



Spatial and temporal patterns of hydrological extremes in Europe

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At a catchment scale, the hydrological characteristics of extreme events such as floods and droughts vary considerably across Europe. However, extreme events are also governed by large-scale physical processes that can influence the hydrological response of larger regions beyond catchment or national boundaries.

To analyse such extreme events at a regional scale, a hydrological database for Europe, consisting of daily data from over 5000 stations, has been assembled. The database is a result of existing datasets of European coverage amended and complemented by a collaborative effort as part of a joint European flood research agreement based on the exchange of data, models, staff and expertise.

The developed database allows an analysis of the influence of large scale drivers such as climate on the spatial patterns of floods and droughts across Europe. The timing of extreme events in Europe is a key variable in understanding the main processes governing flood and drought events. In this contribution, regional similarities and differences of hydrological extremes in Europe are analysed and the resulting characteristic spatio-temporal patterns of floods and droughts are presented separately and compared with one another.