



Technische
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Braunschweig



EXCELLENCE CENTER FOR
DEVELOPMENT COOPERATION
SUSTAINABLE WATER MANAGEMENT

LWI



Expert Seminar on Sustainable Flood Risk Analysis and Management

September 19 – 30, 2011 / Bahir Dar, Ethiopia



funded by



Federal Ministry
for Economic Cooperation
and Development

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EXCELLENCE CENTERS
FOR EXCHANGE AND DEVELOPMENT

Expert Seminar on Sustainable Flood Risk Analysis and Management

Overview

The Expert Seminar will provide fundamental scientific and technical knowledge on all aspects of the whole risk chain which for risk sources comprise knowledge and models to understand and predict e.g. storm surges and rain fall events in flood vulnerable areas.

For risk pathways models, methods, and techniques will be made available to assess the reliability of flood defences like dams and dikes against breaching, the development of breaches, and the probabilities and inundation characteristics of flood waves.

For risk receptors, the assessment of potential consequences of flood events, including the risk assessment and evaluation, will be dealt with. In addition, on all levels of risk analysis and assessment the associated uncertainties will be explicitly considered and quantified.

Objectives

- understanding and applying the most recent methods and models to their specific and country-related problems
- understanding the high complexity of flood risk analyses, risk assessment, and risk management
- being able to apply the methods, models and techniques to better understand and

predict flood hazards, risk pathways, and the related consequences

- estimating and assessing the flood risk
- developing appropriate methods to prevent and mitigate floods

Topics

- Risk sources: coastal floods, fluvial floods, flash floods
- Risk pathways: flood defence systems and structures, fault tree and reliability analysis, flood wave propagation
- Risk receptors: overview of methodologies, risk management before flood event, risk management during flood event, risk management after flood event

Course Organization

The course will consist of lectures, practice sessions, and exercises. The lectures are planned to provide overviews of the state-of-the-art knowledge of the respective topics. Workshops and exercises are aiming at all participants to be able to apply methods and models to standard cases and their own data and problems. Excursion(s) will be planned to visit flood prone areas and relevant nearby sites. The language of the Expert Seminar will be English. Journey and accommodation will be organized and covered.

Schedule		
Monday	Sept. 19, 2011	Arrival and come together
Tuesday	Sept. 20, 2011	Introductory session: lectures and discussion
Wednesday	Sept. 21, 2011	Risk sources (I): coastal floods
Thursday	Sept. 22, 2011	Risk sources (II): fluvial floods, flash floods
Friday	Sept. 23, 2011	Risk pathways (I): coastal flood defence systems and structures, river flood defence systems and structures
Saturday	Sept. 24, 2011	Excursion
Sunday	Sept. 25, 2011	Free time
Monday	Sept. 26, 2011	Risk pathways (II): fault tree and reliability analysis, flood wave propagation and inundation
Tuesday	Sept. 27, 2011	Risk receptors (I): assessment of direct / indirect (tangible) economic losses, assessment of societal / environmental (intangible) losses
Wednesday	Sept. 28, 2011	Risk receptors (II): risk reception, acceptance and communication, resilience of societal and eco-systems
Thursday	Sept. 29, 2011	Risk management (I): pre-flood measures, mitigation measures during flood
Friday	Sept. 30, 2011	Risk management (II): post-flood measures and integration closure session: overall discussion, concluding remarks
Saturday	Oct. 01, 2011	Departure

Lecturers

H. Oumeraci, G. Meon, A. Kortenhaus, G. Riedel (LWI, DE); J.-D. Creutin (INPG, FR); J. Jensen, C. Mudersbach (U Siegen, DE), G. Kaiser (NGI, NO); F. Klijn (Deltares, NL); M. Kok (HKV, NL); J. Lamond (U Wolverhampton, UK); D. Lombroso (HR Wallingford, UK); C. van Mai (VN); B.P. Parida (U Botswana); G. Pender (Heriot Watt U., UK); E. Penning-Rowsell (Middlesex U., UK); E. Plate (DE); T. Tingsanchali (AIT, TH)

Target Audience

Researchers, postdoc fellows, decision makers, Ph.D. students working in the field of

flood risk analysis and management. Participants should have a basic understanding of at least one of the following areas: flood hazards, risk-related issues, probability theory, vulnerability assessment, flood risk analysis & management, GIS theory and applications.

Number of participants

The number of participants is confined to 20.

Application

Please apply online until May 15, 2011:

<http://www.exceed.tu-braunschweig.de/apply/summerschool>

Internet: www.exceed.tu-braunschweig.de

Email: exceed@tu-braunschweig.de

Content: TU Braunschweig
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