We want to thank the reviewer for her/his constructive comments. Our answers are written in italic letters alongside to the reviewer's comments.

I thank the authors for the modifications made to the paper, which follow the different recommendations made by the reviewers. They have greatly improved the presentation and the understanding of the results. I have a few remarks that should probably be addressed before publication.

Natural variability

Throughout the paper, the natural variability is assumed to be adequately and fairly represented by the weather generator. However, as I understand it, the weather generator only represents the variability related to the purely stochastic behavior of the meteorological process and describes the high-frequency component of the internal variability. The low-frequency variability describes in Deser et al. (2012b; Climate Dynamics) as the "variability [that] arises from processes internal to the coupled ocean-atmosphere system via dynamic and thermodynamic interactions" is not reproduced by the weather generator. This point should be mentioned and discussed in Section 3.3.

We thank the reviewer for this comment and included this point in Section 3.3 (565ff).

Factors of change

There is not much explanation about the factors of change, but they seem to be a very important component of this study. As I understand it, factors of change are mean temperature and precipitation change are absolute differences of annual mean temperature obtained from the RCM runs, between the historical and future periods. I assume that relative differences are computed for precipitation changes. An equation in Section 2.2.1 would clarify these points.

We added equations Eq (1) and (2) in the appendix and included more details of the use of factors of change in section 2.2.1 (line 107ff).

I also imagine that these absolute and relative differences are applied to some parameters of the stochastic generator. At l. 144, the authors indicate "a reparametrized setup using factors of change (FC)" but we do not know if the factor of changes only affects the annual mean temperatures and precipitations in the simulations from the weather generator or other aspects. Additional details are thus required to understand how these factors of change are applied since it is the only part of the simulation chain that actually leads to different climate change responses. A figure showing the factors of change that have been obtained would certainly help to understand their impact.

We added information which variables were directly changed by the FC approach and mention the interdependency between variables in the weather generator, which indirectly affects other variables (line 147ff). We aimed to provide a figure in the Supplement similar as in Peleg et al. (2019), Fig. 3b, which shows the factors of change for a nearby study area. However, the time restrictions did not allow us to rerun the code as this information is not just an external data set. Thus, we chose to reference Figure 3b in Peleg et al. (2019). If the Editor feels that this additional figure in the Supplement is crucial for publication, we will provide this information with a bit of extra time.

Correction factor

l. 186: "a correction factor of 1.3" -> This precision should not appear in the section "verification" as this affects the input. How the factor of 1.3 is chosen? Is it applied to all grid cells? Is there a publication to

justify this choice of 1.3? There are often gradients that are applied for this correction as a function of the elevation, but a correction of +30% is very large.

For unshielded precipitation gages as those operated by MeteoSwiss in Switzerland snowfall site specific undercatch corrections of 30% are (unfortunately) quite normal, see e.g. Egli et al. (2009). Although section 2.3 is entitled "verification" we note the correction factor as part of the description for the input data of the snow model simulations presented in Figure 4. Figure 4 is intended to demonstrate the model's general ability to represent the temporal snow accumulation and melt dynamics, where using local input data (affected by undercatch) necessitated the application of a local undercatch correction. This, of course, was not the case for all the other snow model simulations where the weather generator provided model input, which we now explicitly state in the text (line 192ff)

Minor comments

l. 153: "provide hourly data" -> could you be more specific? For example, "areal precipitation and temperature data at an hourly scale".

We combined item (1) and (2) into on item to clarify that the weather generator is used for providing hourly data for the full set of required inputs for the energy balance snow model, which are described in the next section (line 158ff).

l. 212: "The intensity and contribution of snowmelt required to define a size of a ROS event" -> A part of the sentence seem to be missing.

This sentence was corrected (line 219f).

References (now also part of the manuscript)

Egli, L., Jonas, T., Meister, R.: Comparison of different automatic methods for estimating snow water equivalent. Cold Regions Science and Technology, 57, 107-115, https://doi.org/10.1016/j.coldregions.2009.02.008, 2009.