Contribution ID: **88** Type: **not specified**

The Southern German flooding in May and June 2024

Tuesday 18 March 2025 10:00 (15 minutes)

Between Mai 30th and June 6th 2024, heavy rainfall in Southern Germany lead to severe flooding in the Danube, Neckar and Main catchment. Hazardous events of this nature receive considerable public attention, particularly due to the ongoing debate around the impacts of man-made climate change.
The BMBF funded research project ClimXtreme aims to improve our understanding of such weather extremes in a changing climate through physics, statistics and impact modeling. A main goal is the creation of a knowledge base and the dissemination of relevant information to decision makers as well as the interested public. As part of this initiative, ongoing state-of-the-art research is applied to current events and the results are published in the form of scientific reports.
The analysis reveals that the southern German floods resulted from a mix of precipitation processes on several spatio-temporal scales including convection as well as large-scale stratiform rain. Compared to previous floods, the most remarkable characteristic is the large extent in space and time. The aggregated intensity, on the other hand, was not particularly unusual and has been slightly increased by the warming climate. Nevertheless, the reaction of river runoff was extreme, particularly on the scale of small river catchments: while the overall regional runoff was the second largest in the past century, several local runoff values had estimated return times well over 100 years.

Presenting Author

Sebastian Buschow

Email Address of Presenting Author

s6sebusc@uni-bonn.de

Affiliation of Presenting Author

University of Bonn

Address of Presenting Author

Institut für Geowissenschaften, auf dem Hügel 20

Session

Precipitation and Hydrological Models: Extreme precipitation events

Preferred Contribution Type

Oral Presentation

VAT

DE 122 119 125

Authors: FRIEDERICHS, Petra (University of Bonn); BUSCHOW, Sebastian (University of Bonn); SZEMKUS, Svenja (University of Bonn)

Presenter: BUSCHOW, Sebastian (University of Bonn)