



Evolution of extreme temperature events in short term climate projection for Iberian Peninsula.

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Extreme events of maximum and minimum temperatures are a main hazard for agricultural production in Iberian Peninsula. For this purpose, in this study we analyze projections of their evolution that could be valid for the next decade, represented in this study by the 30-year period 2004-2034 (target period). For this purpose two kinds of data were used in this study: 1) observations from the station network of AEMET (Spanish National Meteorological Agency) for five Spanish locations, and 2) simulated data at a resolution of 50×50 km horizontal grid derived from the outputs of twelve Regional Climate Models (RCMs) taken from project ENSEMBLES (van der Linden and Mitchell, 2009), with a bias correction (Dosio and Paruolo, 2011; Dosio et al., 2012) regarding the observational dataset Spain02 (Herrera et al., 2012).

To validate the simulated climate, the available period of observations was compared to a baseline period (1964-1994) of simulated climate for all locations. Then, to analyze the changes for the present/very next future, probability of extreme temperature events for 2004-2034 were compared to that of the baseline period. Although only minor changes are expected, small variations in variability may have a significant impact in crop performance. The objective of the work is to evaluate the utility of these short term projections for potential users, as for instance insurance companies.

References

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