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

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Comments by M. Sivapalan have two parts. The first part is basically character smearing and personal attack on Bassi and the co-authors using a highly objectionable language which is similar to the comments posted by some others in this discussion forum, and the second part which is relevant for the purpose is on the content of the manuscript. We would address the second first.

1] There is significant amount of data available on hydro-meteorological parameters and groundwater for the 20 major river basins in India for several decades now. For instance, Cauvery river basin (within which Arkavathy watershed falls) has stream flow

data for nearly 80 years. These data sets are maintained both by National and State level agencies. Table 1 provides the details of such data for the Karnataka part of Cauvery basin which even include agencies maintaining these data sets and also website links for some of the data which are available online for free. It seems M. Sivapalan was in such hurry to write this comment that he did not find time to visit those websites which are maintained by national and state governmental agencies. It is quite clear that all these years Prof Sivapalan has not interacted with relevant experts and specialist from India.

2] Prof Sivapalan has raised serious concerns over the veracity and relevance of studies undertaken by researchers in prestigious and established International and National institutions working on river basins issues in India, without supporting it with any material evidence. These institutions include IWMI, ICRISAT, IITs, IRAP, and World Bank among others. If these institutions are not to be believed then who should be believed?

3] We have given a detailed explanation in section 4 of the commentary why village tanks are not the 'right unit' for the analyses performed by Penny et al (2018). Even for the tanks, Penny et al (2018) should have used area-capacity curve available with the state minor irrigation department instead of relying totally on RS/GIS to determine changes in tank water extent in order to show changes in tank inflows.

Shockingly, M. Sivapalan has tried to insult Bassi and his co-authors by labelling them as those indulging in 'hit job' and are 'ill-disguised', 'world attention' seekers, 'self-serving', 'uninformed' and 'non-informative'. Yet, he failed to come up with a single point to show that Bassi and others have faltered in their critique and arguments. Surely, Bassi and co-authors have been successful in informing the readers of HESS about the status of hydrological data availability on Indian River basins and also highlighted the need for using a better methodology for analysing hydrological changes at the basin/watershed scale. Strangely, M. Sivapalan, while refusing to acknowledge this, chooses to indulge in the character assassination of the authors.

Merely raising questions about the scientific aptitude of Bassi et al., who have tried to present facts through their commentary, shows his professional bias against them. He has gone to the extent of suggesting the editor to 'warn' Bassi et al. of any future submission as if they had committed some serious crime by writing an academic critique on the work of Penny et al (2018). We sincerely hope that the Editors of the journal would take serious note of M. Sivapalan's inappropriate conduct.