)	Drafting Session of the Floodplain Statement/Declaration (Chairmen: M. Zalewski, V. Santiago, G. Bidoglio, E. Stakhiv, K. Takeuchi ; Reporters: I. Wagner, R. D. Robarts)	Reading and adoption of the Draft Floodplain Declaration (Chairmen: M. Zalewski, V. Santiago, G. Bidoglio, E. Stakhiv, K. Takeuchi , Reporters: I. Wagner, R. D. Robarts) Summary and discussion
Evening	Final of the photo competition "River Valleys – In Harmony with Man and Nature"			
	Dinner			
Friday 23rd May 2008 - 8.00 am		Departure for the conference trip to Krakow and Zakopane		

Monday
19th May 2008

Venue: Museum of the History of the City of Lodz (15 Ogrodowa Str.)

Opening and Introduction

Chairman: Maciej Zalewski, ERCE u/a of UNESCO, PAS, University of Lodz, Poland

- 10.00 – 10.30 **Opening and Introduction by Chairmen**
Maciej Zalewski, European Regional Centre for Ecohydrology u/a of UNESCO, Polish Academy of Sciences, University of Lodz, Poland
Giovanni Bidoglio, Joint Research Centre, European Commission, Ispra, Italy
Eugene Z. Stakhiv, Institute for Water Resources, U.S. Army Corps of Engineers, USA
Kuniyoshi Takeuchi, International Centre for Water Hazard and Risk Management u/a of UNESCO, Tsukuba, Japan
Jay O’Keeffe UNESCO-IHE, The Netherlands
- 10.30 – 11.00 **Opening and Introduction by the Hosts**
Michał Kleiber President of the Polish Academy of Sciences
Wiesław Puś Rector of the University of Lodz
Jerzy Kropiwnicki Mayor of the City of Lodz
- 11.00 – 12.00 **Introduction by the Invited Organizations and Institutions**
UNESCO: Siegfried Demuth, Chief Hydrological Processes and Climate Section, Division of Water Sciences, UNESCO IHP
UNEP: Representative of UNEP
InterAcademy Panel Water Programme: José Galizia Tundisi, Chair of the IAP Water Programme, Brazilian Academy of Sciences
RAMSAR: Tobias Salathe, RAMSAR Senior Advisor for Europe
European Commission
Ministry of Foreign Affairs of the Republic of Poland
Ministry of Environment of the Republic of Poland
Ministry of Science and Higher Education of the Republic of Poland
Director of the Economic Chamber Polish Waterworks, Antoni Tokarczuk
- 12.00 – 12.30 Coffee break
- 12.30 – 13.00 **Special Lecture dedicated to the 50th Anniversary of Scientific Activity of Professor John E. Thorpe**
Fritz Schiemer, University of Vienna, Austria
Challenges and opportunities for sustainable use and restoration of floodplains
- 13.00 – 13.30 **Opening Lecture**
John Thorpe, University of Glasgow, UK
Role of floodplains in shaping fish life traits
- 13.30 – 15.00 Lunch

14.00 – 15.00: Press Conference

(Chairman: Antoni Tokarczuk, former Minister of Environment, Director of the Economic Chamber Polish Waterworks)

SESSION 1: Hydro-geomorphological processes and ecological engineering in floodplain formation

Chairman: Maciej Zalewski, ERCE under the auspices of UNESCO, PAS, University of Lodz

- 15.00 – 15.20 **Opening Lecture**
Wolfgang Junk, Max Planck Institute of Limnology, Germany
Role of flood pulses in shaping river systems
- 15.20 – 15.40 **William J. Mitsch**, Ohio State University, USA
Ecological engineering in floodplain management
- 15.40 – 16.00 **Giovanni Bidoglio**, Joint Research Centre, European Commission, Italy
European Water Framework Directive in floodplains conservation
- 16.00 – 16.20 **Eugene Stakhiv**, Institute for Water Resources, U.S. Army Corps of Engineers, USA
River engineering for concordance between flood protection and integrity of ecological processes
- 16.20 – 16.40 **Kuniyoshi Takeuchi**, International Centre for Water Hazard and Risk Management u/a of UNESCO, Japan
Potential implication of accelerated living with floods on ecological system
- 16.40 – 17.00 **Leszek Starkel**, Polish Academy of Sciences
Paleohydrology of Vistula River basin with special emphasize on floodplain formation
- 17.00 – 17.20 **Massimo Rinaldi, Bruna Gumiero**, University of Firenze, Italy; European Centre for River Restoration, Italy
Anthropogenic evolution of geomorphology in river valleys and its effect on floodplain biocenosis
- 17.20 – 17.40 Coffee break

