

# ***Interactive comment on* “Comparison of occurrence-bias-adjusting methods for hydrological impact modelling” by Jorn Van de Velde et al.**

**Faranak Tootoonchi**

faranak.tootoonchi@geo.uu.se

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As a person who is currently working on multivariate bias correction, I really enjoyed reading this manuscript. Although the overall view of jointly bias correcting variables seemed quite promising since a decade ago, the uncertainties that come with adopting complex methods can not be taken for granted. Therefore, multivariate bias correction needs further investigation and I personally find your manuscript a good initiative in assessment of these methods. I think you made a good point by your conclusion: “The use of simpler methods seems recommended to reduce the uncertainty as much as possible when assessing and communicating global change impacts.”

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For the sake of clarity, I'd like to make some comments on the text; pointing out phrases that I couldn't understand thoroughly (though I am not the person who is officially assigned to do that).

Line 62-63: such as CDF-t (Michelangeli et al. (2009), used in e.g. Vrac (2018)) : -Maybe better to change to: such as CDF-t which was originally proposed by Michelangeli et al. (2009) and later used in e.g. Vrac (2018).

Line 154-155: Third, both historical and future simulations are adjusted at the same moment, to ensure a sound comparison during the intensity phase of the adjustment: -I do not fully understand what do you mean by moment? Do you mean mathematical moments or time? And if it is the latter, how does it insure a sound comparison during the intensity phase?

Line 159: To overcome the assumption that the simulated time series has to have more wet days than the observations. . . -Why simulated time series must have more wet days than observations?

Line 286: This method is essentially the only difference with the univariate QDM, implying that differences in performance can be related to it. -This sentence is a bit unclear to me.

Line 332-333: Thus, only the combinations of these methods with respectively (respective?) QDM and MBCn were simulated 20 times. -This sentence is a bit unclear to me.

Line 368-369: "This" extrapolation is often advised for these quantiles, as their simulated values might be larger than the largest values of the observations. -It is a bit unclear to me what is "this" referring to.

Line 484: When all methods are compared, the performance of the adjusted climate simulations is for the indices considered here generally better than the climate simulations. -This sentence is a bit unclear to me.

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