

Session Programme Topic 6

Extreme meteorological events and their impacts in a changing climate

Convener: Michael Kunz, Frauke Feser

Over recent years, damage caused by extreme weather events has increased substantially. In Germany, for example, the year of 2013 marked a new record in total losses due to large-scale flooding, record-breaking hailstorms, and a wide-spread heat wave. Combining results of high-resolution regional climate models with different observation records makes it possible to quantify the frequency and intensity of meteorological extremes better than before. However, there is still insufficient knowledge about long-term changes in the probability or intensity of meteorological extremes and the extent how these changes are driven by global warming. Furthermore, it is not clear how changes in the hazard will also affect the impact of extremes, which is also controlled by factors such as vulnerability, protection measures, or resilience. This session invites researchers from different disciplines that work on analyses of weather and climate extremes, their context to climate change, and the impacts on society.

Tuesday, 7 October 2014

Neue Mälzerei, Room MS, Seminar I+II, 5th floor

- 14:55 TP6-O-01: Russo, S., A. Dosio, A. Dosio, P. Barbosa, L. Feyen, G. Forzieri, A. Bianchi, J. Vogt: Projection of occurrence of Extreme heat waves in Europe with Heat Wave Magnitude Index
- 15:10 TP6-O-02: Jänicke, B., F. Meier, U. Fehrenbach, J. Curio, D. Scherer: Causes for cold biases in a regional reanalysis of weather and climate in Berlin, Germany, and their implications for analysing heat-stress events
- 15:25 TP6-O-03: Scherer, D., U. Fehrenbach, F. Meier, B. Jänicke, J. Curio: Heat-stress events and excess mortality in Berlin, Germany, as resolved by a regional reanalysis of weather and climate
- 15:40 TP6-O-04: Thober, S., L. Samaniego, R. Kumar: Assessment of a Multi Model Ensemble to Forecast the European 2003 Drought

Poster Session:

Umweltforum, Room G, Gallery, 1st floor: 16:10 – 18:10

- TP6-P-01: Seidel, P.: What do we know about impacts of extreme weather on plant pests - nearly nothing?
- TP6-P-02: Kelem, G., S. Kahsay, E. Fkadu, A. Tegann: Climate variability, climate change and extreme events in Ethiopia
- TP6-P-03: Schaaf, B., F. Feser, H. von Storch: Analysis of the variability of extra-tropical cyclones at the regional scale for the coasts of Northern Germany and investigation of their coastal impacts
- TP6-P-04: Dietrich, S., A. Winterscheid: Influence of internal climate variability on estuarine sediment dynamics
- TP6-P-05: Sassen Brand, V., L. Droprinchinski Martins, J. A. Martins: Study of heat waves and hot spells in Southern Brazil
- TP6-P-06: Martins, J. A., C. B. Machado, M. N. Capucim, V. Sassen Brand, L. Droprinchinski Martins: Extreme rainfall events and the vulnerability of the biomass and hydro sectors in the Paraná River Basin – South America
- TP6-P-07: Sang, J., M.-K. Kim, S.-H. Kang, C.-K. Park, S. Kim: Large-scale characteristics of top 20 heat waves in Korea
- TP6-P-08: Seo, Y.A., Y. Shin, J. Heo, J. Jang, J.-S. Park: Changes in extreme rainfall in East Asia: comparison of historical and future projection by using general extreme value distribution
- TP6-P-09: Shin, Y., Y.A. Seo, J. Heo, J. Jang, J.-S. Park: Assessing changes in observed and future projected precipitation and temperature extremes in East Asia via Bayesian model averaging
- TP6-P-10 Semenov, V., M. Latif: A non-linear link between anomalous winter weather regimes over Northern Eurasia and arctic sea ice reduction

Wednesday, 8 October 2014

Neue Mälzerei, Room MKS, Kuppelsaal Süd, 5th floor

- 10:00 TP6-O-05: Outten, S.: Statistical Analysis of Future Projections of Extreme Winds and their Inclusion in Current Infrastructure Planning

- 10:15 TP6-O-06: Zahn, M., F. Feser, M. Schubert-Frisius, H. von Storch: Past and future changes of wind storms - latest achievements and current activities at HZG
- 10:30 TP6-O-07: Eggert, B., P. Berg, J. O. Haerter, C. Moseley, D. Jacob: Impact of temporal and spatial resolution on extreme event statistics and its implications on climate modelling
- 10:45 TP6-O-08: Maraun, D., W. Park: The impact of Atlantic multi-decadal variability on European precipitation extremes
- 11:00 TP6-O-09: Feser, F., M. Barcikowska, O. Krueger, F. Schenk, R. Weisse, L. Xia: Storminess over the North Atlantic and Northwestern Europe – A Review
- 11:15 Coffee BREAK (Neue Mälzerei, Room MP, Plenary Hall, 5th floor)

Neue Mälzerei, Room MKS, Kuppelsaal Süd, 5th floor

- 11:45 TP6-O-10: Curio, J., D. Scherer, F. Maussion: The influence of atmospheric water transport on precipitation variability on the Tibetan Plateau
- 12:00 TP6-O-11: Volosciuk, C., V. Semenov, D. Maraun, M. Latif, N. Tilinina: The impact of a warmer Mediterranean Sea on Central European summer flooding
- 12:15 TP6-O-12: Meredith, E., V. Semenov, D. Maraun, W. Park: The extreme flooding of July 2012 in Krymsk, Russia, from a climate perspective
- 12:30 TP6-O-13: Merz, B., S. Vorogushyn, N. Viet Dung, K. Schröter: Space-time variability of flooding across Germany
- 12:45 TP6-O-14: Wahl, T., S. Jain, J. Bender, S.D. Meyers, M.E. Luther: Increasing risk of compound flooding from storm surge and rainfall for major US coastal cities
- 13:00 Lunch BREAK (Neue Mälzerei, Room MP, Plenary Hall, 5th floor)

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Neue Mälzerei, Room MKS, Kuppelsaal Süd, 5th floor

- 14:55 TP6-O-15: Sørensen, C., P. Knudsen, O. B. Andersen: Coastal flooding in Denmark – future outlook
- 15:10 TP6-O-16: Schlauss, S., M. Grottker, T. Einfalt, B. Schaeffers, H. Deng, A. Jackisch: Flash flood emergency planning and warning for the City of Luebeck based on hydrodynamic modelling
- 15:25 TP6-O-17: Punge, H.J., K. M. Bedka, M. Kunz: Hail hazard in Europe: Analysis based on the overshooting cloud top (OT) proxy and reanalysis data
- 15:40 TP6-O-18: Kunz, M., M. Schmidberger, D. Köbele: Hail hazard in Germany related to orographic and atmospheric characteristics
- 15:55 TP6-O-19: Mohr, S., M. Kunz: Changes in the hail potential over past and future decades using a logistic hail model