



Drought events in the Czech Republic: past, present, future

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Droughts are, together with floods, the most important natural extremes in the Czech Republic. In the last c. 20 years even some irregular alternations of years with severe droughts on the one hand (2000, 2003, 2007, 2011–2012, 2014–2015) and severe floods on the other (1997, 1998, 2002, 2005, 2009, 2010, 2013), reflecting greater variability of the water cycle, can be observed. Great attention devoted to the study of past, present and future of droughts in the Czech Republic in a few last years allowed to obtain basic knowledge related to long-term spatial-temporal variability of droughts, combining dendrochronological, documentary and instrumental data, synoptic causes and climate forcings of droughts, case studies of important drought anomalies with significant social-economic consequences (like drought of 1947), impacts of droughts in agriculture, forestry or water management, and future droughts according to model estimates. Basic results obtained are summarised and documented by several typical examples. Such level of drought knowledge became a basis for formulation of the new research project, trying to analyse the climate forcings and triggers involved in the occurrence, course and severity of drought events in the Czech Republic in the context of Central Europe and explanations of their physical mechanisms, based on a 515-year series of drought indices reconstructed from documentary and instrumental data. Presentation of this new project for 2017–2019 is included in the second part of the paper. (This work was supported by Czech Science Foundation, project no. 17-10026S “Drought events in the Czech Republic and their causes”.)