

South African Weather Service SWIOCOF-5 Pre-Forum

Seasonal Forecast, Water Resources and Expected Outcomes

Marc de Vos, September 2016

- Hindcasts
 - ERA-I
 - ERSST
- Forecasts
 - ARP
 - ECMWF
- Local Parameter for Downscaling
 - Cumulative rainfall (RR)
- Dominant Large Scale Fields
 - PMER (SLP)
 - U & V850 (lower level winds)

- OND

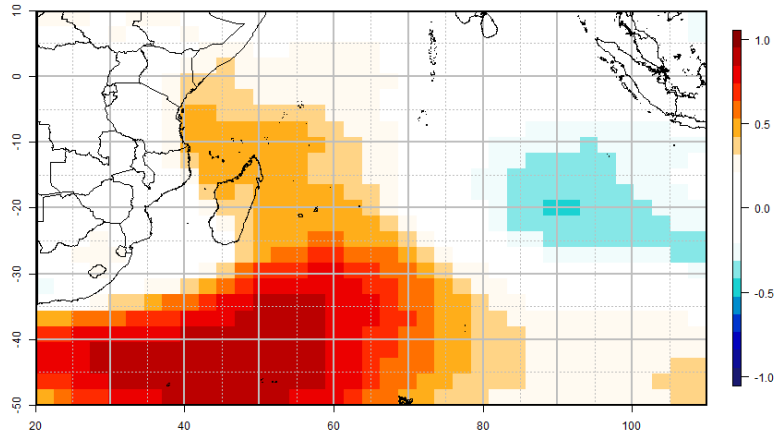
A: 50

N: 40

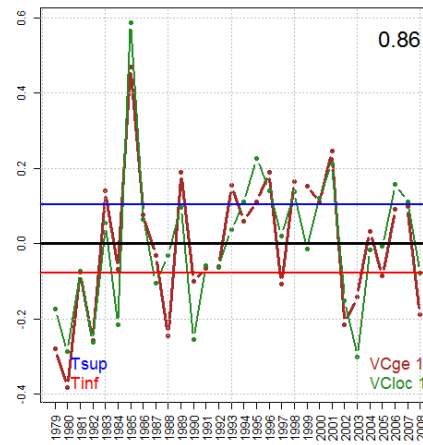
B: 10

- NDJ?

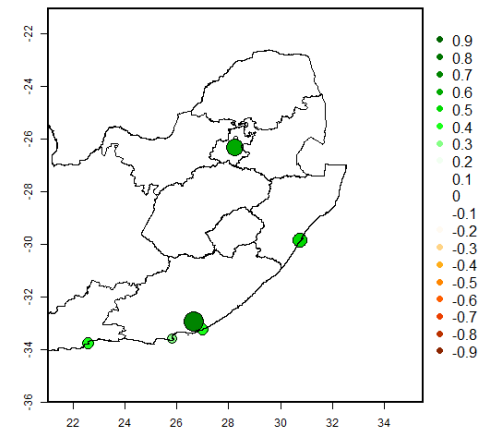
Correlation VCge 1 / PMER OND



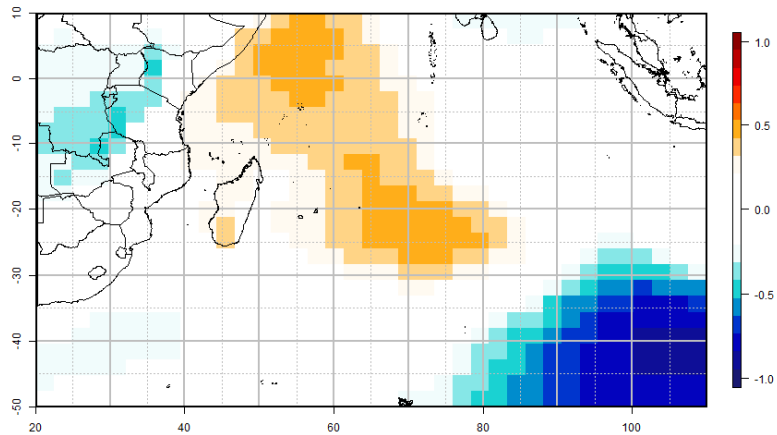
VCge 1 and VCloc 1 from 1979 to 2008 : PMER OND



