



Assessing differences in simulated streamflow from a hydrological model that uses empirical and dynamical downscaled climate data sets for the Western Cape, South Africa.

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Recent studies on the impacts of climate change on the southern African region has noted future potential changes in precipitation patterns and intensities. Assessing the impacts this may have on water resources of South Africa and Western Cape is therefore becoming an important priority. Downscaled climate data is expected to be used by many researchers and end-users for various projects including hydrological modelling. Accessibility of RCM data is still difficult for a large number of impact modellers in developing countries especially in Africa. Empirical downscaling methods are by comparison easier to run and can provide such researchers easier access to regional scale information especially for climate change assessments. Testing the differences that downscaling methods and scale of data has on the output of such an impacts model is attempted in this study which uses the ACRU agrohydrological model. Climate data from a number of GCMs and NCEP reanalysis data, are downscaled using both an empirical method that is implemented using Self Organising Maps (SOMs) and a dynamical method using the MM5 regional climate model. The data is then used to simulate streamflow with the use of the ACRU model, which has been configured for the regional catchments of the Western Cape. Some of the preliminary results from this study are presented here.