

## 2<sup>nd</sup> Announcement and Call for Abstracts

### Storm Surges Congress *Risk and Management of current and future Storm Surges*

13-17 September, 2010, Hamburg, Germany



**Deadline for Abstracts**  
**28 February 2010, Selection and invitation April 2010!**



Storm surges represent a major type of environmental and social threat regularly associated with losses of lives and substantial economic damages.

In 1953, the Netherlands and the UK were hit, in 1962 Germany; in 1970 Bangladesh, in the 1990s China three times, and in 2008 the tropical storm Nargis impacted Myanmar. Hurricane Katrina in 2005 showed the disastrous interplay of a storm, with heavy rainfall and vulnerable coastal protection. Lives lost in such events reach the order of 100,000; economic damages may approach 100bn US\$.

Besides climate change, storm surges are exacerbated by anthropogenic forcing including intensive land and sea use along the river-coast continuum. A recent OECD study of extreme floods in 136 port cities foresees an increase of population and asset exposure of between 2-3 times, and 10 times, respectively, by 2070.

#### **Two scientific and social questions are critical:**

- 1. How do we deal with the present level of risk?**
- 2. How do we respond to changing future conditions?**

Answers require interdisciplinary approaches and a coupling of scientific and coastal user discussions. **Overcoming fragmented views on a global concern on short and long-term time scales** by a joined up thinking is needed involving the assessment of threats and opportunities emerging across the social-ecological system scale of coasts.

### **Multiple stakeholders to be involved comprise:**

- Coastal engineering, and harbour authorities
- Coastal zone and river basin management
- Urban, coastal and marine planning
- Disaster and risk management
- Social development organisations
- Economic planning and insurance business
- Operational oceanography
- Storm surge modellers
- Coastal geoscientists (erosion, subsidence)
- Weather and forecasting services and
- Climate research.

**The Storm Surges Congress 2010** aims to engage the relevant actors and to serve as an enabling forum for exchange of state-of-the-art expert knowledge and practitioners' views.

The objective is to work towards a common perception of key concerns including options of mitigation and adaptation. Practitioners and researchers are invited to delineate future challenges for science, and dialogue across science-policy-practice interfaces.

The goal is to foster our mutual understanding of relevant spatial, temporal as well as institutional scales that need to be considered in response to current and future storm surge risks.

### **Congress structure**

The congress will be organised in plenary and moderated poster sessions. Parallel sessions will be avoided; cross-disciplinary exchange is encouraged. Plenaries will be organised along thematic subjects, introduced by key notes.

Poster sessions will be introduced to plenary as oral summaries by selected SC experts. They will subsequently be organised in marketplace format where thematic contributions can be reviewed.

Moderated concluding round tables are planned to foster discussions and a synthesising statement.

### **Abstract Submission Guidelines**

You are invited to submit an abstract for oral or poster presentation. Abstracts need to be submitted and organised in a way to feed into the thematic sections.

The SC and LC will take responsibility to blind review and select abstracts for oral or poster presentation. If your abstract is accepted for the Storm Surges Congress you will receive a notification until April 1st, 2010.

Abstracts must follow the format suggested and must be submitted online (see link below) by February 28, 2010. We encourage you to submit early to ensure prompt confirmation and processing.

- The body of the abstract is limited to 500 words (excluding headings).
- Your Abstracts should contain Title, Author/s, Affiliation and
- the following content sections: Background, Objectives, Methods (including type of data collected), Results, Conclusions, and Support (if applicable).
- 3-5 key words referring to sessions are obligatory.

After an abstract has been accepted, regular papers of about eight to ten pages including all figures, tables and references have to be submitted to the steering committee in order to be reviewed for potential publication in the conference products.

**Important Dates:**      **\*Abstract Submission and Registration starting from December 1, 2009**  
                                 **\*Abstracts due February 28, 2010**  
                                 **\*Paper acceptance April, 2010**  
                                 **\*Conference September 13-17, 2010**

Please find more information on our website: [www.loicz.org/storm2010](http://www.loicz.org/storm2010)

### **Suggested session outline**

Regions should cover all relevant areas such as polar regions, temperate to sub-tropical and tropical systems, deltas and tidal estuaries.

#### **a) Driving factors and scales of storm surges**

- Does climate change matter?
- How does surge hazard vary globally?
- Why are so many coastal cities sinking?

#### ***Papers in this theme might address:***

*Climate and climate change*

*Variable storminess*

*Sea level rise*

*Geological processes*

*Water works and coastal defence*

*Oil, gas and groundwater extraction – anthropogenic subsidence*

*Urbanisation, demographic change in coastal areas and deltas*

#### **b) Contemporary risk and management**

- What are the present risks?
- What are the differences between tropical and extra-tropical storms and surges?
- People and assets: who pays for the risks?