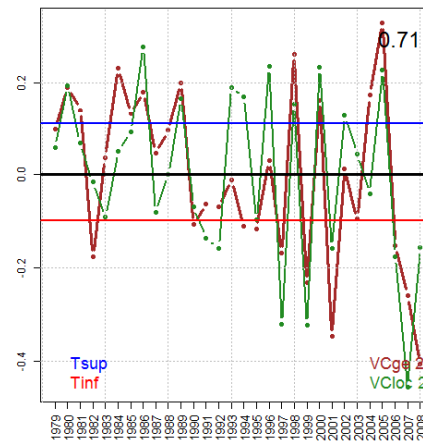
correlation VCloc 1 / RR (PMER OND)



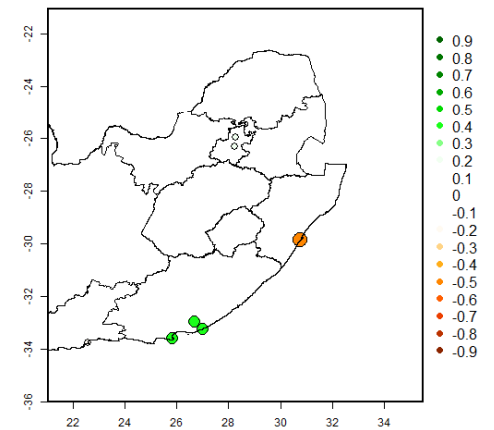
Correlation VCge 2 / PMER OND



VCge 2 and VCloc 2 from 1979 to 2008 : PMER OND



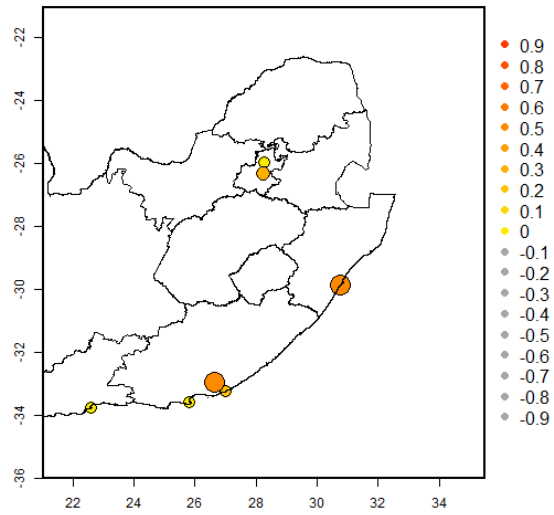
correlation VCloc 2 / RR (PMER OND)



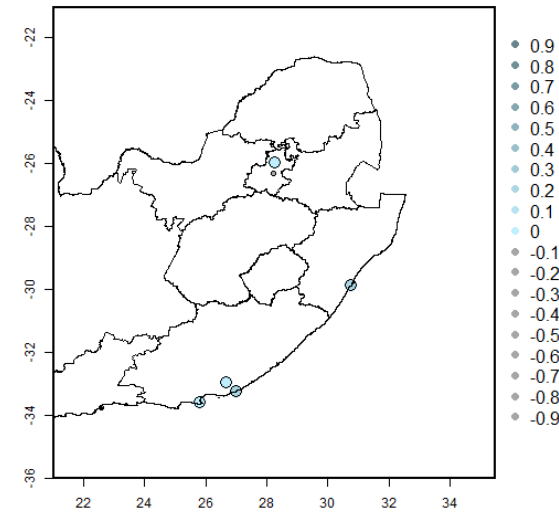
Modes & Model Performance

OND, ERA-I, ARP, PMER (SLP)

