



SESSION DESCRIPTION

E3 Methods to assess future vulnerability and risk to heat stress in medium-sized cities

Workshop

Date: Thursday, 27 June, 2019

Time: 13:30-14:45

Rooms: S01-02

Language: English

Contact: Prof. Dr. Joern Birkmann

E-mail/web: Joern.birkmann@ireus.uni-stuttgart.de

Organized by: ZURES Project

OBJECTIVE

The ZURES Session focused on innovative methods and tools to assess urban heat stress and heat stress vulnerability in medium-sized cities. Based on the analysis of present and future heat stress, socio-demographic transformation future scenarios of exposure and human vulnerability are going to be presented. In addition, vulnerability to air-quality was also discussed. The presenters (researchers and practitioners from the cities) examined and discussed the opportunities and limits of these assessments and scenario-methods for different planning processes. Based on concrete examples from the city of Bonn, the city of Ludwigsburg and the city of Bottrop, future development pathways and options to enhance the resilience of cities in the context of urban growth and climate change were discussed. The session provided also a forum for exchange with other projects and experiences.

OUTCOMES

Participants left the workshop session with:

- A more precise understanding on how to develop quantitative and qualitative scenarios for heat stress and human vulnerability at the very local level;
- New knowledge regarding the challenges of urban development in the city of Bonn, in the city of Ludwigsburg and in the city of Bottrop.

METHODOLOGY

Facilitator *Jörn Birkmann, Professor, University Stuttgart, Stuttgart, Germany*

13:30 - 13:40 Introduction ZURES & Statement - Federal Ministry of Education and Research (BMBF)

Jörn Birkmann, Professor, University of Stuttgart, Stuttgart, Germany

Florian Frank, Head of Division, Federal Ministry of Education and Research (BMBF), Bonn, Germany



13:40 – 13:52 Urban climate and vulnerability: innovative assessment and scenario approaches

Jörn Birkmann, Professor, University of Stuttgart, Stuttgart, Germany

Wiriya Puntub, Researcher, IRPUD TU-Dortmund, Dortmund, Germany

Cornelia Burmeister, Qualified Geographer, GEO-NET, Hannover, Germany

Matthias Garschagen, Chair in Human Geography, Head of Human-Environment Relations, Ludwig-Maximilians-Universität München (LMU), Munich, Germany

13:53 – 14:05 Bridging science, policy and planning: Evidence based planning for climate change adaptation in Bonn and Ludwigsburg – experiences from the ZURES project

Jessica Löffler, Technical Associate, City of Bonn, Bonn, Germany

Joachim Helbig, Head Anticipatory Environmental Precautions and Planning, City Bonn, Bonn, Germany

Albrecht Burkhardt, Urban Development, City of Ludwigsburg, Ludwigsburg, Germany

Simone Sandholz, Associate Academic Officer, UNU-EHS, Bonn, Germany

Fanziska Goettsche, Research Associate, IREUS – USTUTT, Stuttgart, Germany

Kevin Laranjeira, Research Associate, IREUS – USTUTT, Stuttgart, Germany

14:06 – 14:18 Innovative measuring and microscale modelling – the ISCAPE project

Marisa Fuchs, Research Associate, University of Dortmund, Dortmund, Germany

Tilman Christian, City of Bottrop, Bottrop, Germany

14:19 – 14:31 *Linking climate change, heat stress in cities, human vulnerability and health*

Elsa Martayan, Director, GUAPO, Paris, France

14:32 – 14:45 Discussion and Poster walk

With thanks to: *BMBF /Federal Ministry of Education and Research, the City of Bonn and the City of Ludwigsburg*



Further recommended readings

Sandholz, S.; Sabelfeld, R.; Wannewitz, M.; Garschagen, M. (2017): Erfahrungen und Bedarfe von Akteuren der Stadtplanung im Hinblick auf Vulnerabilität gegenüber Hitzestress, Ergebnisse einer Online-Umfrage bei deutschen Klein-, Mittel- und Großstädte. In: ZURES Working Paper 1, 12/2017. Bonn

Birkmann, J.; Sorg, L.; Fleischhauer, M. (2018): Klimawandel Szenarien zur zukünftigen Vulnerabilität. Expositions- und Vulnerabilitätsszenarien für wachsende Mittelstädte- Fallbeispiel Ludwigsburg. In: Raumplanung Heft 199/ 6-2018; p. 29-35

Birkmann, J.; Sorg, L.; Jamshed, A.; Sauer, H.; Fleischhauer, M.; Greiving, S.; Garschagen, M.; Sandholz, S.; Wannewitz, M.; Bueter, B.; Schneider, M. (2019): Strengthening risk-informed decision-making: Scenarios for human vulnerability and exposure to extreme events. Case Study: heat stress vulnerability in the city of Ludwigsburg, Germany. In: UN/ISDR (United Nations International Strategy for Disaster Risk Reduction, Background paper for the Global Assessment Report 2019 of UN/ISDR

ZURES-website: <https://www.zures.de/index.html>