#### ***Papers in this theme might address:***

*Risk assessment*

*Coastal urbanisation and assets at risk*

*Damage and insurance issues*

*Managing extra tropical storm surges*

*Managing tropical storms surges*

#### **c) History and intercultural perception**

- What did our ancestors do: retreat, protect or advance?
- Acts of God or acts of nature: what was the historical experience of surges?
- How do the media see extreme surge events?

#### ***Papers in this theme might address:***

*Historical accounts of storm surge risk*

*Awareness of storm surge risk*

*Perception of dynamics and drivers of storm surges*

*Media coverage and presentation of natural risks, storm surge events, responses, and predictions*

*Future perceptions of surge risks*

**d) The role of scientific information – dealing with uncertainty**

- What is the state of the art in modelling/predicting and projection
- What do we need to know to plan for the possibility of increased storminess in some regions?
- Should we protect or retreat against increasing surge risk?

***Papers in this theme might address:***

*Information needs of coastal stakeholders*

*Defining the bottom line – reference water levels and current and future flood protection*

*Dealing with uncertainty*

*Current capacity of modelling, predictions, and forecasting*

*Expected level of future (5-10 years horizon) modelling, forecasting and projections*

*Knowledge gaps, e.g. hydrodynamics and bathymetry*

*The role of remote sensing*

*Scenarios of future tropical and extra tropical storminess*

*Scenarios of sea level rise*

*Vulnerability and risk assessment*

*The role of managed realignment*

*Usage of scenarios for adaptation and planning*

*Calculation of the design level*

**e) Institutional dimensions – dealing with uncertainty**

- How do our institutions, civil society and public actors respond to storm surges?
- What is the role of warning systems?
- Can good governance handle the risks?

***Papers in this theme might address:***

*Institutional dimensions of storm surge response*

*Civil society as organisational force*

*Public bodies as organisational force*

*Management scales*

*Warning systems: Present and future*

*Technological progress to improve the information basis*

*Effectiveness of hazard lines or set back lines*

*Current reflection of risk and response in governance*

*Institutional response to uncertainty*

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**International Scientific Committee, SC, (Italics tbc):**

**Paolo Ciavola** (Department of Earth Sciences, University of Ferrara, Italy)

**Ping-Xing Ding** (State Key Laboratory for Estuarine and Coastal Research, ECNU, China),

**Bruce Glavovic** (Resource & Environmental Planning, Massey Univ., New Zealand)

**Karel Heynert** (DELTA RES, NL)

**Kevin Horsburgh** (Proudman Lab., Liverpool, UK),

**Pavel Kabat** (Wageningen Univ. NL)

**Hartwig Kremer** (LOICZ International Project Office, Institute for Coastal Research, GKSS, Germany),

**Boram Lee** (IOC-UNESCO, Paris, France)

**Jason Lowe** (Met Office Hadley Center, UK),

**Nobuo Mimura** (Center for Water Environment Studies, Ibaraki University, Hitachi, Japan)

**Il-Ju Moon** (Cheju National Univ., College of Ocean Science, S. Korea)

**Sylvin Müller-Navarra** (Federal Maritime and Hydrographic Agency BSH, Hamburg, Germany),

**Robert Nicholls** (Univ. of Southampton - School of Civil Engineering and the Environment, UK),

**Mark Pelling** (King's College London, UK)

**Ramesh Ramachandran** (Anna Univ., Inst. for Ocean Management, Chennai, India)

**Steven Solomon** (Geological Survey of Canada)

**Hans von Storch** (Institute for Coastal Research, GKSS, Germany and Climate Campus, Hamburg)

**James Syvitski** (*Community Surface Dynamics Modeling System, Univ. of Colorado-Boulder, US*)

**Keith Thompson** (Dept of Oceanography, Mathematics, Statistics, Dalhousie Univ., Canada)

**Georg Umgiesser** (Institute of Marine Sciences, ISMAR-CNR, Venice, Italy)

**TBA, (ESA, Frascati, Italy)**

**National / Local Organising Committee, LC:**

**Heinz Glindemann** (Hamburg Port Authority; Leiter Strombau)

**Gabriele Gönnert** (Landesbetrieb für Strassen, Brücken und Gewässer, LSBG)

**Harro Heyer** (Bundesanstalt für Wasserbau, BAW – Wasserbau Küsten – Dienststelle Hamburg)

**Thomas Bruns** (Deutscher Wetterdienst, DWD)

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