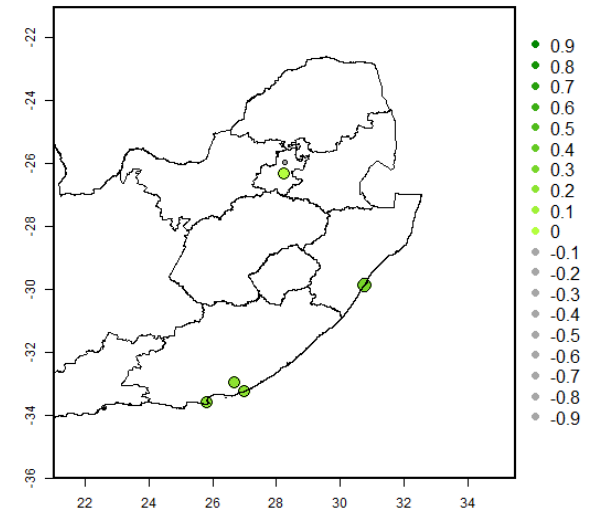
Heidke Skill Score : lower tercile RR (PMER OND)



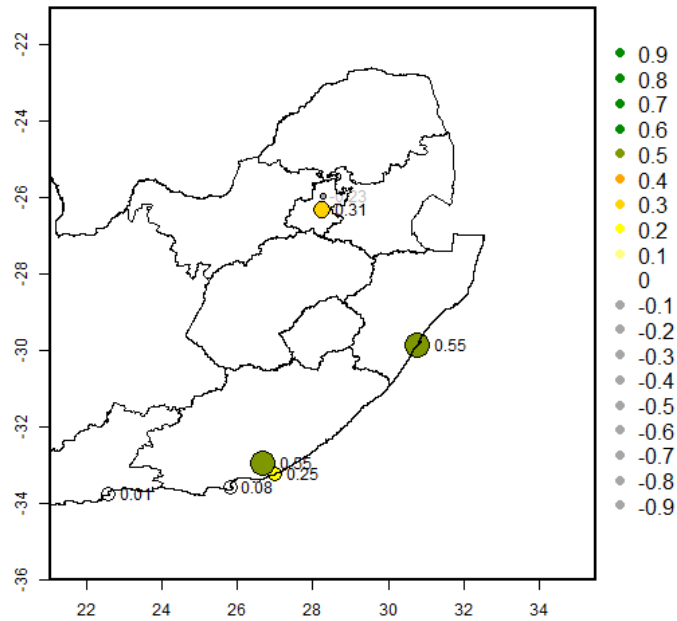
Heidke Skill Score : median tercile RR (PMER OND)



Heidke Skill Score : upper tercile RR (PMER OND)

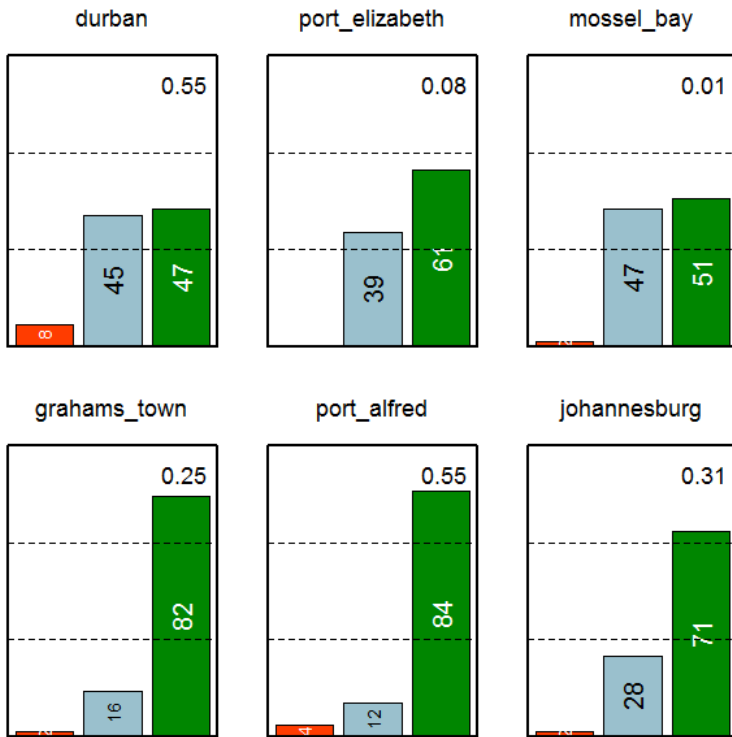


Correlation RR : obs / model (PMER OND)



