



## **SYMPOSIUM ON:**

# **THE EFFECTS OF GLOBAL CHANGE ON FLOODS, FLUVIAL GEOMORPHOLOGY AND RELATED HAZARDS IN MOUNTAINOUS RIVERS**

**Potsdam, 6-8 March 2017**



### **Organizers:**

**Prof. Dr. Axel Bronstert  
Prof. Dr. Annegret Thieken  
Dr. José Andrés López-Tarazón  
Dr. Theresia Petrow**

## Motivation

Mountainous (either Mediterranean or Alpine) areas are considered sensitive to so-called global change, considered as the combination of climate and land use changes. All panels on climate evolution predict future scenarios of increasing frequency and magnitude of floods which are likely to lead to huge geomorphic adjustments of river channels so major metamorphosis of fluvial systems is expected as a result of global change. Such pressures are likely to give rise to major ecological and economic changes and challenges that governments need to address as a matter of priority. Changes in river flow regimes associated with global change are therefore ushering in a new era, where there is a critical need to evaluate hydro-geomorphological hazards from headwaters to lowland areas (flooding can be not just a problem related to being under the water). A key question is how our understanding of these hazards associated with global change can be improved; improvement has to come from integrated research which includes the climatological and physical conditions that could influence the hydrology and sediment generation and hence the conveyance of water and sediments (including the river's capacity, i.e. amount of sediment, and competence, i.e. channel deformation) and the vulnerabilities and economic repercussions of changing hydrological hazards (including the evaluation of the hydro-geomorphological risks too).

Within this framework, the purpose of this symposium is to bring together researchers from several disciplines as hydrology, fluvial geomorphology, hydraulic engineering, environmental science, geography, economy (and any other related discipline) to discuss the effects of global change over the river system in relation with floods. The symposium will try to improve our understanding of how rivers are likely to evolve as a result of global change and hence address the associated hazards of that fluvial environmental change concerning flooding. Four main topics will be addressed:

**-T1: Modelling global change (i.e. climate and land-use) at relevant spatial (regional, local) and temporal (from the long-term to the single-event) scales.**

**-T2: Measuring and modelling river floods from the hydrological, sediment transport (both suspended and bedload) and channel morphology points of view at different spatial (from the catchment to the reach) and temporal (from the long-term to the single-event) scales.**

**-T3: Evaluation and assessment of current and future river flooding hazards and risks in a global change perspective.**

**-T4: Catchment management to face river floods in a changing world.**

The symposium will be organized by means of invited talks given by prominent experts, oral lectures, poster sessions and discussion sessions for each individual topic. Confirmed invited speakers for each of the topics are:

- **T1: Dr. Donal Mullan** (Queen's University Belfast):
- **T2: Prof. Dr. Peter Rutschmann** (Technical University of Munich)

- **T3: Dr. Michael Bründl** (WSL Institute for Snow and Avalanche Research SLF)
- **T4: Dr. Ramon Batalla** (University of Lleida)

It is planned to generate some outcomes from the symposium: i) a review/opinion paper from the discussion sessions (as agreed by the participants); ii) a Special Issue in **EARTH SURFACE PROCESSES AND LANDFORMS** (already confirmed) with contributions from the workshop participants.

### Abstracts

Contributions of up to 300-500 words, including title, authors name, affiliations, and contact must be send to [jalopez@uni-potsdam.de](mailto:jalopez@uni-potsdam.de) before 1 November 2016. Letter of acceptance/rejection will be send to the main author before 15 December 2016.

### Registration

For organizational reasons, attendance is limited in number and will be assigned on a first come first served basis. The symposium fee will be at around EUR 150. It will include all the symposium documentation, coffee-breaks and lunches and is non-refundable.

Registration must be done before 1 November 2016 via email to [jalopez@uni-potsdam.de](mailto:jalopez@uni-potsdam.de)

### Symposium Venue

The Symposium will take place from Monday 6 until Wednesday 8 March at Building 27 of the Campus Golm of the Universität Potsdam (Karl-Liebnecht-Str. 24-25, 14476, Potsdam-Golm, Germany). It is located just at 150 m of the Golm train station (see map below).



### Contact:

José Andrés López-Tarazón: [jalopez@uni-potsdam.de](mailto:jalopez@uni-potsdam.de)

Theresa Petrow: [thpetrow@uni-potsdam.de](mailto:thpetrow@uni-potsdam.de)

## Preliminary Programme

6 March 2017

- 8:00 Registration
- 8:30 Welcome and opening
- 9:00 Keynote related with **T1: Modelling global change (Dr. Mullan)**
- 9:30 Oral presentations related with **T1**
- 10:45 Coffee/Posters
- 11:15 Keynote related with **T2: Measuring and modelling river floods (Prof. Dr. Rutschmann)**
- 11:45 Oral presentations related with **T2**
- 13:00 Lunch
- 14:00 Group Discussions
- 15:45 Coffee/Posters
- 17:00 End of Plenary

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- 9:00 Keynote related with **T3: Evaluation/assessment river flooding hazards and risks (Dr. Bründl)**
- 9:30 Oral presentations related with **T3**
- 10:45 Coffee/Posters
- 11:15 Keynote related with **T4: Catchment management (Dr. Batalla)**
- 11:45 Oral presentations related with **T4**
- 13:00 Lunch
- 14:00 Group Discussions
- 15:45 Coffee/Posters
- 17:00 End of Plenary

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- 9:00 Discussion Plenary: put together previous discussions
- 10:30 Coffee/Posters
- 11:00 Discussion Plenary: outcomes drafting
- 12:30 Synthesis of symposium
- 13:00 End of symposium