SESSION 1 cont: Hydro-geomorphological processes and ecological engineering in floodplain formation

Chairman: Eugene Stakhiv, Institute for Water Resources, U.S. Army Corps of Engineers, USA

- 17.40 – 18.00 **Tobias Salathe**, RAMSAR
Floodplains biodiversity protection and management in the context of the RAMSAR policy
- 18.00 - 18.20 **Klement Tockner**, Swiss Federal Institute of Aquatic Science and Technology, Switzerland
Floodplains as keystone ecosystems of global importance
- 18.20 – 18.40 **Jean Pierre Berton**, University of Tours, France
The need for integration of natural and cultural values of river valleys
- 18.40 – 19.00 **Tom Ball**, UNESCO Centre for Water Law, Policy and Science; University of Dundee
Management approaches to floodplain restoration and stakeholder engagement in the UK: a survey of good practice
- 19.00 - 19.20 **Jun Xia**, Chinese Academy of Sciences, Beijing, China
River eco-problem and restoring approach by water projects management and pollution control: challenges and actions in Huai River Basin of China
- 19.20 – 19.40 **Summary and closing of the session**

19.40 – 20.00: Floodplain Declaration – rationale and introduction to the process

(Iwona Wagner, ERCE u/a UNESCO PAS, UL, Poland)

Tuesday
20th May 2008

Venue: Conference Centre, University of Lodz (16/18 Kopcińskiego Str.)

SESSION 2: Ecohydrology – link between conservation of ecological functions of floodplains and enhancement of sustainable economical development

Closing session of the UNESCO IHP-VI ECOHYDROLOGY PROGRAMME, dedicated to the memory of prof. Zdzisław Kaczmarek and dr Frederic Fournier

Chairman: Wolfgang Junk, Max Planck Institute of Limnology, Germany

- 9.00 - 9.10 **Introduction: Lisa Hiwasaki, Project Officer, UNESCO-IHP
UNESCO's Ecohydrology Programme**
- 9.10 - 9.30 **Opening Lecture
Maciej Zalewski, ERCE u/a UNESCO PAS, University of Lodz, Poland
The "foresight" methodology for development and implementation of
ecohydrology in river valleys**
- 9.30 - 9.50 **Richard Robarts, UNEP GEMS/Water Programme, Canada
Assessing the impacts of global change on aquatic systems and the need for
floodplain data**
- 9.50 - 10.10 **Luis Chicharo, University of Algarve, Portugal
The role of floodplains and reservoirs in sustainable use of coastal zone
resources**
- 10.10 - 10.30 **Lisa Hiwasaki, Project Officer, UNESCO-IHP
Towards integration of social sciences into ecohydrology**
- 10.30 - 10.50 **Jay O'Keeffe, UNESCO IHE, The Netherlands
Education and capacity building in floodplain protection and management**
- 10.50 - 11.10 **Iwona Wagner, ERCE u/a UNESCO PAS, University of Lodz, Poland
Floodplains in the UNESCO's IHP demonstration projects on EH**
- 11.10 - 11.30 **Robert Naiman, University of Washington, USA
An evolving perspective and role for the Ecohydrology Programme**
- 11.30 - 12.00 Coffee break

SESSION 3: Sustainable management of floodplains in the face of global climate change

