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An assessment of a multi-model ensemble of decadal climate predictions: the contribution of COMBINE to CMIP5.

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A multi-model set of decadal prediction experiments has been produced as part of the EU FP7 COMBINE Project, following the CMIP5 protocol for near-term climate predictions. Five different coupled GCMs, representing the state-of-the-art of European climate models, were used in this effort, producing an ensemble of six members. The experimental set combines different initialization strategies (including full-value and anomaly initialization), dynamical models and reanalyses to constrain the initial state of the climate system.
Here, an assessment of the COMBINE multi-model ensemble is presented. The major focus of this analysis is on evaluating the predictive skill at both global and regional scales. Uncertainties in decadal hindcasts/forecasts are assessed through an analysis of the inter-model spread, with the ultimate goal of identifying critical aspects in the current generation of decadal climate prediction systems.