

Interactive comment on “The role of glacier dynamics and threshold definition in the characterisation of future streamflow droughts in glacierised catchments” by Marit Van Tiel et al.

M. Zappa (Referee)

massimiliano.zappa@wsl.ch

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Dear authors,

I like the manuscript but I have a couple of concerns:

a) Glacier dynamics: C D: You are comparing a state-of-the-art approach (dynamical glaciers), with an approach which is acknowledged to be inadequate in transient mode (constant glaciers). I think you should have a look at the option without glacier change, but tax it as inadequate early enough in the paper (Figure 6) and continue with the dynamical model only. Up to Figure 6 you could also work with a

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version where you remove the glaciers from the beginning.

b) HVT TVT: Here I fear that regime shift (shown by HVT) and actual drought-analysis (shown by TVT) are mixed up. In the discussion part this is presented as finding, but I think this should be stated from the beginning.

c) For calibration and validation I would use a seasonally varying discharge value instead of the average discharge as benchmark (see detailed comment in the commented manuscript)

Please clarify these issues and the other points in the commented PDF.

Best regards

Massimiliano Zappa

Please also note the supplement to this comment:

<http://www.hydrol-earth-syst-sci-discuss.net/hess-2017-119/hess-2017-119-RC2-supplement.pdf>

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2017-119, 2017.

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