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# A new daily quality-controlled data base for the Pyrenees, 1950-2015

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The CLIM'PY project (Characterization of the evolution of Climate and provision of information for adaptation in the Pyrenees) is a transboundary research project, including several public administrations, in which the current trends in temperature, precipitation and snow cover throughout the Pyrenees and its future projections are analysed in detail.

Within the first phase of the project, we developed a daily quality-controlled database, including maximum temperature, minimum temperature and precipitation, and covering the period 1950-2015. A set of 1,330 daily temperature series and 1,495 daily rainfall series were selected for the analysis, according to their temporal coverage and continuity. The whole set of data was then tested for quality. The methodology used for the quality control of daily precipitation is that proposed by Serrano-Notivoli et al. (2017), based on exhaustive quality control and estimation of new values in those days with missing or erroneous data. As for temperature series, absolute quality control is carried out using RClimdex approach, with extraqc (http://www.c3.urv.cat/softdata.php). From 11.3 million daily precipitation data, about 1.2% were flagged as erroneous and reconstructed, while for temperature about 0.3% of 13.5 million daily values were detected and extracted for the final analysis.

In addition, for the more recent period (1981-2015), a closer analysis was performed by generating a 1x1km grid, covering the entire Pyrenean domain. The methodology for the grid generation is also described.

A homogeneity analysis of the longest and more continuous monthly series was also carried out, according to the HOMER approach, while daily homogeneity adjustments were tested by the methodology proposed by Vincent et al. (2002).

Finally, a preliminary trend analysis was done, both for mean monthly, seasonal and annual temperature and rainfall series (1950-2014 period), and for 27 WMO-ETCCDI daily extreme indices (1981-2015 period).

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