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Regional climate reconstruction based on written sources for the Carpathian Basin

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According to the IPCC Third Assessment Report, the Mediterranean region is one of the most affected areas in terms of change in intensity and occurrence of extreme climate events. In this poster, historical documents collected by Antal Rethly are used to evaluate the occurrence, duration and geographical location of extreme climate events of the past centuries for the Carpathian Basin located in the northeastern part of the Mediterranean region. A hierarchical code system has been defined and applied to the approximately 15000 collected climate related written sources. The three main categories distinguish temperature, precipitation and wind related events, containing about 3800, 10000, and 1300 information items, respectively. In case of temperature, reports on cold conditions dominate (65%), while in case of wind most of the archive records mention the strength. Precipitation information takes 66% of the total collection and the most often reported event is ‘rain’. Other frequently reported precipitation related information includes extreme events, e.g., thunderstorm, hail, flood, and drought. Spatial and temporal distribution of precipitation, temperature, and wind related climate events and extremes has been evaluated using settlement and subregional scales. Furthermore, geographical distribution of extreme climate events has been mapped. Annual and seasonal climate time series have been reconstructed and analysed for the Carpathian Basin.