

Interactive comment on “The causes of flow regime shifts in the semi-arid Hailiutu River, Northwest China” by Z. Yang et al.

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I really enjoyed reading the paper – it is a brilliant paper, and can be published without substantial changes. They have used the best and most appropriate statistical methods to detect change points. The paper provide a lot of insights into the hydrology of the region and the connection between human policy decisions on the nature of hydrologic variability better than I have ever seen in the past.

The authors set out to analyze the relative contributions of climate change and human-induced land use and land cover changes and extractions on the evolution of hydrologic regime. But in the end, it turned out that direct human impacts are so over-whelming that one wonders if we want to be bothered about climate change impacts in the region.

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Given that, I wonder if the storyline of the paper should not be changed to look at the co-evolution of a human-nature system, to show how hydrologic variability and regime and human policy changes interacted and fed back on each other. In other words, the paper would become even more attractive as a sociohydrology paper. I will leave this decision to the authors – at the very least they should bring out these social aspects more than they have done. For the present, they just present these social policy regimes as overlays on top of the regime shifts.

I am in favor of publication of this manuscript in HESS in its present form, although I would like to see some restructuring of the storyline to reflect the above points.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 8, 5999, 2011.

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