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A global dataset of multiscalar drought indices (SPI and SPEI)

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The availability of data on climate anomalies is of paramount importance to the research community. We present here a database of two multiscalar drought indices: the Standard Precipitation Index (SPI) and the Standard Precipitation-Evapotranspiration Index (SPEI). The dataset has a global coverage and a spatial resolution of 0.5 degrees, and is based on the CRU TS3 precipitation and temperature datasets. The dataset includes the values of the SPI and the SPEI indices at 1 to 12, 24, 36 and 48 months. The SPI is a well known precipitation index, and has been extensively used in studies about climatic droughts and other precipitation anomalies. The SPEI is a newly proposed drought index (Vicente-Serrano et al., in press) and has the advantage of combining the multi-scalar character of the SPI with the capacity to include the effect of temperature on drought conditions, thus making it ideal for assessing the variability in drought severity associated with higher evapotranspiration demand in scenarios of global change. In this contribution we detail the elaboration of the dataset and some examples of its intended use. The database has been made available for public access.