

## ***Interactive comment on “The Decadal Climate Prediction Project” by George J. Boer et al.***

### **Anonymous Referee #1**

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This manuscript sets out the protocol for the forthcoming Coupled Model Intercomparison Project (CMIP) 6 experiments on initialised climate prediction. It is only the second time that such experiments were included in CMIP and the current manuscript sets out necessary experimental plans as well as providing an iteration towards an improved set of hindcast experiments compared to CMIP5. The contents are the result of numerous international meetings and discussions and represent the synthesis of a large body of expert scientific opinion. I suggest this important protocol is published after minor technical corrections.

p1 line 25: please add a reference to Eyring et al 2015 at this early stage when CMIP6 is first mentioned

p2 line 10: the GC on Near Term Prediction under WCRP is now approved so please update this statement

C1

p2 line 33: evolution

p3 line 6: ...their individual contribution...

p3 line 10: ...operational climate predictions on annual...

p3 line 24: suggest a reference to Smith et al, ERL, 2012 regarding the potential for improved predictions

p3 line 25-27: I think it is also important to note that enhance skill arises from the longer averaging periods (e.g. yrs 1-5) normally adopted in this area

p5 line 18: please add a couple of references to the idea of continued improvement. Bauer et al Nature 2015 and MacLachlan et al QJRMS 2015 give examples for weather and seasonal forecasting respectively

p7 line 8-9: suggest alternate wording: "...assessment of performance. Skilful real time multannual forecasts will be a contribution to the GFCS and fill the gap between seasonal predictions and long term climate projections."

p7 line 22: ...and applications communities including National Meteorological and Hydrological Services and Regional Climate Centres.

p8 line 7: explain DCVP on first use

p8 line 27: there is a question mark after 7

p10 line 6: perhaps it would be worth referencing the WMO pbook on this topic "Climate Science for Serving Society" by Asrar and Hurrell (Eds)

p11: Just for information: is it worth saying why C1.9, C1.10 are longer than other experiments?

Fig.2 caption: ...summarized in Table 1...

Fig.3 caption: which models are used?

C2

Table A2: I am unclear as to why 1500-6000y of simulation are required for A4.1 and A4.2. Is this not the same as A1?

Table A2: I find the notes here very confusing please clarify what this experiment is for and also what is meant by "continued from forecast start date"

Table A1 caption: double space before "the" in line 2

p26 Line 33: Eade et al GRL 2014 showed weak Atlantic response in initialised predictions and precedes the reference here so please add.

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Interactive comment on Geosci. Model Dev. Discuss., doi:10.5194/gmd-2016-78, 2016.