

Interactive comment on “Statistical downscaling of climate data to estimate streamflow in a semi-arid catchment” by S. Samadi et al.

S. Samadi et al.

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Received and published: 3 September 2012

Dear Ms. Tajiki,

Many thanks for your kind feedback. My replies on your commands are as below;

This research paper explains the impact of regression based statistical downscaling on river runoff in a semi-arid catchment. although I believe this type of research work in semi-arid region are one of the outstanding subject, my commands to improve this paper are as below: 1- authors used one emission scenario to model the climatic variable (I know how much time needs to model even one scenario, so I appreciate that), please provide the details of the scenario and a brief explanation of other emission

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scenario in introduction part. 2- explain more about the future water resource strategy in this catchment under climate change impact. 3- why did authors select those two downscaling approach? please revise the text again I have seen some grammar mistakes,

- I explained briefly about emission scenario in introduction chapter.
- We needed to downscale **daily** climate data using regression based statistical downscaling methods. There are four regression based statistical methods, namely canonical correlation analysis (CCA). (vonStorch et al., 1993), Artificial Neural Networks (ANN), Statistical Downscaling Method (SDSM) and Kriging. In this list SDSM and ANN can downscale **daily** data only so we used these linear and nonlinear methods to represent the climate change impacts in a semi-arid area.

For more info, please see below reference:

<http://www.narccap.ucar.edu/doc/tgica-guidance-2004.pdf>

- Manuscript was revised according to reviewer's commands.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 4869, 2012.

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