



Analysis of the historical precipitation in the South East Iberian Peninsula at different spatio-temporal scale. Study of the meteorological drought

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Precipitation is a fundamental climate variable that has a pronounced spatial and temporal variability on a global scale, as well as at regional and sub-regional scales. Due to its orographic complexity and its latitude the Iberian Peninsula (IP), located to the west of the Mediterranean Basin between the Atlantic Ocean and the Mediterranean Sea, has a complex climate. Over the peninsula there are strong north-south and east-west gradients, as a consequence of the different low-frequency atmospheric patterns, and the overlap of these over the year will be determinants in the variability of climatic variables. In the southeast of the Iberian Peninsula dominates a dry Mediterranean climate, the precipitation is characterized as being an intermittent and discontinuous variable.

In this research information coming from the Spain02 v4 database was used to study the South East (SE) IP for the 1971-2010 period with a spatial resolution of 0.11 x 0.11. We analysed precipitation at different time scale (daily, monthly, seasonal, annual, ...) to study the spatial distribution and temporal tendencies. The high spatial, intra-annual and inter-annual climatic variability observed makes it necessary to propose a climatic regionalization.

In addition, for the identified areas and subareas of homogeneous climate we have analysed the evolution of the meteorological drought for the same period at different time scales. The standardized precipitation index has been used at 12, 24 and 48 month temporal scale. The climatic complexity of the area determines a high variability in the drought characteristics, duration, intensity and frequency in the different climatic areas.

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