

Interactive comment on “An integrated model for the assessment of global water resources – Part 2: Anthropogenic activities modules and assessments” by N. Hanasaki et al.

Anonymous Referee #1

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This is the second of a 2-part paper. Together, these two papers constitute a remarkable piece of work, and very well written too. The model presented in these two papers will be widely used for a range of applications, and I commend the authors for this work.

However, my biggest concern is what I can learn from this paper. The focus has been mainly on presenting the model details, demonstrating the improvements that have been made in respect of previous and contemporary models.

For a paper to be published in a scientific journal, the model should have been used to generate new understanding or insights that we would not have otherwise, or novel

applications of the model to answer fundamental or management questions. There is very little of it here.

The authors may say that this may be beyond the scope of these two papers, but it is a serious concern.

My second concern about these papers is that a lot of simplifying assumptions have been made to put together the model - I agree that they are necessary. Nevertheless, how much can I trust the predictions of the model, given these assumptions and simplifications. I would have liked to see some uncertainty analysis.

Addressing these two concerns means submitting two new papers altogether, which is too much work, and perhaps too harsh. Perhaps as a compromise the authors can be persuaded to add a section at the end:

1) a listing of the assumptions and the improvements that are needed to the various modules, on the basis of improved data support and process understanding, and some measure of the confidence that they have with current modules

2) the potential uses of the model - the kind of questions that can be answered with the model, and the insights that it can provide in terms of global hydrology etc.

Also, the authors may want to indicate if this model is going to be widely available for other groups. It will be a shame to independently develop the model - much can be gained by building on it.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 4, 3583, 2007.

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Discussion Paper