Compliance of comments of the reviewers

The authors thank the reviewers for their thoughtful comments. These have been incorporated in the manuscript as follows. The point wise replies of the comments of the Reviewer#2 are given below.

Comment	Response of the authors
Anonymous Referee #2 Received and published: 23 April 2017	
(1) I don't find a concrete innovation in modeling technique to publish in this journal. The introduction section is too lengthy including very general statements and it seems like a review paper. This should he concise based on the overall study objectives.	The introduction section has been improved by reducing length, editing, and adding some references.
(2) The methods section should be revised thoroughly since it contains the equations which are explained in details in SWAT documentation and in several previous research papers. The abstract section says that the authors have used manual calibration approach but as I understand from methods section. they have explained the application of SWAT-CUP SUFI-2 approach for model calibration. This is very confusing to the audience.	We have used both SWAT-CUP and then manual calibration to further improve the results. This has been clearly explained in the Results and Discussion section.
(3) One of my critical comments is regarding the study of uncertainty analysis in this paper. In Abstract section, the authors have stated that they have done quantification of uncertainty analysis but not mentioned in details in the text. This is very important aspect of model simulation studies so this shouldbe accounted very properly in the paper.	We agree that the uncertainty analysis was weak in the paper and propose to strengthen it in the revision.
(4) The paper is lacking supporting references in many places. It also contains several technical errors. Specific suggestions about the paper are listed below: Title: Since the study is primarily focused for calibration and validation of Ganga River Basin SWAT model, the Title should be modified "should use different terms instead of using hydrologic modeling-. Abstract section, lines 10-13: I am not convinced with these statements. There are several studies conducted in several Himalaya Mountain basins. I suggest the authors to see a few of the following examples: 1. Neupane, R P., Yao, J., & White, J. D. (2014). Estimating the effects of climate	Suggested references have been reviewed and their key findings will be included in the paper. Compared to the size and importance of Himalayas, there are limited hydrologic modeling studies and typical applications are for areas of about 5000 to 7500 sq km. Size of our study area is about 19000 sq km. Authors of some studies have tried to qualitatively relate parameter values with catchment characteristics. In terms of broad impacts of climate change

change on the intensification of monsoonal air driven stream discharge in a Himalayan watershed. Hydrological Processes, 28(26), 6236-6250. 2. Neupane, R. P., White, J. D.,& Alexander, S. E. (2015). Projected hydrologic changes in monsoon-dominated Himalaya Mountain basins with changing climate and deforestation. Journal of Hydrology, 525, 216-230. 3. Nepal, S., & Shrestha. A. B. (2015). Impact of climate change on the hydrological regime of the Indus. Ganges and Brahmaputra river basins: a review of the literature. International Journal of Water Resources Development, 31(2), 201-218.	as reported in the literature, the impacts are nearly the same for the Indus, the Ganga, and the Brahmaputra basins: there will be pervasive reduction in snow/glacier cover areas in the future, runoffs are likely to increase in near future and decline thereafter, and flood peaks are likely to increase. We are of the opinion that assessments of climate change impacts for this region are subject to high uncertainty which arise due to modeling but more importantly due to large uncertainties in climatic projections.
Abstract section, line 16: Should be clear in manual and automatic calibration approaches in the paper. Abstract section, line 20: "between 13-20%" should have clear explanation of estimating these numbers in the text. Introduction section: The first sentence is not so clear. Introduction section, lines 28-33: Authors should provide proper references to support these statements. Introduction section,2nd paragraph: The first sentence is not clear and should be re-written. Introduction section. lines 50-52: Provide the reason of getting better NS value in monthly basis with reference. Introduction section. paragraphs 3 and 4: These paragraphs mostly include literature reviews regarding water quality issues. This is not appropriate since the paper is focused for water quantity issues. So. these should be removed. Introduction section, lines 106-107: provide supporting reference for this data Authors should trim the introduction section based on research objectives.	Specific comments and editorial suggestions will be suitably incorporated in the revised manuscript.
In summary. the paper has both scientific and technical flaws as mentioned above, so I would ask authors for a comprehensive revision based on the above-mentioned comments to better improve from the present form.	We do not agree with the reviewer that the paper has scientific and technical flaws. The paper may not be as strong as the reviewer expected but the word ‘flaws’ has a different connotation. Of course, our endeavor will be that the revised paper is much better than the current version.