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Weather types producing flood events in Central and Southern Europe. Case study for singular events during the final period of the Little Ice Age

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Flood events are natural hazards which are caused by various factors and processes. This study focuses on weather types, which generated strong rainfall events and caused flood events at the final period of Little Ice Age (AD 1780-1880).

Information obtained from historical documentary sources about dates, impacts and general features of such events are applied for two different geographical contexts: In a Central Europe river basin with oceanic climate conditions and in a Southern Europe river basin with mediterranean climate.

Data availability for sea level pressure series for selected locations of Western Europe enable the reconstruction of weather types which produce flood events in both different geographical contexts.

Another objective of this reconstruction is not only the definition of weather types or atmospheric circulation patterns producing floods in either region but also to identify possible relations between severe weather conditions in these two geographically separated areas such as persistent rainfall events or opposed patterns of rainfall and drought.