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Analysis of Projected Changes in Precipitation Regions of Turkey

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Classification and clustering are important issues in climatology studies for water management. In this study, we examine the precipitation regions of Turkey with combination of the regional climate model outputs with a hierarchical cluster technique. Therefore, the outputs of the HadGEM2-ES global climate model of the Met Office Hadley Centre were downscaled to 50 km for Turkey via Regional Climate Model (RegCM4.4) of the Abdus Salam International Centre for Theoretical Physics (ICTP) for the period of 2070 - 2100 with respect to the present period of 1970 - 2000 under two distinct case scenarios (i.e. RCP4.5 and RCP8.5). Thereafter, Ward's method, which is commonly used in climate research, was also performed in order to cluster the precipitation data. In this context, spatial variations in precipitation regions of Turkey were determined for different climate change pathways.

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