Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2017-388-AC1, 2017 © Author(s) 2017. This work is distributed under the Creative Commons Attribution 4.0 License.



## Interactive comment on "Spatio-temporal trends in observed and downscaled precipitation over Ganga Basin" by Himanshu Arora et al.

## Himanshu Arora et al.

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Reply to Interactive comments from Anonymous Referee #1 (https://doi.org/10.5194/hess-2017-388-RC1)

RC1(1). You mention downscaling of precipitation but there is no text devoted to this subject.

AC1(1). In this study, Authors didn't apply any downscaling procedure, but have utilized the downscaled precipitation data, which is obtained from CMIP5 climate and hydrology projections archive (available at http://gdo-dcp.ucllnl.org/downscaled\_cmip\_projections/) (Maurer et al. 2007). The precipitation was downscaled (by Reclamation 2014) using the bias-correction and spatial dis-

C1

aggregation (BCSD) method. Downscaled precipitation for 37 GCMs from CMIP5 archive (ensemble r1i1p1) are used in this study. Following reference included in revised manuscript: Reclamation: Downscaled CMIP3 and CMIP5 Climate and Hydrology Projections: Release of Hydrology Projections, Comparison with preceding Information, and Summary of User Needs, prepared by the U.S. Department of the Interior, Bureau of Reclamation, Technical Services Center, Denver, Colorado. 110 pp, 2014

RC1(2). There is a trend (slope) of the precipitation but I do not see any line plots that show this trend. A trend line would highlight the increase or decrease

AC1(2). The plots showing trend lines at particular grid points are added in the revised manuscript.

RC1(3). All statistics should be accompanied with p-value and significance.

AC1(3). The p-values associated with all statistics (such as ZMK) are included in the revised manuscript.

RC1(4). Spatial statistics (standard deviation) should be included in the paper.

AC1(4). The plots showing the spatial variation of standard deviation (similar to spatial plots for mean which are already there in manuscript) are included in the revised manuscript.

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