Modes & Model Performance

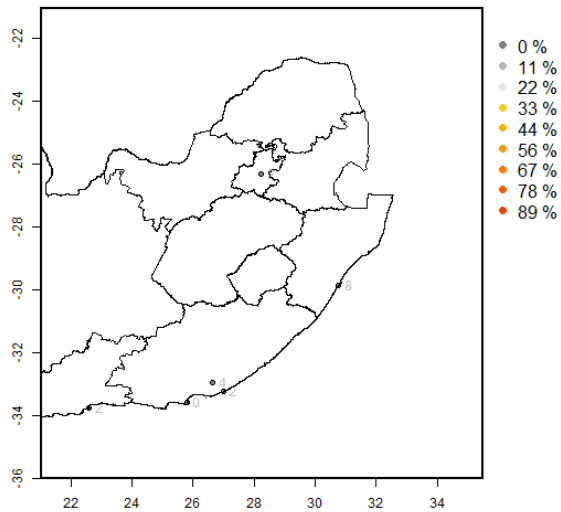
OND, ERA-I, ARP, PMER (SLP)



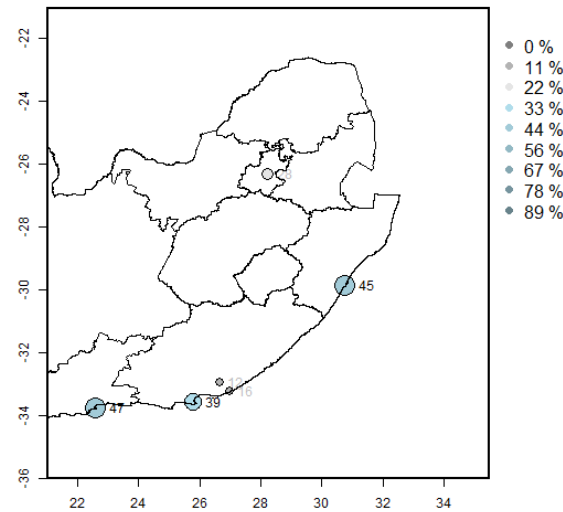
Rainfall Forecast, OND 2016

OND, ERA-I, ARP, PMER (SLP)

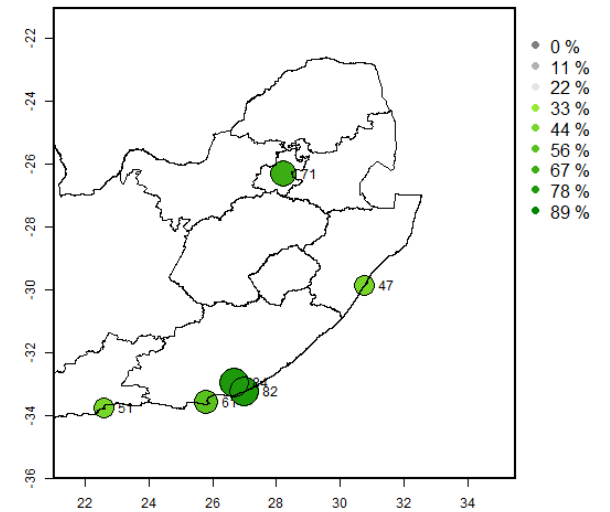
SEASONAL FORECAST : Lower tercile RR OND 2016