Chairman: William J. Mitsch, Ohio State University, USA

- 12.00 - 12.20 **Opening Lecture
Zbigniew Kundzewicz, Polish Academy of Sciences, Poland
Climate change impacts on the hydrological cycle**
- 12.20 - 12.40 **Andrzej Kędziora, Polish Academy of Sciences, Poland
Impact of agricultural landscape structure on heat and water balance of
ecosystems**
- 12.40 - 13.00 **Radwan Al-Weshah, UNESCO Cairo Office
Nile River flooding as an example of ecological service provided by natural
hydrological regimes – historical perspective**
- 13.00 - 13.20 **Tomasz Okruszko, Warsaw Agricultural University, Poland
Facing climate changes – is floodplain restoration a mitigation tool for
hydrological cycle modification?**
- 13.20 - 13.40 **Angelo Agostinho, Universidade Estadual de Maringa, Brazil
Application of ecohydrology concept for sustainable development of tropical
floodplains**
- 13.40 - 14.00 **Edyta Kiedrzyńska, ERCE u/a UNESCO PAS, University of Lodz, Poland
Flood sediments deposition and nutrients retention in the lowland river
floodplain for water quality improvement and reduction of reservoir
eutrophication**

14.00 – 15.00 Lunch

SESSION 3 cont: Sustainable management of floodplains in the face of climate change – methodological aspects

Chairman: Georg Janauer, University of Vienna

- 15.00 – 15.20 **Kristen C. Hychka, Robert P. Brooks, Denice H. Wardrop, Penn State** Cooperative Wetlands Center, USA
Identifying a hydroecological classification scheme for headwater floodplain wetlands
- 15.20 – 15.40 **Yun Pan, et al., Hiroshima University, Japan; Capital Normal University Beijing, China**
Using three-dimensional visualization to represent hydrological influence on wetland plants
- 15.40 – 16.10 **Artur Magnuszewski, University of Warsaw, Poland**
Modeling of hydrological processes as a tool for decision making in floodplain management
- 16.10 – 16.30 **Kinga Krauze, ERCE u/a UNESCO PAS, University of Lodz, Poland**
Long-Term Ecological Research (LTER) approach as a tool for sustainable floodplain management
- 16.30 – 16.50 **Denice H. Wardrop, et al., Penn State Cooperative Wetlands Center, USA**
Determination of an integrated stream, wetlands, and floodplain hydrologic unit and accompanying ecologically-relevant classification scheme

16.50 – 17.00: Floodplain Declaration – State of Art

(Iwona Wagner, ERCE UNESCO PAS, UL)

17.00 – 17.15 Coffee break

17.15-20.00: The European Workshop of the InterAcademy Panel Water Programme: Ecohydrology and ecosystem biotechnologies: framework and tool for IWRM

Chairman: José Galizia Tundisi, Chair of the IAP Water Programme, Brazilian Academy of Sciences

We invite to participate in this workshop representatives of the Academies of Sciences, but also decision-makers and managers, and all the participants of the conference who are willing to take part in this event.

The workshop will focus on identification of the water-related issues in Europe, such as access to safe water, and proposing solutions to the identified constrains. It will bridge the representatives of different groups for the problem solving and capacity building.

- 17.15 – 17.30 **Jose G. Tundisi, Chair of the IAP Water Programme, Brazilian Academy of Sciences**
International Centers for Innovation, Research, Development and Capacity Building in Water Management
- 17.30 – 17.45 **Maciej Zalewski, ERCE u/a UNESCO PAS, University of Lodz, Poland**
Ecohydrology – engineering harmony between water resources, ecosystems and society
- 17.45 – 18.00 **Mike Donaghy, WWF Scotland**
Modern river basin and flood management legislation presents real opportunities to match research with policy
- 18.00 – 18.15 **Matti Kummu, the Finnish Academy of Science**
Hydrology and ecology of the Tonle Sap Lake: impacts of the Mekong upstream development
- 18.15 – 18.30 **Piotr Kowalczak, Institute of Meteorology and Water Management, Poznan, Poland**
Main causes of water conflicts

- 18.30 – 18.45 Coffee break
- 18.45 – 19.00 **Sulejman Redzic**, Academy of Science and Arts of the Bosnia and Herzegovina
Ecohydrological approach to sustainable management of floodable Karst Fields in Dinaric Alps (Western Balkan)
- 19.00 – 19.15 **Zbyszek Gasowski**, Asocjacje Les Etudes Ligériennes, France
Conflicts and solutions in the development and management of the Loire Valley
- 19.15 – 19.30 **Georgios Stournaras**, the Academy of Athens
Hydrogeology and vulnerability conditions of limited extension fissured rocks islands. The case of Tinos Island (Aegean Sea, Hellas)
- 19.30 – 19.45 **Gabor Paulovits**, the Hungarian Academy of Sciences
Modeling the effects of water level fluctuation on reproduction and spawning habits of fish species in Lake Balaton
- 19.45 – 20.00 **Arturs Skute**, Academy of Sciences of Latvia
Ecological and hydrological functions of the biggest natural floodplain in Latvia

