

I found that the authors have addressed the comments I made in my previous review. I acknowledge the big effort made, especially in order to clarify the origin of the large biases, with even additional simulations.

However I cannot recommend yet the publication, being still some issues that need to be addressed. The most serious shortcoming is that the manuscript is messy and mixed up. There are many trivial errors revealing that the manuscript has not double checked carefully. The authors should check the manuscript before submission, in order not to worsen the work of the reviewer. More specifically, the figure numbering seems to be wrong when they are referenced. At page 7, line 32 you mention Fig.2, but Fig.2 shows the maps of the spread and not the subdomains. And so on... for almost all the cross-references. At page 11, line 13 you mention Fig.8 about SS analysis for subregions, but this figure seems missing so I cannot analyze the results described in Sec. 3.1.2.

## **Other comments**

Pag 5, Lines 12: latitudes ?

Pag 7, Lines 2-3: The authors decided not to address my previous comment about CDO, but I insist that this information is not relevant... otherwise you should mention also the software you have used for plotting the figures, for making calculations... However I leave the Editor the final decision about this comment.

Pag 10, line 6: observations ?

Pag.11, lines 7-9 : “Additionally, the ranges... for the area”. You claim that the range of improvements are similar, but sincerely the values reported in Table 4 seem to me quite different, keeping in mind that in a sensitivity context even a difference of +1 is a large value. More specifically 7.5 is different from 4.9, 11.1 is rather different from 7.4.

Sec. 3.1.4: probably in this case the cross reference of Fig. 8 is correct, but the figure and the text are not clear. What do these maps represent? You claim that SNOW configuration leads to warmer conditions, but I see a wide blue area on the right... probably I do not understand well the meaning of the figures.

Pag 12, line 30: WSH? Probably it is WSC

Pag 12, line 31: “The largest underestimation... CSA”. I guess that this analysis is related to Fig.10, but I do not understand the meaning of this figure. Probably the quality of the colors is low.

Pag. 13, line 28: conclusion ?

Pag 14, line 5: initiative ?

Pag 14, lines 20-23: “Following these... snow model”. You say that no significant changes are evident. If so, what is the relationship with what you have written before (lines 11-20)?

Pag 14, line 24: I am not sure, but I guess that GUO can be written as Guo.

Figure 1 (caption). You claim that these are rotated coordinates, but they seem to me geographical coordinates.

Table 2: Why is there a question mark next to Tegen ?