



Projection of seasonal precipitation conditions and dry days in Southeastern Europe

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Precipitation and drought conditions play a key role in agriculture, so the regional and local adaptation strategies for the coming decades need information on how these climatic conditions tend to change due to global warming. For this purpose, the results of regional climate model (RCM) simulations from the EURO-CORDEX initiative are analyzed to estimate the possible future trends until the end of the 21st century. In order to take into account the uncertainty arising from the anthropogenic factors (e.g. greenhouse gas emissions, land use changes, population), three different RCP scenarios (i.e. RCP2.6, RCP4.5, RCP8.5) are taken into consideration representing immediate mitigation, mitigation from 2040, and business-as-usual future pathways, respectively. The study analyzes the changes in seasonal precipitation, seasonal number of dry days, and seasonal maximum of consecutive dry days by mid-century (2041-2060) and late-century (2081-2100) relative to the reference period (2001-2020) in Southeastern Europe, i.e. a major Mediterranean region between the Adriatic and the Black Sea. The difference between the RCM simulations enables us (i) to assess the uncertainty of the projections, and (ii) to identify robust likely changes in the region. Thus, stakeholders and decision-makers are provided with relevant information for future planning.

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