

Author Responses to Editor Comments

We would like to thank the Editor for the thorough review of our manuscript and suggestions made. We have revised the manuscript based on the Editor's suggestions and comments. We reply to each of the comments below. Our changes in the paper are in blue below, and the line numbers and sections refer to the revised manuscript:

Editor Comment	Author Comment
1. The limited sample size, and implications of this, need to be clearly emphasised. Compulsory.	<p>1. We have emphasised the limited sample size see L23—L24,</p> <p>However, the results should not be generalised due to the small sample size—there is need for a more in-depth study with a larger sample size to explore this further.</p> <p>L405—L408</p> <p>The events were planned prior to the lifting of all COVID-related restrictions on overseas travel from the UK and on larger gatherings in partner countries. Consequently, participant numbers were limited, and we recognize that these results should not be generalised due to the small sample size. To deepen our understanding, especially regarding the impact of professional grouping, a larger-scale elicitation is recommended. Conducting a face-to-face study would also be valuable to ensure participants fully grasp the probability concepts—particularly conditional probability—through interactive activities such as games and quizzes before formal evaluation. A practical takeaway is that more time is needed for participants to become familiar with the methods to improve the quality of the elicitation.</p> <p>L421—L422</p> <p>Given the small sample size in this study, there is need for a more in-depth study with a larger sample size to explore these findings further.</p>
2. Any remaining misleading confirmatory remarks i.e. "... as confirmed/supported also by study X/Y" when the studies aren't necessarily	2. We have corrected misleading confirmatory remarks see L309—L305.

<p>comparable need to be corrected as doing this misrepresentation and academic misconduct (see previous reviewer comments). Compulsory</p>	
<p>3. This is a long paper for a rather limited result, so we strongly recommend shortening the paper dramatically, perhaps using figures to illustrate methods, to focus on the geoscience communication work. The consequence of not doing so is that very few people will read the paper. However, at this stage, we do not make this compulsory.</p>	<p>3. We have shortened the methods (Section 2.2) and results (Section 3.1 to 3.2).</p>
<p>To help you, the Executive Editor team (includes applied statisticians) also made some detailed suggestions, all of which should be acted upon (i.e. compulsory).</p> <p>4. Ethics should be in a separate statement. i.e. doesn't need to be on lines 111-115.</p> <p>5. Q4 doesn't make sense. Did they ask them to pick one? Or comment on all of them. Clarify.</p> <p>6. Section 2.2. I'd prefer far fewer words, and to see what the participants saw in all sub-sections, with detailed method in Supplementary Material</p> <p>7. Why is Q1 related to subsection 2.2.2, not 2.2.1. These need to be in order and clearly labelled as being linked. The linking becomes apparent when realising there are 5 sub-sections, but 4 questions. However, this highlights the need to</p>	<p>4. We have moved the ethics statement to be a standalone, see L428—L431.</p> <p>5. We have edited Q4 (Table 1) to make it clear. We were asking the participants to choose one of the three loss functions which would represent the loss incurred when a decision was made by using erroneous information.</p> <p>6. We have shortened the text on Section 2.2 see L145—L158.</p> <p>7. We have revised this, and it is now in the same order throughout the manuscript.</p>

try to write & structure the manuscript more clearly so that it's more readily readable.

8. Figure 1 should give me a sense of the decision and context being made – it doesn't do this at the moment e.g. perhaps a selection of scatter plots were shown to the participants.

9. In Section 1.3, offset correlation is mentioned 4th. It should be in the same order that it's considered in the results and questions later.

10. In Figure 1, maps 1&2 should be visually related to a map including the original data and the location of the points of the two sampled grids, so that the process can be clearer. Things such as this (but not restricted to just this one example) may also help the authors shorten the text.

11. Only statistically significant results should be interpreted. This may help you cut length and figures.

8. Thank you for the comment. We have revised Figure 1 to illustrate the offset correlation using simulated data, as we did not use actual study data to construct the pairs of maps shown to participants. In the revised figure, we have two hypothetical cases where we have offset correlation values of 0.4 (a) and 0.8 (b). In each case the illustrated subset of grid points is of the same dimensions, so the grid is denser in (b) than (a). In each case a hypothetical data set 1 (black grid points) and set 2 (grey points) is collected from grids of shared spacing but offset north-south and east-west by half the grid spacing. These map pairs and corresponding scatter plots were used during the task to help participants visually assess how much uncertainty is consistent with a particular offset correlation. We also have edited the caption to reflect the above.

9. We have made the change, see L57—L64.

10. Figure 1 illustrates the offset correlation using simulated data, and we cannot show actual data from two such grids because this was never actually done, it is a concept to illustrate the consistency that can be expected for a given grid spacing.

11. We have described statistically significant results only see Sections 3.1.1 to 3.1.4.