



Objective and subjective judgement-based seasonal probability forecasts for East Africa

Andrew Colman and Richard Graham

Met Office, Climate Research, United Kingdom (andrew.colman@metoffice.gov.uk)

Probability forecasting has now become common place in weather and climate forecasting including for seasonal forecasts, and there is renewed interest in using forecast probability thresholds to trigger mitigation responses to introduce more objectivity into decision-making (the so-called forecast based Actions (FbA) approach).

On seasonal timescales, probability thresholds for climate events with socio-economic impact, such as droughts and floods are of key interest. A key requirement of forecast systems is that forecast probabilities of such events represent the true chance of an event occurring, i.e. that the forecasts are reliable.

Consensus forecasts generated at Regional Climate Outlook Forums typically employ a degree of subjective forecaster judgement to merge a number of forecast inputs. Recent increased availability of GCM based seasonal forecasts has enabled generation of objective forecasts as well. Thus, as part of the ForPac (towards Forecast based Preparedness Action) project, we examine the skill of these different methods using the reliability diagnostic.

Specifically, we compare the reliability of 3 sets of forecasts for a region over East Africa. One set is based on issued forecasts produced by subjective merging of information by forecasters, the second is based on output from seasonal forecast general circulation models (GCMs), and thirdly output from GCMs that has been calibrated to correct systematic biases is examined.

We will show that the calibrated forecasts show the most reliable (realistic) probabilities in most cases.