

SESSION: (A3) S2S ensemble predictions and forecast information

(A3-03)

How much can Model Output Statistics improve sub-seasonal predictive skill?

A.G. Munoz (1), C.A.S. Coelho (2), A.W. Robertson (1) and S.J. Mason (1)

IRI, USA (1), CPTEC, Brazil (2)

Recent research has highlighted the potential for improving predictive skill at the sub-seasonal timescale, which could be the basis for enhanced, actionable forecasts for climate services involving water and disaster management, health, energy and food security. The WMO's World Weather and World Climate Research Programme's Subseasonal-to-Seasonal Prediction Project (S2S) has made available an extensive database with both hindcasts and almost-realtime forecast at this timescale. Lead times are long enough that much of the information in the atmospheric initial conditions is lost, but at the same time are too short for other sources of predictability (e.g., ocean boundary conditions) to have a strong influence in skill. Presently, sub-seasonal skill is still limited, and in general raw uncalibrated forecasts cannot be used to develop climate services. An obvious alternative is to make use of a variety of robust bias-correction and calibration methods --also known as Model Output Statistics, MOS-- available for other timescales, such as the seasonal one. Nonetheless, some technical issues can hinder this approach. We discuss problems and advantages of applying MOS to sub-seasonal forecasts, analyzing the spatio-temporal variability of skill in several models and methods.