Contribution to the Poster session:

Andrirej Bogoliepov Institute of colloid and water chemistry, Kyiv, Ukraine
The influence of dissolved natural organic substances on the migration of radionuclides in environmental objects

Wednesday
21st May 2008

Venue: Pilica River Demonstration Site
Conference Centre in Bornislawow

8.00 – departure to the technical trip

9:00 – 12.30: Visit to the Pilica Catchment Demonstration Project
(Agnieszka Bednarek, University of Lodz)

12.30 - lunch

SESSION 4: Continental Perspectives – Case studies

Chairmen: M. Zalewski, V. Santiago, G. Bidoglio, E. Stakhiv, K. Takeuchi

- 14.00. – 14.15 **David Harper**, University of Leicester, UK
Importance and perspective of the Ewaso Ngiro system
- 14.15 – 14.30 **Alaa el-Sadek**, National Water Research Centre, Egypt
Eco-hydrology as important tool for Integrated Water Resources Management in the Nile Basin: Egypt
- 14.30 – 14.45 **David Motta-Marques**, Institute of Hydrological Research-Federal University of Rio Grande do Sul, Brazil
Ecohydrology towards the sustainable development
- 14.45. – 15.00 **Karl Wantzen**, University of Konstanz, Germany
Management of biodiversity and ecosystem services of the Pantanal of Mato Grosso: risks and opportunities
- 15.00 – 15.15 **Yesid Carvajal Escobar**, Universidad del Valle, Colombia
Environmental flow regime in the framework of integrated water resources management strategy
- 15.15 – 15.30 **Diefenderfer Heida**, Pacific Northwest National Laboratory, USA
Hydraulic geometry of freshwater tidal forested wetlands and early channel morphological responses to hydrological reconnection, Columbia River, U.S.A.
- 15.30 – 15.45 **Rodrigues Stéphane, et al.**, GÉEAC Laboratoire de Géologie des Environnements Aquatiques Continentaux, FRANCE
Managing flow capacity, sediments and vegetation: learnings from the disconnected secondary channels of the River Loire (France)

15.45– 16.00 – coffee break

Parallel discussions

16.00 – 16.30 **Summary, discussion and formulation of contribution to the Floodplain Declaration**

4a: Arid and semi-arid zones

Chairmen: *David Harper, Leicester University,*
Luis Chicharo, Algarve University

4b: Tropical zones

Chairmen: *Wolfgang Junk, Max Planck Institute of Limnology, Germany,*
Angelo Agostinho, Universidade Estadual de Maringa, Brazil

4c: Temperate zone

Chairmen: *Fritz Schiemer, University of Vienna, Austria*
Kinga Krauze, ERCE u/a UNESCO PAS, Poland

DRAFTING SESSION OF THE FLOODPLAIN DECLARATION

*(Chairmen: M. Zalewski, V. Santiago, G. Bidoglio, E. Stakhiv, K. Takeuchi,
Reporters: I. Wagner, R. D. Roberts)*

- | | |
|---------------|--|
| 16.30 – 16.50 | <u>Opening Lecture</u>
Andrzej Siemaszko , National Contact Point for Research Programme of EU, Poland
Some aspects of the European energy-climate policy |
| 16.50 – 17.50 | Reports of the Continental Perspective Sessions – contributions to the Floodplain Declaration |
| 17.50 – 18.50 | Summary and discussion |

After the session, the participants will be welcomed to submit their written suggestions to be included on the Floodplain Declaration to the Conference Secretariat by lunch time of the 22nd of May. The inputs will be further elaborated and presented on the last day of the conference by the Steering and Advisory Committees and the invited institution and international organizations

19.00 – departure from the Conference Centre

20.15 – arrival in Lodz

Thursday
22nd May 2008

Venue: Conference Centre, University of Lodz (16/18 Kopcińskiego Str.)

