

We thank Usha Harris for her insightful review. Below, we respond (in black) to the comments (in blue):

This manuscript reports on original research conducted by the authors. The aim, study design and results are communicated with excellent clarity. It makes a much-needed contribution to the field of science communication by evaluating the impact of climate communication activities by scientists on ordinary people's behaviour of which there is limited knowledge, as the study finds.

We thank the reviewer for these extremely kind words; they are much appreciated.

The title is clear and aptly describes the content of the manuscript. The abstract provides a short and clear summary of the important findings and conclusions? The introduction provides a good summary of literature on the topic with well-defined aim and research question. The framework for evaluating science communication activities is identified along with the three communication models used by scientists. The authors may like to include examples of when each of these models may have been used effectively. For example, there is a place for the deficit model in disaster risk communication in the aftermath of disasters, but dialogue and participatory approaches may be more effective in designing effective risk communication strategies with communities.

We thank the reviewer for this suggestion. We will indeed add a comment in the revised manuscript about when these roles are appropriate.

For the deficit model: *"This may sometimes be an appropriate role, for example in disaster risk communication."*

For the dialogue model: *"This is an appropriate role when for example designing effective risk communication strategies with communities and could also help the scientists to improve their research (Boon et al., 2022)."*

The method for literature survey is well explained. Did the researchers consider using participatory and dialogue as climate change communication search terms since these methods are considered to be more effective in bringing about behaviour change?

The reviewer addresses a good point. We did include citizen engagement and public involvement as search terms for the climate communication aspect, but not participation or dialogue. We ran our search again including the terms "dialogue" and "participatory" and evaluated the impact of including these terms. We found that the inclusion of these terms mostly brought up false positives about engagement activities without scientist involvement. We therefore decided not to redo our literature search.

I would suggest that authors include the description of the included studies as a table within the text instead of as Appendix A. The discussion highlights some important findings including the need to include both negative and positive impacts of communication activities.

This is a good suggestion. In the revised manuscript, we will move the table from the Appendix into the main text (as a new Table 2).

The authors may like to suggest the importance of interdisciplinary studies where scientists and communication researchers can work collaboratively to understand impact of communication activities especially using dialogue and participatory models.

This is a good point. We will indeed add such a suggestion to the end of the discussion section:

*"We thus call for more interdisciplinary research where scientists and communication professionals collaboratively investigate the impact of communication activities, specifically those using dialogue and participatory models."*

Overall, this manuscript is very well written and offers an important insight into an area which is in need of further exploration.

We thank the reviewer for this very kind and supportive feedback