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Numerical Simulation of precipitation and temperature over southeast of Iran using RegCM3 Climate Model

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Seasonal Prediction and modeling of the southeast of Iran is highly complicated; because of the influence of Indian monsoon and Complex geographical conditions including coastlines, Oman Sea, desert area and mountainous area. As the regional climate models consists from different numerical schemes for parameterization some physical process such as convection, topography, radiation and subgrid scale process, so they need to be calibrated in the area under study. In this paper RegCM3 regional climate model has been used for simulation of 1995 summer precipitation and temperature. According to the high contribution of the convective rainfalls in summer precipitation of the southeast of Iran, four convection schemes including Grell-As, Grell-Fc, Kuo and Emanuel have been selected in this study. Simulations have been done with 50 km spatial resolution over three provinces located on the southeastern part of Iran including Sistan-Bluchestan, Hormozgan and Kerman using NCEP reanalysis data. Results show that skill of the model in monthly temperature simulation is highly acceptable. Using Emanuel Scheme overall temperature Bias and relative error are to 3?c and %0.9, respectively. But Skill of model isn't so good for monthly precipitation. The minimum bias and relative error with Emanuel scheme are 5.5 mm and %35.7, respectively.