

## ***Interactive comment on “Reviving the Ganges Water Machine: why?” by U. A. Amarasinghe et al.***

**P. van der Zaag (Editor)**

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I have read the manuscript with interest, as well as the two reviews, that are both quite thorough and critical, identifying key weaknesses and also providing constructive suggestions for improvements.

As editor, I would like to raise four points, some of which may also have been raised in some way or other by the reviewers, but need to be emphasized:

1. The authors have to be extremely clear about defining their subject matter: what precisely is meant when they refer to the “Ganges Water Machine”. How is it defined?

In relation to this, I find it difficult to combine the general knowledge I have of water management in India, which is characterised, among others, by the systematic over-exploitation of groundwater, on one hand, with the tenet of this paper, namely that there

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must in fact be greater abstractions of groundwater prior to the monsoon, to ensure that sufficient storage space is available to store the monsoon rains. Surely, in case groundwater is over-abstracted, which I thought was the case already in India, one would think that there would be sufficient storage space left for the monsoon recharge to be stored? So is the Ganges Water Machine a real proposition, or rather a myth?

2. Are the data provided in Figures 2, 4, 5 and 7 referring to the entire Ganges basin (i.e. including Nepal and Bangladesh)? Figure 6 provides data on ET and EF for different EMCs at what site/location?

3. Throughout the paper, the authors are not meticulous in using correct units. Stocks should be reported as volumes, flows as volumes per time unit. The main text, Tables 1 and 3, as well as the Y-axis of Figures 2, 3, 4, 5 and 6 need to be amended. The unit of the values presented in Figure 8 are not declared. When formulae are given (equations 1, 2, 3), no units are reported. This is important given the subject matter of the paper, where there are chances of confusing stocks with flows.

4. The authors should indicate how the present manuscript relates to another manuscript submitted to HESSD by the first two authors of the present paper, together with some other authors, with nearly the same title, namely “Reviving the “Ganges Water Machine”: where and how much?” (<http://www.hydrol-earth-syst-sci-discuss.net/12/9741/2015/hessd-12-9741-2015.html>)

I consider the criticisms of both reviewers quite severe and fundamental. It is clear that the submitted manuscript is of insufficient quality to be considered for publication in HESS. I invite the authors to take the critique and suggestions made at heart and to thoroughly revise and significantly improve the manuscript.

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