

Interactive comment on “Long-term precipitation forecast for drought relief using atmospheric circulation factors: a study on the Maharloo Basin in Iran” by S. K. Sigaroodi et al.

S. Maskey (Editor)

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Dear authors,

Two reviewers have evaluated your manuscript. While highlighting some valuable points of your manuscript they also noted some serious concerns and advised ways for improvement. The main concerns for me, as also reported by the reviewers, are that (1) some of the conclusions are not well supported by the results presented, and (2) a more rigorous validation of the results is expected (e.g. by re-sampling of the calibration/validation set). If you would like to submit the revised manuscript, please

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carefully address the reviewers' comments and suggestions in the revised manuscript. The changes implemented in the revised manuscript should be clearly indicated referring to page and line numbers. Please take in to account the relatively low values of model performance indicators (in particular the skill score and r-square) while deriving conclusions. In addition to the reviewers' comments, I would like to indicate some specific points below:

- 1) The significance test (or hypothesis test) indicated by P-values is not the measure of the model performance, for which you have used r-square, skill scores and RMSE. Therefore, they should be discussed accordingly. I would like to refer this point also to your reply to reviewer-2 (C7373).
- 2) In Table 9: How are the “acceptable” and “unacceptable” determined?
- 3) I would also invite your attention to the paper by Barlow et al. (2002) “Drought in Central and Southwest Asia: La Niña, the Warm Pool, and Indian Ocean Precipitation.” J. Climate, 15, 697–700. If you find it relevant, you should discuss how their results/conclusions compare with yours regarding the influence of different indices (Table 1) on the precipitation over your study area.
- 4) P. 13334, L. 24: please provide the reference.
- 5) Eq. C1, Table A1: SPI is commonly understood as defined in McKee et al. (1993), please use different name and abbreviation for your index.
- 6) P. 13342, L. 20: by “more frequently used”, I suppose you are referring to Table 7 (?), but this is not clear in this statement.

Thank you.

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