

Is there value in very long lead dynamical seasonal precipitation forecasts ?

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The potential value of very long lead dynamical seasonal precipitation forecasts is investigated using hindcasts from the Canadian Seasonal to Interannual Prediction System (CanSIPS), which is based on two versions of CCCma's coupled climate model and has provided Environment Canada's operational seasonal predictions since late 2011. The range of CanSIPS forecasts at 12 months is relatively long among operational systems, and a legitimate question is whether forecasts at the longer end of this range are sufficiently skillful to justify their production. The potential for value in such forecasts is suggested by the system's appreciable skill for predicting ENSO even at 9-month lead (forecast months 10-12, anomaly correlations ranging between 0.55 and 0.84 depending on season). The performance of calibrated probabilistic hindcasts in predicting high-impact regional precipitation anomalies attributable to ENSO is examined. Questions considered include the lead-time dependence of a relative value score formulated in a simple cost-loss framework, and whether model-based predictions of precipitation anomalies outperform the product of a forecast equatorial Pacific SST index and historical regression patterns of precipitation against that index.