



Relationships between circulation indices and precipitation in the Mediterranean in an ensemble of regional climate models

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Spatial and temporal variability of precipitation in the Mediterranean is related to atmospheric circulation patterns such as the North Atlantic Oscillation (NAO), the Mediterranean Oscillation (MO) and the Western Mediterranean Oscillation (WeMO). The present study examines ability of an ensemble of 12 regional climate model (RCM) simulations with the 25-km resolution to reproduce observed links between these circulation indices and precipitation in the Mediterranean. We focus on the winter season (DJF) and differences in precipitation characteristics (mean amounts and extremes) on the highest 25% and the lowest 25% of days according to a given index. The relationships are evaluated against the E-OBS dataset for the 1960–1990 period, and their changes under climate change scenarios for the late 21st century are analysed in the second step.