

Point by point reply to comments (preprint egusphere-2023-1958 <https://doi.org/10.5194/egusphere-2023-1958>)

We are very thankful for the executive editor's comments that helped us to improve our manuscript. Below, each executive editor's comment (indicated by "EC") is followed by our answer (indicated by "AC"). The proposed new text in the revised manuscript is written in bold. The given lines and section numbers refer to the revised manuscript unless otherwise indicated.

EC: Thank you for your revisions and meaningful engagement with the review process. We are happy to publish this work after a few more minor revisions. Please read my suggestions below for more details.

AC: Thank you for the positive feedback.

EC: In general, the abstract can be re-structured to better communicate what the authors have done and the findings. For example, some sentences from the introduction section can be adapted and used in the abstract (e.g., in this study, we show how to quantify climate change hazards with their uncertainties for any region around the globe from publicly available ISIMIP multi-model output. We also demonstrate how climate change hazard uncertainties can be communicated effectively for identifying local climate change adaptation strategies.). Then add 2-3 sentences how this was done and also list the key findings.

AC: To follow your advice, we have reformulated the second sentence of the abstract, which now reads:

"As these processes require information about context-specific climate change hazards, we show in this study how to quantify climate change hazards with their uncertainties in regions all around the globe and how to best communicate the potential hazards with their uncertainties for identifying local climate change adaptation strategies."

How this was done and the key findings have already been provided in previous of the abstract.

EC: Lines 14-15 (in the abstract) - It is not clear what the authors are stating especially the last part of the sentence. Please consider revising this sentence (e.g., We evaluated our approach to communicating uncertain local climate change hazards by questionnaires for the stakeholders in the participatory process and the audiences of two project results presentations for the general public').

AC: In lines 14-16, we changed the sentence as follows:

"We evaluated our approach to communicating uncertain local climate change hazards by questionnaires that the stakeholders in the participatory process and the audiences from the general public of two project results presentations answered."

EC: Sometimes the authors refer to themselves as 'we' and 'the authors of this paper'. Please pick one and use consistently.

AC: We checked the text and now use "we" consistently. Therefore, in line 141, we now use "we" instead of "the authors of this paper".

EC: Line 135: "While the communication approach was evaluated, no general conclusions can be drawn due to the small number of evaluating participants." Insert in parenthesis, the number of those evaluated. The number ranges from 7 to >40 so it is not clear what exactly the authors are referring to. Also, consider replacing 'concrete' with 'general' in this sentence.

AC: In lines 137-138, we changed the word "general" to "concrete" and added "in a participatory process (26 evaluating participants)" at the end of the sentence.

EC: Please include the questionnaire used with the stakeholders as Supplemental Materials. The authors also mention there was an interview session with 22 stakeholders before the start of workshop 1. Was there a questionnaire for these interviews too? Can the findings be included in the text or as Supplemental Materials?

AC: In the supplement, we added S.2 with the questionnaire for the evaluation of our communication format with a more common communication format and added "(the questionnaire can be found in Supplement S.2)" in the manuscript in line 474. The questionnaire questions and the answers of the stakeholders in the first workshop of the participatory process can be found in Müller and Czymai (2022), which is referenced in the manuscript. The questionnaire for the interviews and the results had nothing to do with the quantification and visualization of potential climate change hazards with their uncertainty, which is why we decided not to include it in the text or the supplemental materials.

EC: Please consider revising sentences where the term 'weak evaluation' is used, and instead explain the limits of your evaluation strategies. Weak is a subjective word and can be interpreted in different ways.

AC: In lines 609-610, we added "because of the small number of evaluating participants and the high context dependence" to explain why we consider the evaluation to be weak.

EC: In Table 1, list visualization methods in the same order as Figure 1 (left to right), or even better (if possible) consider combining figure 1 and table 1 so the reader doesn't have to go back and forth between these two charts.

AC: Thank you very much for your suggestion. We rearranged and integrated the former Table 1 into Figure 1.

EC: Remove informal writing (example: line 195 'So, ...')

AC: In line 193, we replaced "So" with "Thus". Moreover, we checked the whole text to remove informal writing (e.g. "even more so" was replaced by "particularly" in line 59, "just like" was replaced by "with the same approach as" in line 312).

EC: I suggest removing Figure 2 as it is explained clearly in the text. However, if you want to keep it, consider making some revisions to increase its readability. For instance, label each step on the figure (Step 1, Step 2, etc.). Also, consider adding figure numbers under figures 1 and 3 and 4 in Figure 2.

AC: As Figure 2 was explicitly asked for by the reviewers and serves as a graphical overview of our approach, we decided to keep it. Thank you very much for your helpful suggestions to improve the

figure. In revised Figure 2, we included the terms “Step 1” and “Step 2”, and we added figure and section numbers.

EC: Line 202 - It is not clear what the authors mean by 'Figure 2, left box' (is it the blue box)? If the authors clearly label each box as Step 1, Step 2, etc. then this confusion is reduced. This is especially important because the authors use these terms in the text when referring to this figure.

AC: We replaced the terms “right box” and “left box” with “Step 1” and “Step 2” in lines 192, 193, 200, and 201.

EC: There were a total of 5 workshops and 2 focus groups. To increase readability, I suggest creating a table that lists workshop names (e.g., workshop #1) together with other relevant information such as the time of each workshop, format/structure, participants' backgrounds, workshop aims, activities, and evaluation strategies. This information when structured in a table can be easier to read and digest.

AC: The manuscript only refers to what we have done before and during the first workshop and an evaluation after the whole participatory process. We only mention the other workshops and the focus groups to highlight that the quantification and communication presented in our study laid the basis for the following workshops. This is why we refrained from including a table with more details on the workshops and focus groups.

EC: Spell our RCP the first time it appears in the text (Figure 1). Follow the same rule for other abbreviations used in the text.

AC: We included “representative concentration pathways (RCP)” in line 174 when the abbreviation “RCP” was used the first time, which is in a figure heading. This is why we also spelled it out in lines 239-240 when the term was used the first time in the text. In line 143, we included “global climate models (GCM)”.

Other changes

AC: We decided to use the term “study” consistently throughout the text (instead of “paper”). Moreover, we included a thank you to the editors in the Acknowledgements and corrected spelling errors. However, we again did not follow the remarks from the precedent review file validation because Figure 6 was presented in this way to the stakeholders in the first workshop. But we discuss in lines 561-563 that the colors in Figure 6 should be changed to colors from color palettes visible for persons with color vision deficiency.