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## Climate drivers of meteorological droughts in north-western Europe (1836-2022)

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Droughts have garnered global attention due to their adverse effects on crops, ecosystems, and society. Despite their frequent occurrence in north-western Europe, the causes of these droughts remain poorly understood. This study investigates the historical climate drivers of meteorological droughts in the region. The identification of drought events since 1836 is conducted using the Standardized Precipitation Evapotranspiration Index at a 3-month scale, based on reanalysis datasets (ERA5 and 20CRv3). Subsequently, by employing clustering methods, we categorize the diverse atmospheric conditions leading to droughts into discernible patterns. Our next objective is to assess the long-term variability and trends within these patterns. This research provides a long-term regional analysis of meteorological drought drivers, contributing to a deeper understanding of regional climate changes over the past two centuries.