

The Decadal Climate Prediction Project Responses to Anonymous Referee #1

We appreciate very much the referee's positive and helpful comments and accept essentially all of his suggestions in the revised version of the paper as noted below.

All of the comments below are accepted and changes made as suggested.

- 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
- 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 multianual 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
- 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)
- Fig.2 caption: ...summarized in Table 1...
- 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.

Other changes that have been made in response to comments

- p8 line 27: there is a question mark after 7
 - this is a typo, now corrected
- p11: Just for information: is it worth saying why C1.9, C1.10 are longer than other experiments?
 - the experiments that involve the AMV and IPV are 10 year experiments and since the response to AMV appears to be weaker than to IPV larger ensembles are suggested to help overcome this and this is now mentioned more explicitly in the notes
 - the pacemaker experiments referred to differ in the length of the simulations involved, 65 years vs 10 years, and are different in implementation as compared to the AMV and IPV experiments leading to the different total number of years

- Fig.3 caption: which models are used?
 - these are now listed in the text and referred to in the caption
- 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?
 - yes, this was a typo and is now corrected
- 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"
 - this has been rewritten in what we hope is a clearer manner