

Interactive comment on “A trading-space-for-time approach to probabilistic continuous streamflow predictions in a changing climate” by R. Singh et al.

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This is a very interesting article and provides another avenue for estimating the potential impact of changes in temperature and precipitation due to climate change on the hydrologic response of catchments. In particular, the approach applied to five watersheds across a range of aridity levels allows the authors to demonstrate that more arid catchments are more likely to show a greater response to a change in either temperature or precipitation compared to more humid catchments.

The parallels drawn between the prediction in ungauged basins problem and the po-

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tential impacts of climate change problem are also useful insights.

One quibble is that I don't really see this study as a trading-space-for-time approach. The differences observed between the catchments shows the value of considering a range of catchments which are separated in space and show different aridity indices. However, the responses of these catchments are derived by examining responses over 5 different validation periods, and by examining the impacts of a range of artificially-applied temperature and precipitation scenarios. I do not see then how the approach trades space for time, except in the analogies drawn between the climate change impact study and the prediction in ungauged basin study. Perhaps the title of the paper could be modified to reflect this?

However, either with a new title or the original, I recommend publication of this paper in HESS. It is very well written and does not require any modification to make it more comprehensible to the reader.

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