



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 T_{max} and of minimum temperature T_{min} . 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 T_{min} 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 T_{max} (-0.33 °C) with the largest statistically significant decrease in July (1.1 °C), an increase of monthly mean T_{min} (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.