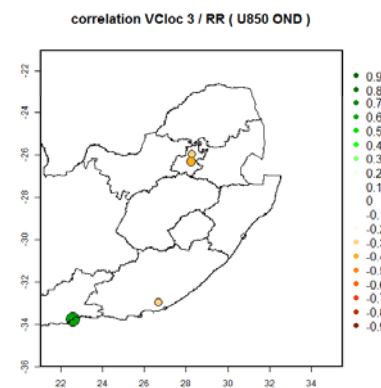
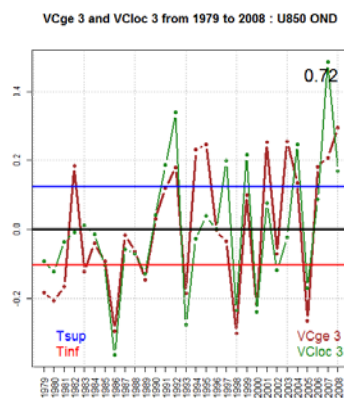
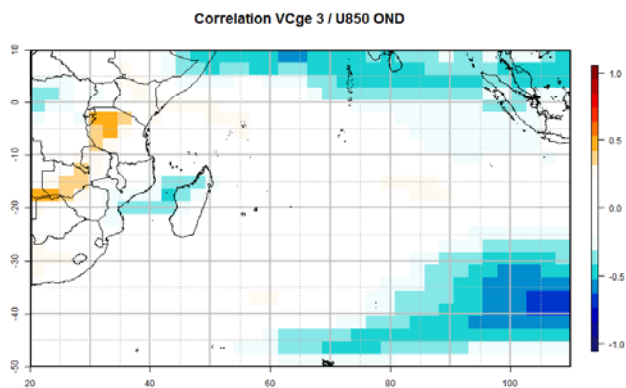
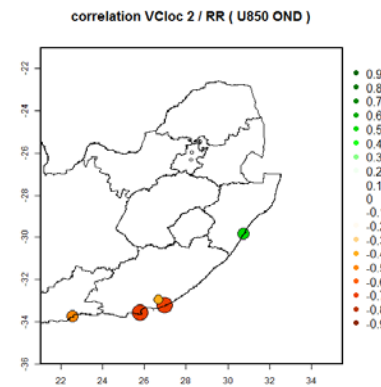
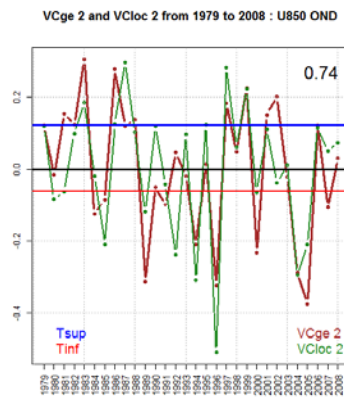
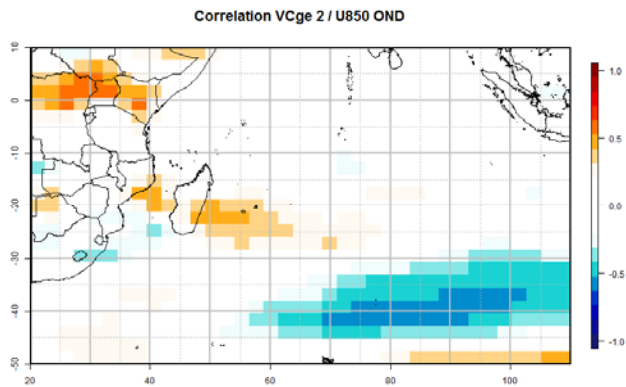
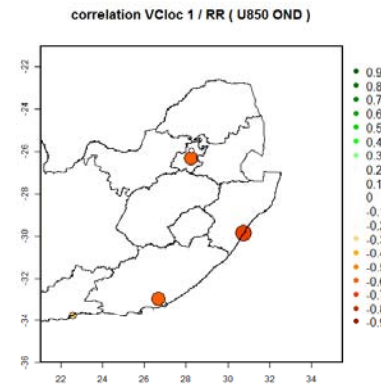
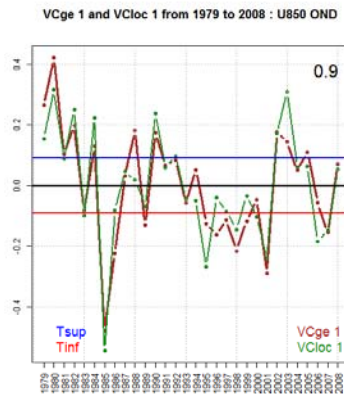
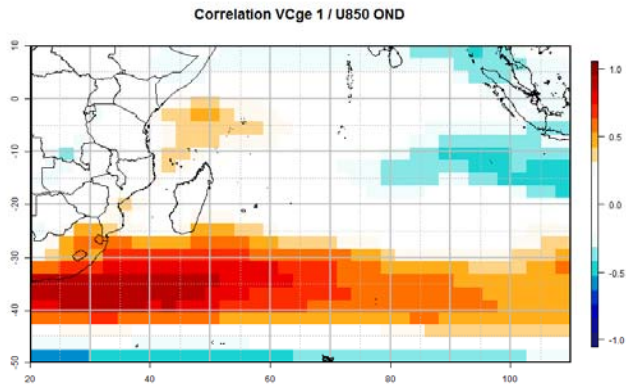


