



## **Reconstructing the climate of the 19th century from newspaper information**

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In Romania, the systematic collection of meteorological data started in the second half of the 19th century, but the number of stations was very limited and their spatial distribution was sparse. As a consequence, the meteorological archives include only a few complete data sets making difficult to characterize the climate of the period. Evidences from natural archives exploited so far are very scarce and refer mainly to tree-rings and lacustrine and fluvial sediments. However, major historical and social events occurred in the 1800s, and abundant written information may be found in documents and journals, providing a potential source of meteorological information about Romania's territory still unexploited in a systematic manner yet.

This study is the result of a thorough and comprehensive screening of the meteorological references published in the central newspapers of the epoch. Meteorological calamities like drought (e.g. 1816-1817; 1845-1847), extreme temperature, heavy rains or strong wind events (e.g. 1802) are frequently reported in the daily journals and periodicals, while valuable information about the climate may be found in several travel books and monographs. We aggregated the findings in an open access database containing geo- and time-referenced data about the characteristics of the mentioned phenomena and their consequences. Eventually, the information was compared with instrumental data from weather stations or from other sources in order to validate its accuracy and credibility. In the end, we present significant results of this endeavour, as a basis for refining and reconstructing the 19th century climate over the Romania's territory from newspaper information.