

Hydrol. Earth Syst. Sci. Discuss., community comment CC1 https://doi.org/10.5194/hess-2021-499-CC1, 2021 © Author(s) 2021. This work is distributed under the Creative Commons Attribution 4.0 License.

Comment on hess-2021-499

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Community comment on "Climate sensitivity of the summer runoff of two glacierised Himalayan catchments with contrasting precipitation regimes" by Sourav Laha et al., Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2021-499-CC1, 2021

Dear authors,

The model of this study yielded the insensitive response of glacier runoff to precipitation change but this is not discussed in depth. The model can resolve how each component responds (that's why we utilize numerical models, right?). Figure 11a of Fujita and Sakai (2014, HESS) could be helpful for this issue. Runoff responses to precipitation change are different in ice-containing and ice-free surfaces, and the compensation of these opposite responses could yield the insensitive response. I suggest that the authors perform this kind of analysis. It would be interesting if the authors find a different reason.

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Reference

Fujita, K. and Sakai, A.: Modelling runoff from a Himalayan debris-covered glacier, Hydrol. Earth Syst. Sci., 18, 2679–2694, https://doi.org/10.5194/hess-18-2679-2014, 2014.