SEASONAL FORECAST : Median tercile RR OND 2016



SEASONAL FORECAST : Upper tercile RR OND 2016

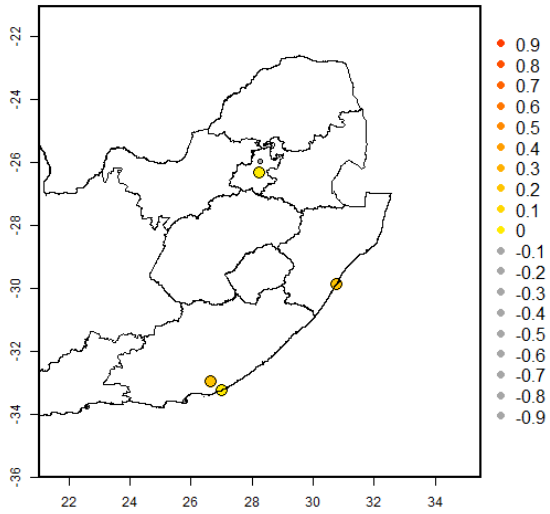




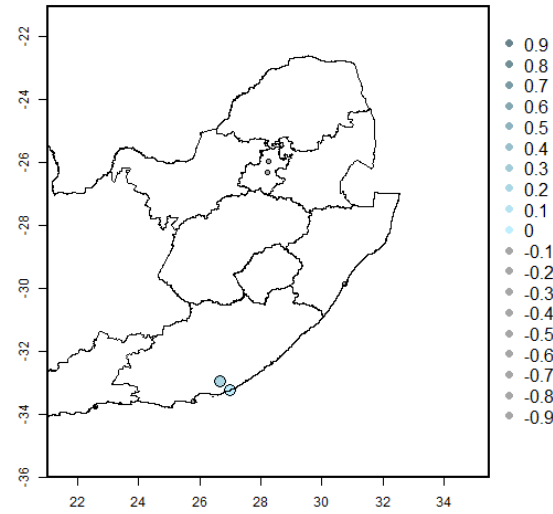
Modes & Model Performance

OND, ERA-I, ARP, U850 (SLP),

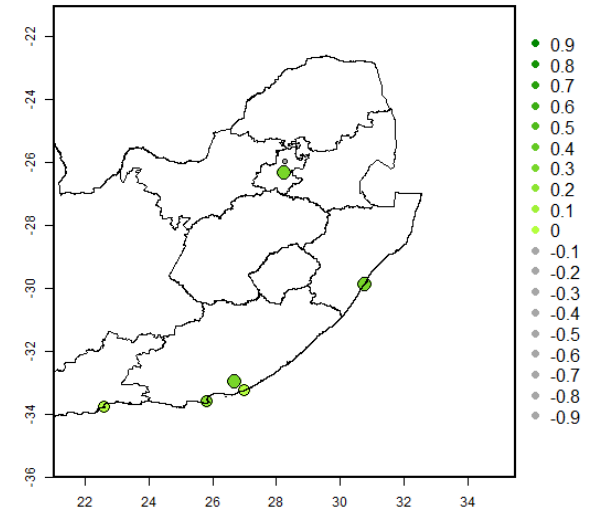
Heidke Skill Score : lower tercile RR (U850 OND)



