



Climate trends in Apulia during the second half of the 20th century

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This work discusses climate trends in Apulia (south eastern Italy) for the period 1951-2000 considering three indicators that are important for the agricultural productivity of this region: the monthly accumulated rainfall, the monthly mean of daily maximum temperature Tmax and of minimum temperature Tmin. The autumn and winter water resources are important for recharging aquifers and reservoirs to be exploited during the crop growth season. The increase of mean Tmin could anticipate the phenological phases, hence flowering, and increase the probability of exposing plants to anomalous frosts. The dataset of Servizio Idrografico Regione Puglia (SIRP) containing a large number of stations (83 for temperature and 133 for precipitation) has been used for this analysis after having been controlled with data-homogeneity tests (such as the Buishman-range test and the Craddock test) in order to identify time series that are suitable for climate analysis. Results show a decrease of monthly mean Tmax (-0.33 °C) with the largest statistically significant decrease in July (1.1 °C), an increase of monthly mean Tmin (0.78 °C), which is particularly large during the warm season with a peak value in May (1.3 °C), and a decrease of total annual precipitation (approximately 50 mm) which, however, is statistically significant only in a minority of stations.