

Dear Reviewer,

We thank you again for the second round of reviewing our manuscript. We are glad that our revision has addressed your comments and suggestions to your satisfaction. We address your remaining comments (dark grey) with our responses (blue) in the following.

- Great motivation of research aims. It would be nice, if you could provide the readers with an obvious summary explicitly saying: “The research aims of this study are 1) ... 2) ...”

Thank you for this suggestion. We add this summary at the end of the introduction section.

- Table 1: Sorry to bother again on the same point. From what I understood, ERA5L in fact uses statistical downscaling to interpolate meteo forcing, but then the land surface scheme is run offline without assimilation in order to derive land variables (snow, runoff, ...). So, if a physical-based land scheme is run, I’m not sure “statistical downscaling” is the appropriate term. Of course it’s also not dynamical downscaling. Maybe it deserves its own distinction?

We try to clarify this issue, by naming the column “Downscaling of the climatic input variables”. So, it’s now clear for the reader that the downscaling refers only to the climatic input and does not question the physical base of the land surface scheme.

- Good idea to use remote sensing. For the next time, please be aware that cloud cover can induce significant biases, and maybe the cloudgapfilled version of MODIS (MOD10A1F) might be more appropriate. Or the product produced within Snow - ESA Climate Change Initiative, which is explicitly intended for climate model evaluations. With complete series you could also have derived snow cover days from remote sensing (easier comparison than snow cover fraction, which is parametrized differently, and also not always available, as you mentioned).

Thank you for these recommendations.