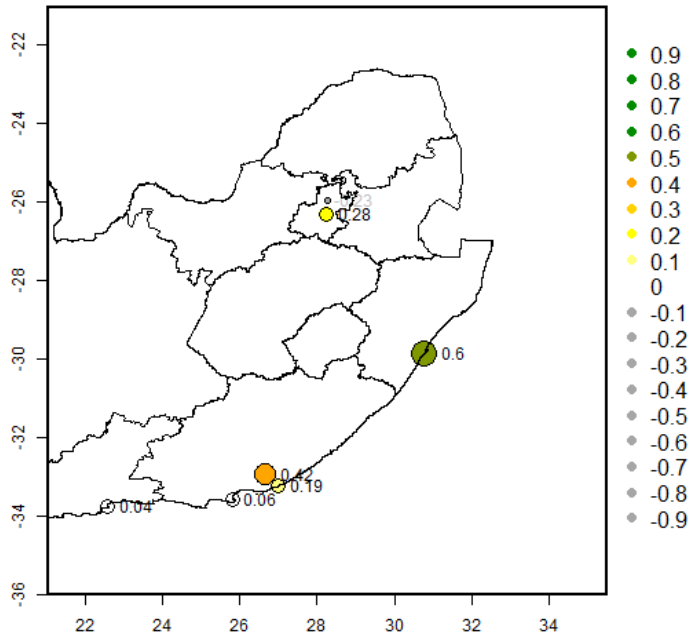
Heidke Skill Score : median tercile RR (U850 OND)



Heidke Skill Score : upper tercile RR (U850 OND)

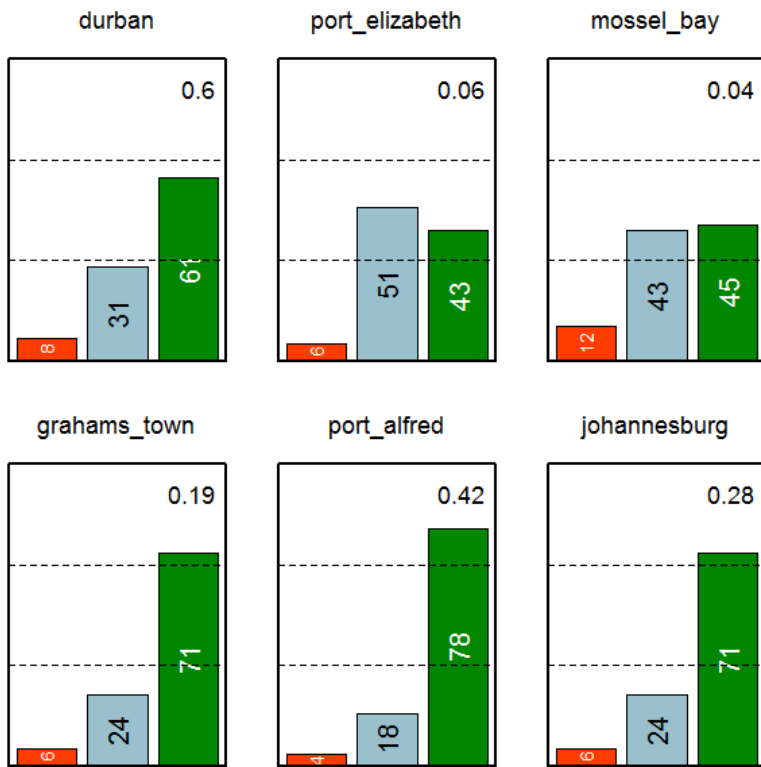


Correlation RR : obs / model (U850 OND)



Modes & Model Performance

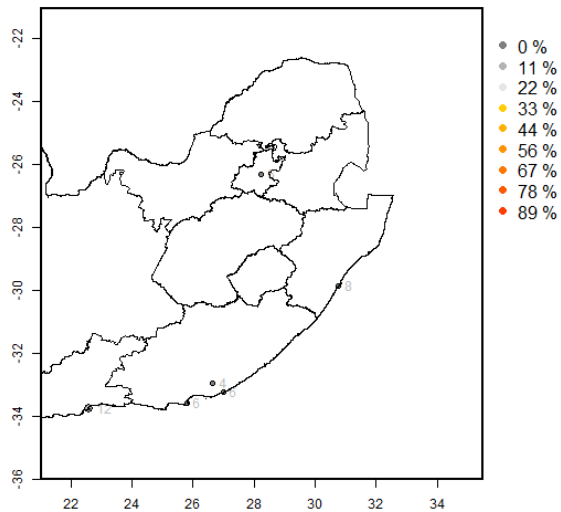
OND, ERA-I, ARP, U850 (SLP)



