

Interactive comment on “The Vulnerability, Impacts, Adaptation, and Climate Services (VIACS) Advisory Board for CMIP6” by Alex C. Ruane et al.

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We wish to express our thanks to the anonymous referees and interactive commenter for their detailed and constructive comments on “The Vulnerability, Impacts, Adaptation, and Climate Services (VIACS) Advisory Board for CMIP6” (by A.C. Ruane and co-authors; Geosci. Model Dev. Discuss., doi:10.5194/gmd-2016-71, 2016). Below please find our responses to referee #2 below each comment (beginning with “Authors’ Response:”), which detail the resulting changes we made to the manuscript given tight space constraints. We believe that the manuscript is substantially improved as a result.

Best regards,

-Alex Ruane and co-authors

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Comments from Anonymous Referee #2:

This paper is useful, informative, and well written. I appreciate the work of the authors in putting it together.

The paper is particularly successful at providing an overview of important communities engaged in work at the nexus between climate and VIA research, and in shedding light on recent activities of the VIACS AB in facilitating communication between these different communities.

A few thoughts on how this draft might be improved:

***1) I’m not sure that either the abstract or the introduction provides an accurate map of the paper?

I would have expected some early part of this paper to say something like “This paper describes the motivation that led to the development of the VIACS AB, provides an overview of the various communities it attempts to engage, and summarizes recent activities.” Or something similar. For this reader, it wasn’t entirely clear where the paper was going until the end.

Authors’ Response: We have revised the abstract to better reflect the overall text and are grateful for the specific suggestion.

***2) I’m also curious if this paper could be a bit more ambitious in offering a vision for the VIACS AB?

I see this paper as saying that the VIACS AB will facilitate communication between disparate communities, and then summarizing some recent activities to that end. This is fine, but I’m wondering if the paper couldn’t go a bit further in synthesizing what sorts of information / messages / lessons the VIACS AB has learned from different kinds of communities? And can the paper identify some major questions that need to

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be resolved or addressed by VIA researchers engaging climate modelers?

Pulling this out of section 4, where the state of work in various communities is described, and out of section 5 (particularly key messages from the prioritization activity) would provide a sense of key issues that this group will need to tackle and a greater perspective on the orientation of the co-chairs. It would also offer a more compelling conclusion, offering a bridge between the summary section and the benefits.

Authors' Response: The manuscript touches on these questions in several sections, most notably the motivation for the VIACS Advisory Board (Section 3.1), the section describing VIACS Activities to date (Section 5; and especially the key messages from the Prioritization of CMIP experiments and outputs – Section 5.1), and the benefits to various communities listed in the Summary and Benefits (Section 6). At this stage the VIACS community has not performed any formal effort to capture and synthesize questions for the VIACS community from the climate modeling community (or vice versa), relying instead on the initial questions described within Section 5 as these proved most pressing in the design of CMIP6. We have added a note in Section 5.4 to indicate that the VIACS Advisory Board would be interested in a formal survey of interests, lessons, and messages, which could be an interesting area of future work; however the Board exists to communicate these messages (should they be developed by PROVIA, CMIP climate modelers, or the Climate Services Partnership) rather than to conduct this type of survey. We have adapted Section 5.4 to include a discussion on future work, which we believe more tightly wraps up Sections 4 and 5 and leaves the reader with a better sense of where the Board is going. We feel the Summary and Benefits (Section 6) is still a useful closing section as the aim of this manuscript is really to describe the motivation, creation and mandate of the VIACS Advisory Board, with compelling initial results serving to demonstrate its potential but not superseding the establishment of the Board itself.

+ Though it's coming a bit off the cuff, I'm also wondering if there's some way to link that kind of synthesis to the three science questions of CMIP, or their VIA interpretation

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on p 7?

Authors' Response: We have moved the VIACS interpretation of CMIP's three science questions into the summary section, as this is a more appropriate section to revisit these topics. This is particularly true following our development of Section 5.4 into a forward looking section that touches on several of the key science elements (uncertainty, scenarios, bias correction, etc.).

***3) On a related topic, I'm wondering if there's scope to propose future activities for the AB?

I see that the paper suggests establishing a formal link with the GFCS, and that the conclusion section indicates that the VIACS AB will be most successful if it identifies contact points and networks that allow for a broad and inclusive interaction. It may also be that section 5.4 is describing future, rather than present / past, actions.

But I'm wondering if there's something more that can be said? Are the authors able to articulate some priority actions that would give readers a clearer sense of what they see as most important steps? In many cases, this may just be a matter of distilling material that appears earlier, a bit less directly, into the conclusion section.

From my perspective, this kind of distillation would provide readers with a more concrete sense of what the board plans to do, and an easier read.

Authors' Response: Thanks to suggestions from all reviewers, we have developed Section 5.4 to explicitly call out some future activities, including uncertainty assessment, bias correction, scenario generation, cross-cutting engagement, visualization, and the identification and transfer of best practices utilizing the combined expertise of the climate modeling and climate applications communities.

***4) Will there be a follow up paper that addresses how / whether CMIP addressed the guidance it got from the AB?

The key messages section is really interesting : : I'd be interested as well to hear

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what actions were taken in response to the advice provided. Is any of that available now?

Authors' Response: In the period between submission and revision the CMIP team has developed specific model output packages in response to the VIACS requests. The data archive may therefore now be searched by users to request specific variable sets requested by VIACS communities. We now mention this responsive action prominently at the bottom of Section 5.1, in the summary (section 6), and in the data availability section.

+ Addressing a few of these issues would force the authors to synthesize things a bit more, and to offer perhaps a more elaborated view of the role they see the VIACS AB playing in the future. I think this would add value to the paper and provide the reader a better sense of the board members' vision.

Authors' Response: Agreed (see actions taken in responses above).

Interactive comment on Geosci. Model Dev. Discuss., doi:10.5194/gmd-2016-71, 2016.