SESSION 5: Provision of ecological services and decision making process for sustainable development of floodplain areas

Chairman: Kuniyoshi Takeuchi, International Centre for Water Hazard and Risk Management u/a of UNESCO, Tsukuba, Japan

- 9.00 - 9.20 **Opening Lecture : Georg Janauer**, University of Vienna, Austria
Hydro-electric power stations in regulated river corridors: the situation of the aquatic vegetation and associated ecosystem services
- 9.20 – 9.40 **José Galizia Tundisi**, International Institute of Ecology, Brazil
Ecohydrology and hydropower exploitation in the Amazon region: a challenge for planning and management
- 9.40 – 10.00 **Jerzy Romanowski**, Centre for Ecological Research, Polish Academy of Sciences
The role of islands in maintaining the connectivity of habitat for mammals in Vistula River valley
- 10.00 – 10.20 **Jim Wallace**, CSIRO Land and Water, Australia
The role of coastal floodplains in generating sediment and nutrient fluxes to the Great Barrier Reef lagoon in Australia
- 10.20 – 10.40 Coffee break
- 10.40 – 11.00 **Othmar Nestroy**, Institute of Applied Geosciences, University of Technology, Austria
The importance of the zone of unsaturated soil for the regional water balance
- 11.00 – 11.20 **Vladimir Timchenko, Oleg Timchenko, Nataliya Lukashenko**, National Academy of Sciences of Ukraine
Management of ecosystem of water bodies in floodplain of regulated river
- 11.20 – 11.40 **David Pithart et al.**, Czech Republic Academy of Sciences
Ecosystem services related to natural flooding in Lužnice river floodplain, Czech Republic: maintaining geodiversity, biodiversity & floodwave mitigation
- 11.40 – 12.00 **Azime Tezer**, Istanbul Technical University, Turkey
Urban planning tools for flood mitigation: the assessment of laws and regulations in Turkey
- 12.00 – 12.20 **Marcelo Gavino Novillo**, University of La Plata, Argentina
Monitoring and management of river floodplains: putting together decision makers, hydrologists and ecologist
- 12.30 – 14.00 Lunch

14.00 – 15.00 POSTER SESSION

14.00 – 15.00 FINAL DRAFTING OF THE FLOODPLAIN DECLARATION
(Advisory & Steering Committees and invited institutions, only)

(Chairmen: M. Zalewski, V. Santiago, G. Bidoglio, E. Stakhiv, K. Takeuchi,
Reporters: I. Wagner, R. D. Robarts)

SESSION 6: Floodplain and fisheries

Chairman: John Thorpe, University of Glasgow, UK

- 15.00 – 15.20 **Opening Lecture**
Robin Welcomme, Imperial College, UK
World prospects for floodplain fisheries
- 15.20 – 15.40 **Claudio Baigun**, NTECH, Argentina
Fish and fisheries resources in one of the latest remaining natural large temperate river floodplains - the Parana River case
- 15.40 – 16.00 **Graeme Peirson, Jonathan Bolland, Ian Cowx, Barry Byatt**, Environment Agency, University of Hull, UK
Lateral dispersal and displacement of fish in flood events in lowland river systems –implications for floodplain management
- 16.00 – 16.20 **Abdul Razak Mohamed**, Basrah University, Iraq
Species composition, ecological indices and trophic pyramid of fish assemblage of the restored Huwaza marsh, southern Iraq
- 16.20 – 16.40 **Kaczkowski Zbigniew**, ERCE u/a UNESCO PAS, University of Lodz, Poland
Recreational fisheries as an ecological service of high value created by floodplain rivers
- 16.40 – 17.00 Coffee break

READING AND ADOPTION OF THE FLOODPLAIN DECLARATION

- 17.00 – 18.00 **Reading and Adoption of the draft Statement**
(Chairmen: M. Zalewski, V. Santiago, G. Bidoglio, E. Stakhiv, K. Takeuchi; Reporters: I. Wagner, R. D. Robarts)
- 18.00. – 18.30 **Summary and discussion**