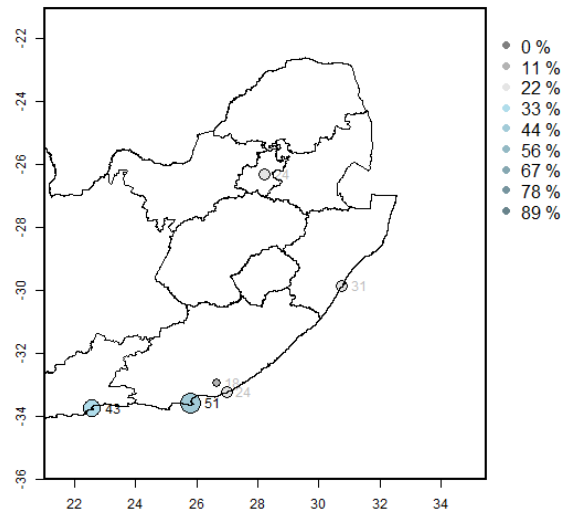
Rainfall Forecast , OND 2016

OND, ERA-I, ARP, U850 (SLP)

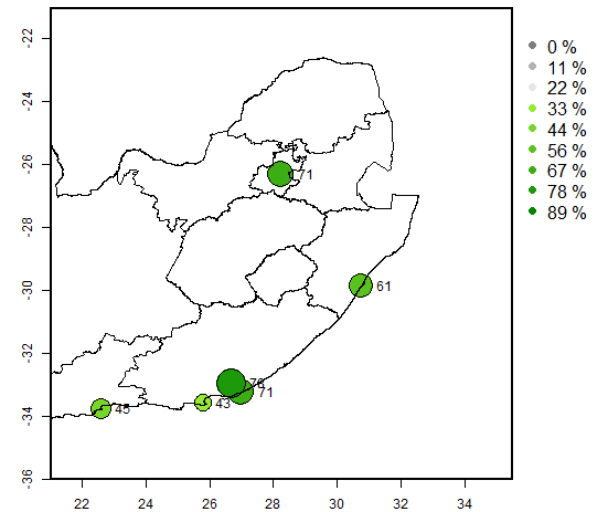
SEASONAL FORECAST : Lower tercile RR OND 2016



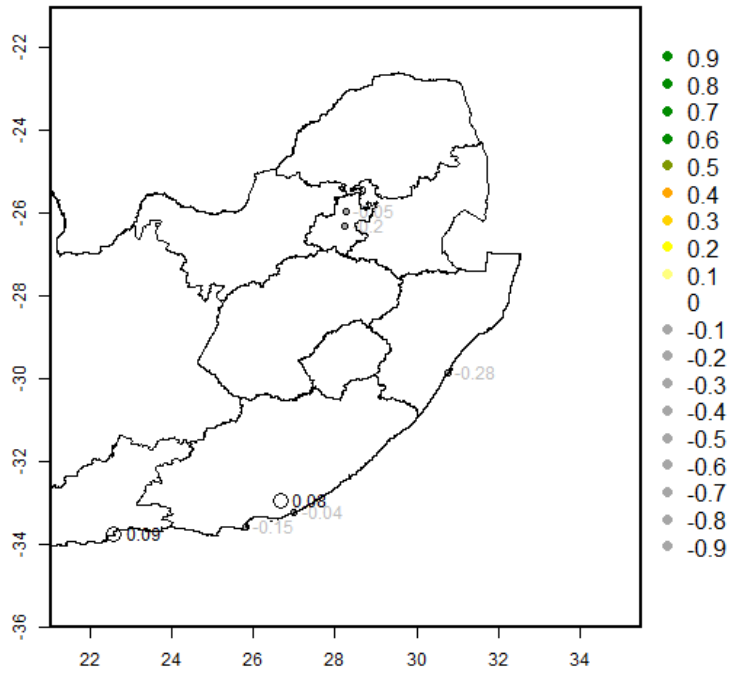
SEASONAL FORECAST : Median tercile RR OND 2016



SEASONAL FORECAST : Upper tercile RR OND 2016



Correlation RR : obs / model (PMER NDJ)



Rainfall Forecast, NDJ 2016

OND, ERA-I, ECMWF, PMER (SLP)

Score : median tercile RR (PMER NDJ)

Heidke Skill Score : upper tercile RR (PMER NDJ)

mossel_bay

grahams_town

