



## **Impacts of European drought events: insights from an international impact report inventory**

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Drought is a natural hazard that can cause a wide range of impacts affecting the environment, society and economy in a number of ways. Drought analysis often concentrates on particular aspects of droughts with large-scale studies focussing mostly on climate variables and impact studies focussing on local case studies. In times of concern over future changes in drought frequency and severity due to climatic change, a holistic view linking hydrometeorological analysis with a wide range of impacts across regions is needed to improve trans-sectorial and transboundary drought management. This study presents an assessment of the diversity of drought impacts of past drought events across European geoclimatic regions made possible by the new European Drought Impact report Inventory (EDII). This database, which already contains over 2000 entries, will go public for online reporting and use at the end of the (EU) DROUGHT-R&SPI project that it was developed in. Collected impact reports are classified into 15 impact categories, including different sectors, and sub-types, and referenced in time and space to allow mapping and statistical analysis. The selection of past drought events studied in detail is based on the complementary European Drought Reference (EDR) database which is housed on the same website. Reports on agricultural impacts were recorded for most events. However, it depends on the region as well as on temporal drought characteristics (timing and duration) if impacts on rainfed crops, on irrigated crops or on grazing and green fodder availability for livestock farming are dominating. Drought events peaking in summer associated with hot weather conditions, such as the extensive European benchmark droughts of 1947, 1976 and 2003 but also recent localized droughts in South-Eastern Europe, are outstanding due to diverse (and severe) impacts being reported across many regions. For all selected multi-year drought events in Mediterranean countries widespread impacts on water supply and irrigated agriculture are recorded revealing the large pressure on water resources. Though currently somewhat biased by increasing report availability for more recent years and geographically by a wealth of reports from specific countries, the database is a promising source to assess regional and temporal differences in drought impacts across Europe and will continue to improve as the number and coverage of drought impacts increases with the publically available EDII website.