



Climate extremes in Italy: an assessment of current changes in precipitation and temperatures

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Daily values of precipitation, minimum and maximum temperatures at stations situated in Italy were used in order to asses the changes occurred in the climate extremes analising some of the 27 indices suggested by the Climate Variability and Predictability Expert Team for Climate Change Detection Monitoring and Indices (CLIVAR - ETCCDMI) as part of the project regarding the climate variability and predictability. The analysys, performed using the newest available version of the RClimDex software (<http://cccm2.3.1.seos.uvic.ca/ETCCDMI/RClimDex/rclimdex.r>).

Results from the analysis of daily temperatures show a significant increasing of the tropical nights and of summer days, and a decrease of the number of cold days and days with frost.

The extreme precipitation analysis does not show results as evident as for the temperatures, however a small decreasing trend of total rainfall is captured in most of the stations, together with a decrease of the number of rainy days. Moreover the decrease in the cumulated rainfall as well in the total number of rainy days shows seasonal differences.

Concerning rainfall extremes, there is a change in the last few decades in the number of days exceeding fixed thresholds. In addition the changes are not the same in all the Italian regions and some consideration will be presented relating the differences of extreme climate indices to the specific geographical features.