Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2018-187-SC3, 2018 © Author(s) 2018. This work is distributed under the Creative Commons Attribution 4.0 License.



Interactive comment on "Comment: Getting the Methodology Wrong for Analysing the Hydrological Changes in Watersheds" by Nitin Bassi et al.

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I am in full agreement with the short comments posted here. The strident, lecturing tone of Bassi et al is not in keeping with the norms of this journal or community, and should not be tolerated.

Furthermore the criticisms presented are specious, seem to be based on a misunderstanding of the paper's purpose, or ignore the sections of the paper where Bassi et al's concerns have been anticipated and dealt with.

The criticism in section 2 that Penny et al have "Misplaced concerns about data un-

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availability" seems to focus on a perceived criticism of the data collection agencies in India. In fact (as the authors point out) the data scarcity they are referring to is a universal one that has inspired hundreds of hydrologic scientists working over the last 15-20 years on the "Prediction in Ungauged Basins" problem.

The criticism in section 3 is based on the erroneous premise that Penny et al have claimed to be making one of the first attempts to analyze hydrological process at the watershed, sub-basin and basin scale in India. They do not make that claim anywhere I can see.

In section 4 Bassi et al do not support their claim that there is something fundamentally 'wrong' with the analysis presented. I find nothing in Penny et al's analysis that violates any basic scientific principles. Bassi et al find it 'strange' that Penny et al chose to develop a novel methodology to look at the storage in the many tanks distributed across the landscape for evidence of hydrologic change, rather than using data from the handful of gauges and reservoirs in the basin (as Bassi et al suggest here and in section 2). However doing so would not address the patterns of finer-scale spatial variability that Penny et al's paper reveals.

The criticisms in section 5 are all anticipated and discussed at length in the original paper. Penny et al clearly explain why they believe their assumptions are justified.

Section 6 is perhaps the most remarkable. The title is insulting, and not supported by the arguments. The criticism is all straw-man – Penny et al do not report any data on declining groundwater levels. When declining water tables are mentioned, peer-reviewed literature is cited to support the claims. No new conclusions are drawn, sweeping or otherwise.

The comment by Bassi et al adds nothing, and detracts much. It should be rejected.

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