



## European droughts derived from documentary data

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High-resolution data about past drought events, particularly for the pre-instrumental period, can be obtained from documentary evidence. The documentary evidence includes narrative sources (annals, chronicles, memoirs), diaries kept by persons specifically interested in the weather, the records kept by administrators tasked with keeping accounts and other financial and economic-administrative records, legal-administrative evidence, religious sources, letters, songs, newspapers and magazines, paintings and pictographic evidence, chronograms, epigraphic evidence, early instrumental observations, society and professional reports, and weather compilations. Such sources are generally available in different extent for many European countries. This variety of documentary information allows distinguish between basic types of drought (meteorological, agricultural, hydrological, socio-economic) and reconstruct hydroclimatic conditions in the form of series of precipitation totals, drought frequencies or drought indices. Documentary-based drought reconstructions can be used to study long-term spatiotemporal hydroclimate fluctuations, major drought events, relationships with external forcing and large-scale climate drivers, socio-economic impacts and human responses in the scale of individual countries or regions in Europe. In the presentation, we provide an European overview of existing documentary-based drought studies on the decadal scale for the Mediterranean region, western, central and eastern Europe. Outstanding European drought events are demonstrated for the years 1361, 1616 and 1718–1719 describing their course, spatial extent and impacts. Some examples of drought impacts on society and societal responses (perception, spiritual and ritual approaches as well as institutional/legal-administrative decisions and changes) are reported. Finally, perspectives and challenges for the future use of documentary evidence in the study of historical droughts in Europe are presented.