

CI-SP

Critical Infrastructures and Strategic Planning

Report on Activities

**ICoE – focal point IREUS, University of Stuttgart,
with the network partners: United Nations
University, Bonn; University of Potsdam and KIT
in Karlsruhe**

IRDR Science Committee Meeting, November 2016

Vision & Mission

- The Center of Excellence aims at exploring the resilience of Critical Infrastructures from various perspectives in order to provide a comprehensive platform for this evermore-important topic and to substantially advance the depths and breadths of the currently narrow approaches. In this regard, the analysis of the resilience of Critical Infrastructures, such as energy, water, transport, health services, will not primarily focus on technical details of the respective systems, but rather on cross-cutting and interdisciplinary challenges that are, for example, linked to the identification of interdependencies and cascading risks between Critical Infrastructures ...

Network Partners involved in the Expert Meeting



- Annegret Thieken /Prof. Hazard and Vulnerability/ Flood Expert
- Prof. Ortwin Renn / Risk Governance Expert /Sociology
- Prof. Jakob Rhyner / UNU-Vice Rector, Director EHS
- Prof. Friedemann Wenzel /Earthquake and Urban Expert
- PD Kunz Plapp / CEDIM Coordinator / KIT

Activities

- Presentation of the ICoE on Critical Infrastructures and Strategic Planning to the Federal Ministry for Research in Germany (BMBF) and to the DFG Senate Commission on the Future of Geo-Sciences
- Development of a Special Issue on Critical Infrastructures and Strategic Planning in the Journal of Extreme Events (JoEE)
- Conduction of expert interviews within the third party funded projects INTACT and PEARL regarding the role of CI
- Analysis of international documents: role of CI resilience in the New Urban Agenda, Sendai Framework and SDGs

Activities

- Evaluation of responses to CI failure during extreme events and lessons learned from the convective summer events 2016 in Germany – discussion with municipalities and experts (submission of a joint proposal to BMBF)
- Impact of the extreme precipitation was significant particularly in small and medium-sized cities: 10 fatalities – large economic damages (e.g. public infrastructure)

Impacts of convective events in May and June 2016





- **Schwaebisch Gmuend – city with 60.000 inhabitants**

- **Selected Consequences:**

- **2 fatalities**

- **14.000.000€ economic damage
(solely public infrastructures: schools, kindergardens, ...)**

- **Damage and loss of more than 1000 private FH has to be added**

- **State support – for destroyed electric devices (max. 2500€)**

- **Rehabilitation costs will stress the local budget over the next years**

- **One company alone lost about 25% of it annual production**

- Boost the resilience of small and medium sized cities to extreme events in NATURE 2016
- Special Issue in JoEE with contributions from an international expert workshop
 - case studies from Boston/CI Tunnel – sea level rise + storms
 - case study from Finland /CI electrica breakdown – winter storm





IRDR ICoE
Integrated Research on Disaster Risk
International Centre of Excellence

Research Proposals

- Together with municipalities affected by extreme events in 2016 (submitted)
- Together with the regional planning authority of Stuttgart on how risk management of CI can be part of regional planning and assessment tools

Planned Activities in the next months

- Presentation of the ICoE at the Future Earth meeting in Germany
- Finalization of the Special Issue on “Critical Infrastructures and Strategic Planning” in JoEE
- Development of ideas on how to cooperate with other ICoEs also in terms of education and PhD programmes
- Formulation of research needs to be send to the BMBF
- Discussion on how IRDR office can support the ICoE

Thanks

Univ. Prof. Dr.-Ing. Jörn BIRKMANN

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