

Vos et al.

Summary

This paper as presented appears to report the personal views of the 17 co-authors upon the challenges and benefits of taking an 'open' approach to weather and climate science. In reality I think it is, in effect, a simple and pragmatic piece of social science research, even if I suspect the authors do not think of it this way. The core results are likely to be interesting, valid, and within GC's remit. However, the data collection method (and it is very probably a valid if simple method), what the new data/information are, and research questions (this is research) need to be stated to increase the accessibility and robustness of the work.

Illustratively, I had difficulty in (i) distinguishing the novel content of the work (i.e. as it adds to existing research/knowledge), and (ii) understanding the evidential basis for the conclusions drawn. If the work is simply reporting the informal view of 17 academics on a topic of interest, as a sub-set of relevant scientists in general, this is fine. But, this needs to be more clearly expressed, and the evidential basis for the findings needs to be explicitly stated (e.g. see comment on L19-20 below). Please use where I have not understood or mis-understood exactly what you have done in my comments below to assist your revisions.

I look forward to reading this again in re-review, where I will be able to focus more on the findings reached although I would not be expect to be in a position to disagree factually with the views of a group of subject-experts reported by those self-same experts.

Major Points

1. There are a number of typographical mistakes, albeit mainly subtle. So please get a native English speaker to proof-read the manuscript. Namely, I have not attempted to pick up all typos.
2. The methodology (i.e. what was done in the session) needs to be clarified e.g. (i) were specific questions/topics posed for this research exercise [which it was], (ii) elicitation by sticky notes or hands in the air or by the co-authors making notes of what the group said? I think the observational data are (i) L57-558 - a specific session to discuss (by unstated means) the issues (unspecified in detail), and (ii) L20 insights from the work in the rest of the conference (by unstated means). A 'Methods' section needs to be added, which is one place where the questions asked at the session could be stated.
3. The 'novelty' (i.e. what is reported here that is not stated elsewhere) is difficult to distinguish, although a Methods section and taking care to phrase the results/discussion in terms of the evidential basis of insights should fix this.
4. The Abstract portrays all the thoughts as entirely new, rather than emerging from a context. e.g. L8 'we observed' - we reaffirm? we agree with the informal subject-wide consensus? Please rephrase where appropriate.

As an editor of GC, I note that this was submitted as a review article, but it may be better classified as a standard paper.

Minor Points

Title - The paper's contents are about open access, not digital (see L2&3). Suggest changing title to reflect this.

L6 - 'the studies in the conference session showed' - How exactly?

L8 - 'we observed' - how (in)formally was this done?

L9 - Typo - 'there' not here

L11 - 'primarily due to'? i.e. either these were refined from a list for some reason, or is this the complete list of possibilities?

L19-20 - It is claimed that 'much faster progress' is being made as 'observed from the studies presented in the conference'. This is quite a leap of logic, and is one illustration of how the manuscript could be more tightly argued and/or presented. If this is simply the authors impression, this is fine, but should be clarified by adding 'we believe' or similar. If written as a statement, and evidential basis should be provided in the new data collected. If this is simply a confirmation of what is in the existing literature (i.e. L52-53) then this should be also clarified.

L21 - Typo - .. computationally intensive ...

L22 - Introduction. A wide range of topics and issues are introduced here. They are placed in historical context, which is good. But, the treatment of these becomes quite vague when the actual session is mentioned (L58-59)

L39-48 - This paragraph is currently un-referenced. Please add these.

L40 - 'exascale' - I don't know this word. Please add a reference or two so that non-specialists can inform themselves.

L62 - Open science. This appears to be a literature review, unrelated to the session mentioned. Was the session simply used as a brainstorming exercise to get the information together for such literature reviews? If so, again this is fine, but include a Methods section to state this, even if it's only a paragraph long. When the paper is revised, I would expect to distinguish whether the information is (i) in the literature, and being brought together here (ii) views of people in the room etc And, this will allow the contribution of this paper to be clarified/determined. If this section is a review, say 'review' not 'explore', but my Methods points still stand w.r.t later sections.

L62 - A brief comment on the limitations/benefits of the approach used to bring together the information for this paper appears necessary in the Methods section.

L99 & 103 - Session/sessions? One 'session' with multiple time blocks?

L103 - A hint of what was done. Good, but please expand in a Methods section. Using the standard Method/Results/Discussion format might help the clarity of the work. Having everything merged into thematic section currently makes determining what this paper adds difficult, although by clearly stating which evidence comes from where and moving from data to discussion within the existing sections might also work.

L104 - 'Discussed'. Please elaborate. e.g. who is 'we'. The co-authors of this paper? How was it determined what are 'common findings' and 'highlights'?

L106 - Please try to be specific. Does 'many' mean 5, 50% or something different? It should be possible to give numbers for papers in your session, or you might randomly sample the conference in a desk-based exercise.

L118 - Example of where evidential basis could be clarified. 'we recognized': we as co-authors discussing and concluding, we in the session, and how was this recognized (e.g. large majority in room, or someone mentioned, or did all participants agree to a circulated notes/minutes?).

General - Is there scope for a table of key points, or graphic to present the most important findings? I am a bit ambivalent about saying this as us readers shouldn't be lazy, but this could usefully highlight the key detailed points. Example of how this could be done - each co-author gets 3 votes, and size of coloured blob relates to number of votes in the graphic.