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Extreme droughts and their human responses in the Czech Lands in the pre-instrumental period

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Rich documentary evidence in the Czech Lands allow selection of many historical dry events in the pre-instrumental period (12th–18th centuries) and description of their human responses. Based on documentary data (annals, chronicles, memoirs, visual weather observations, liturgic sources, economic sources including taxation evidence, newspapers, chronograms, private and official letters, epigraphic sources, market songs, early instrumental meteorological measurements etc.) all basic types of droughts (meteorological, hydrological, agricultural, socio-economic) can be identified. While before AD 1500 records of droughts are less frequent due to relatively scarce Czech documentary evidence (the earliest report from Cosmas in his Chronicle of Czechs reports dry winter in AD 1090/1091), rich evidence in the subsequent centuries allow compile a continuous chronology of dry episodes. Particularly extreme droughts based on described impacts and confirmed by reconstructed seasonal, summer half-year (April-September) and drought indices (SPI, SPEI, Z-index and PDSI) for the Czech Lands since AD 1501 were further selected for a detail study. After presentation of basic types of drought documentary evidence, the paper describes main meteorological features of selected extreme events and their human impacts and responses (lack of water, water mills out of operation, transport of water on great distances, failure of harvest of crops, vegetables and fruits, increase in prices of goods, forest fires etc.). Subsequently common general features of all severe drought events are summarised and discussed with respect to data uncertainty, broader European context of selected droughts and their human impacts and responses. (This work was supported by Czech Science Foundation, project no. 17-10026S “Drought events in the Czech Republic and their causes”.)