Science without application is constrained, application without science lacks foundation

Willem A. Landman
Emma Archer
Mark Tadross
What does the science tell us about seasonal predictability?
How do we rank ito forecast skill?

Two regions are found to be marginally compatible when the skill difference is significant at the 90% level but not the 95% level.
Reliability
Over-confident in predicting drought

ECHAM4.5-MOM3-DC2 for DJF at a 1-month lead

Observed Relative Frequency (%) vs. Forecast Probability (%)

Above
Below

Over-confident in predicting drought
Do not predict “normal” seasons

The effects of sample size on the maximum forecast probability for the normal category
Forecast skill improvement is tied to model complexity – but skill may only increase incrementally from now on.
Investigating predictability of seasonal anomalies for societal benefit
How do we predict to benefit society?
A forecast is incomplete without an indication of previous forecast performance.
Probabilistic forecast skill “translation”

Amukelani Mkhari
Inclusion of the 3 consecutive poor forecasts in the CP calculations has significantly delayed financial recovery.

Much less of a detrimental effect is caused by a single poorly forecast season (2005).
We urge caution in relying on these forecast models exclusively for disease management - we therefore suggest to make sure that good climate monitoring systems are in place to supplement forecasts from models.

We propose that disease surveillance and control activities should not be replaced by forecasts – forecasts should only be used to supplement existing health practices that are currently going on in the region.
Forecasts at best suggest where we might be headed, from a state determined by current **climate and non-climate** conditions.

It can never be only about the forecast (or the model)