



An evaluation of precipitation extremes over the Euro-Mediterranean region simulated by CORDEX RCMs

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The achievement of a better understanding and characterisation of precipitation extremes is very important due to the high impacts of these events on human and natural systems. Here, we analyse daily precipitation excesses simulated over the Euro-Mediterranean region in autumn (September-November), winter (December-February) and spring (March-April) by four regional climate models (ERA-Interim driven) from the EURO-CORDEX initiative in the period 1989-2009. The applied approach is mainly based on tools from the Extreme Value Theory and on a novel procedure to assess the reliability of the estimations. Results show that the four models agree on the main spatial pattern of precipitation extremes (expressed in terms of 5-year return levels), although remarkable inter-model spatial differences are evident in all the three seasons. Finally, only one model shows a lack of reliability over the southern part of the domain and mainly in autumn and spring.