



Decadal climate variability in the Mediterranean region: role of large-scale forcing and regional processes

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This study presents an investigation of the decadal climate variations that have characterized Mediterranean climate in recent past decades, with the aim of better understanding driving mechanisms. The roles of large scale climate anomalies and regional processes are explored. Observed decadal changes in regional climate are analyzed in conjunction with those simulated by a regional ocean-atmosphere coupled climate model PROTHEUS developed by ENEA-ICTP. These climate simulations are used as a means to better understand the processes which contributed to observed decadal climate changes.

Our results point out to significant decadal variations in Mediterranean climate since the 1960s. Local processes and feedbacks play a particularly important role in determining observed surface climate anomalies during the dry season, consistently with previous studies. In contrast, during the wet season, large-scale circulation anomalies play a more dominant role.