



Evaluation of forecast strategies for seasonal and decadal forecasts in presence of systematic model errors

L. Magnusson, M. Alonso-Balmaseda, and F. Molteni
ECMWF, Reading, UK

This study discusses and compares three different strategies used to deal with model error in seasonal and decadal forecasts. The strategies discussed are the so called full initialisation, anomaly initialisation and flux-correction. In the full initialisation the coupled model is initialised from a state close to the attractor of the nature and after initialisation the model drifts towards its own attractor, in presence of model bias. The anomaly initialisation aims at initialise the model close to its own attractor, by initializing only the anomalies. The flux-correction strategy aims at keeping the model trajectory close to the attractor of the nature by adding empirical corrections. These three strategies have been implemented in the ECMWF coupled model, and are evaluated at seasonal and decadal time scales, both in terms of mean climate and predictability. The practical implications of the different strategies are also discussed.