



rain, snow and floods – past Rhine flow regime changes

Berry Boessenkool and Axel Bronstert

Inst. f. Earth and Environmental sciences, Potsdam University, Germany (boessenk@uni-potsdam.de)

The seasonality of large floods in the Rhine is changing. In the alpine nival regime, snow melt floods occur earlier in the year and in the pluvial middle-Rhine regime, rainfall induced flood magnitudes rise. Each flood type is currently separated in time, but may overlap in the future due to climate change. Such a concurrence would create a new type of hydrologic extreme with disastrous consequences. This is why we aim to quantify the probability for a future overlap of pluvial and nival floods. As a starting point, we present a visualization of past changes in flood seasonality along gauges at the Rhine and large tributaries.