

## ***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 the short comment from the CMIP Panel below each specific 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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Short Comment from the CMIP Panel:

The CMIP Panel is undertaking a review of the CMIP6 GMD special issue papers to ensure a level of consistency among the invited contributions, also in answering the key questions that were outlined in our request to submit a paper to all co-chairs of CMIP6-Endorsed MIPs. We very much welcome the important contribution from the VIACS AB to CMIP6, and below are a few comments:

- Please consistently use the term ‘CMIP6-Endorsed MIPs’ when you refer to other MIPs that are endorsed by CMIP6 (e.g. in line 39, 118, 282, 761)

Authors’ Response: Corrected

- Please ensure consistency of the experiment short name and other abbreviations with the CMIP6 overview paper (see Eyring et al., 2016) (e.g. line 117: please replace with “Diagnostic, Evaluation and Characterization of Klima (DECK) experiments (klima is Greek for “climate”)”).

Authors’ Response: We have made corrections and double-checked with Eyring et al., 2016, for consistency.

- Please ensure consistency with the final abbreviations and full names of the CMIP6-Endorsed MIPs (see Table 3 of Eyring et al., 2016) (e.g. DynVarMIP instead of DynVar; long name ‘Dynamics and Variability Model Intercomparison Project’ / ‘for CMIP6’ removed in long name of the VIACS AB in our Table 3)).

Authors’ Response: We have made corrections and double-checked with Eyring et al., 2016, for consistency.

- Section 5.3: Some server side calculations are envisaged to provide output on common grids. Please could you specify the list of variables for which such regridding would be most helpful for the VIACS community?

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Authors' Response: We have added to Section 5.3 to indicate that preliminary regridding would be most useful for monthly temperatures, precipitation, solar radiation, and humidity.

- Table 1: Could you please replace 'Central Set' with 'Entry card simulations for CMIP6'?

Authors' Response: Replaced

- Table 3: Please specify for which experiments the variables are requested. While Key Message 4 on page 19 includes a list of experiments that are of interest to the VIACS community, the experiments should additionally be specified here. In particular, are the variables requested from all DECK experiments and the CMIP6 historical simulations or only the latter? If in addition these variables are requested for a subset of the CMIP6-Endorsed MIPs, please specify these experiments as well.

Authors' Response: As we now indicate in the Section 5.1 (Key Message 2), specific experiments for which new variables were requested varied across VIACS groups, but they were most often requested for the Historical, DECK, and ScenarioMIP experiments. These variables were also requested for 12 of the 17 CMIP6-Endorsed MIPs. New variables are grouped by sector in Table 3, which now also indicates which CMIP6-Endorsed MIPs had experiments that were specifically requested. Note that we have also added variables for the Energy Sector (which were submitted in recent weeks).

- Are you committing to analyze all the data that you are requesting?

Authors' Response: As we indicate in the text of Key Message 2 within Section 5.1, the VIACS Advisory Board does not analyze data itself, but the communities that requested the data through the VIACS Advisory Board have indicated a commitment to analyze those data.

- Line 119: Please change 'drive individual experiments' to 'define individual experiments' since the modelling groups run the simulations, not the CMIP6-Endorsed MIPs

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themselves.

Authors' Response: Changed

- Line 121ff: please update the paragraph on the WCRP Grand Science Challenges (see Eyring et al., 2016)

Authors' Response: Updated and simplified with reference to Eyring et al., 2016

- Line 202: we suggest adding one more bullet to this list: the definition of variables for the CMIP6 data request that are relevant for the VIACS community. Ensuring the relevant output is included in the CMIP6 data request is a prerequisite for any analysis, so we see this is as a major need for this communication.

Authors' Response: Agreed; we have added this bullet.

+ References:

- Eyring, V., Bony, S., Meehl, G. A., Senior, C. A., Stevens, B., Stouffer, R. J., and Taylor, K. E.: Overview of the Coupled Model Intercomparison Project Phase 6 (CMIP6) experimental design and organization, *Geosci. Model Dev.*, 9, 1937-1958, doi:10.5194/gmd-9-1937-2016, 2016.

With many thanks for your ongoing efforts in the CMIP6 process.

The CMIP Panel

Authors' Response: We appreciate the efforts of the CMIP Panel to include the VIACS Advisory Board and provide feedback on this manuscript.

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

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