

Decadal Prediction: An Update from the Trenches

Introduction (Jerry, Ben, Lisa, Juliette, Rym Ed H.)

- Terminology
- Descriptive recap (CMIP5 experimental design e.g. Taylor et al paper; 2009 BAMS paper)
- Better understanding of processes and modeling of variability; climate sensitivity and TCR
- Purpose of paper – update on current status and ongoing work

Technical Issues (“getting it done”)

- Initialization (Jerry, Tony R. coordinating input from centers)
- Ensemble generation (Gokhan, Michele, Ed S. others?)
 - # of start dates versus # ensemble members; Lagged-average ensembles
- Model estimates of predictability (George, Grant, and Haiyan)
(‘given the models we have, what is the best we could expect?’)
- Bias Correction (bias adjustment?) (Ed H, Rowan, Ed S)
 - Response uncertainty; calibrated vs uncalibrated forecasts
- Evaluation (Arun, Suzana, Lisa, Claudia)
 - trend removal (Geert Jan)
 - mention upper ocean heat content choice of depth

Science Issues

- Sources of skill
 - phenomenological sources (Doug, Masa, Holger, Juliette, Noel, Rob, Daniela)
(e.g. external forcing, AMV/AMOC, PDV)
 - methodological ‘sources’ e.g. statistical methods (Gabe, Ed H, Geert Jan)
(although these should be drawing on some physical process or phenomenon)
- Bridging model validation and forecast verification
 - case studies (Rowan, Steve Y, Rym, Holger)
- Forecast uncertainty (Rowan, Lisa, Claudia, Ben)
 - How best to estimate probabilities (e.g. raw model ensemble estimates vs evaluation-based estimates)
 - What uncertainty can be estimated?

Summary (co-chairs)

Issues throughout – so where to mention?

- *time scale: annual means, year 2-5, year 6-9, year 2-9, etc.*
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