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Title: Verification of daily precipitation forecasts in Armenia

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Abstract:

Verification of 12-h daily precipitation amount forecasts is considered in Armenia making use of ERA-Interim model output data. The performance of ERA-Interim model is evaluated against observations of 30 meteorological stations of Armenia over the period 1996<96>2010. Great temporal and spatial variability of distribution of precipitation amounts make it difficult to forecast precipitation amounts in Armenia. Verification results have shown that both temporal and spatial variability of daily precipitation amounts in Armenia are better reproduced by forecasted data in the cold period than in the warm period. High values of relative errors of daily precipitation amount forecasts exceeding 100% at most stations along with the persistently low values of correlation coefficients between values of forecasted and observed daily precipitation amounts make it difficult the direct use of ERA-Interim model for station specific daily precipitation amount forecasts in Armenia. Verification of performance of different statistical downscaling methods and limited-area models nested within GCMs and enabling to resolve detailed features of orography and the land surface that affect regional climate should be examined further.

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