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# Seasonal Climate Watch

## July to November 2017

**Date: Jul 27, 2017**

### **1. Advisory**

The forecast for late winter (Jul-Aug-Sep) rainfall conditions, especially over the winter rainfall regions is still uncertain. There is, however, an indication of above-normal rainfall during early spring (Aug-Sep-Oct) for the far western parts of the country. Most forecasting systems continuously indicate warmer than normal temperatures in general across the country moving towards spring (Sep-Oct-Nov).

The chances of an El Niño event to occur during South Africa's summer rainfall period is still declining. However the El Niño Southern Oscillation (ENSO) is still currently in a warm phase and a resurgence for El Niño chances may still occur. This system is, as usual, monitored closely, and during spring an assessment of its impact on South Africa, if any, can be made with more certainty.

### **2. Recommendation**

It is still not possible to give a clear indication regarding the expected rainfall conditions for the winter-rainfall region of South Africa, even with early spring prospects of favourable rainfall conditions in the region. Due to the negative impact of drier conditions that could possibly occur, it is recommended that current drought measures in place continue for the foreseeable future.

Even with the decreased likelihood of an El Niño event to occur, the ENSO system is still in a warm phase, which is still of some concern as the expected ENSO phase conditions can still change during spring. Precautionary measures are still advised where possible, in the event that an El Niño event does occur and has its usual impact of drier summer-rainfall conditions. It is therefore very important to keep monitoring any future assessments that may provide more clarity on the current expectations for the coming seasons.

### 3. State of Climate Drivers

Observations show that [ENSO](#) (El Niño Southern Oscillation) is has now evolved into a warm phase, however forecasts suggest that it will gradually move back towards neutral conditions within the next couple of months. The likelihood for an El Niño event has decreased further from previous assessments and as we near the end of the winter period these forecasts tend to be more reliable.

The Indian Ocean Dipole ([IOD](#)) forecasts indicate a slow evolution towards a positive phase of the tropical IOD for spring 2017, even though it is less certain than previous indications. This could indicate favourable rainfall for the Equatorial East African region for that period. For South Africa, however, the conditions over the south-west Indian Ocean are more important. Depending on the south-western Indian Ocean conditions during spring this year, above-normal rainfall could occur over the east coast of South Africa.

The Southern Annular Mode ([SAM](#)) has been showing a tendency towards a positive phase for the last two months. At this stage, the forecast is showing a slight tendency of a positive phase during the next few weeks. A negative (positive) phase of the SAM and the weakening (strengthening) of the polar vortex are often associated with colder (warmer) and wetter (drier) conditions over the winter-rainfall region of South Africa, through frontal activities. This system, however, is not predictable on a seasonal timescale, which complicates the winter assessment for the winter-rainfall region at this stage.

## 4. Climate Forecast Details

### 4.1 Rainfall

The forecasting system is currently very uncertain on a specific direction of rainfall throughout the country. There is however an indication for above-normal rainfall over the far western parts of South Africa. The uncertainty is particularly common in winter as forecasting systems are unable to predict the important rainfall bearing systems during this time of the year.

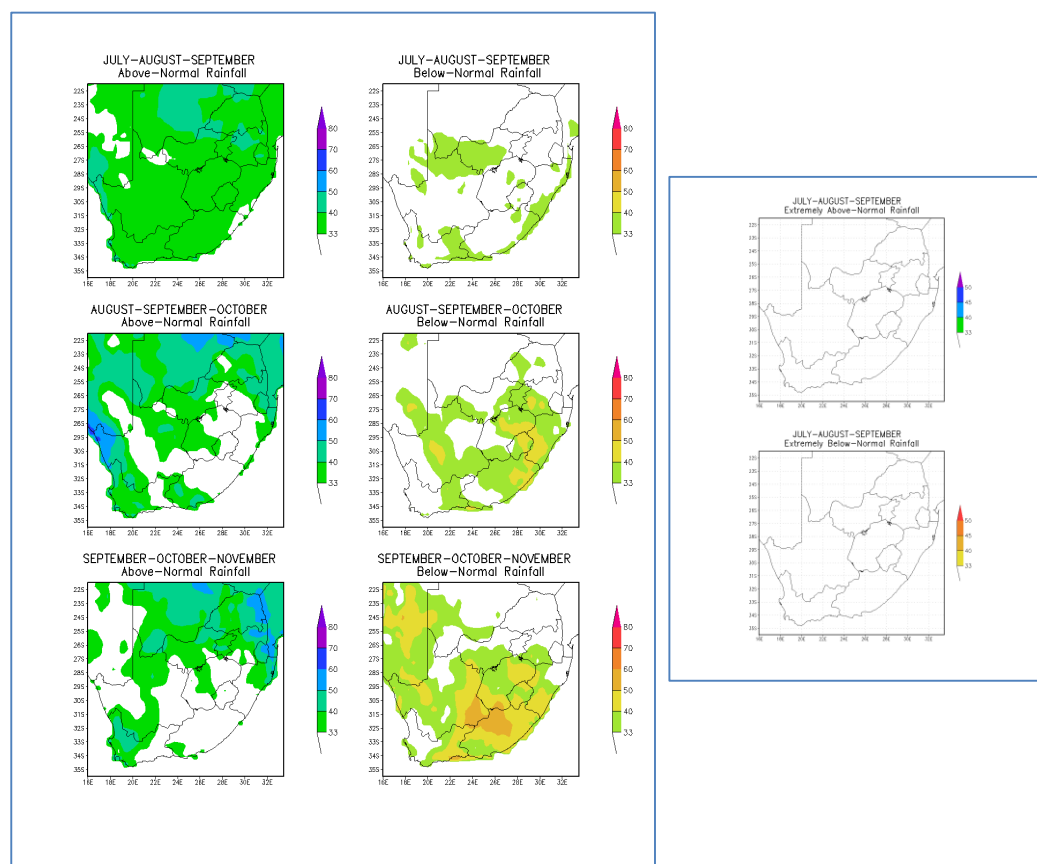


Figure 1: Rainfall forecasts for the three overlapping seasons valid for the period of July to November 2017 and extreme forecasts for July to September 2017 season (right panel). Forecast quality for total seasonal rainfall is indicated in the Appendix (Figure A1).

## 4.2 Minimum and Maximum Temperatures

Despite the fact that temperature forecasts were inconsistent during the past few months, it is expected that temperatures across the country will be higher with the exception of the south-western parts, especially during late-winter.

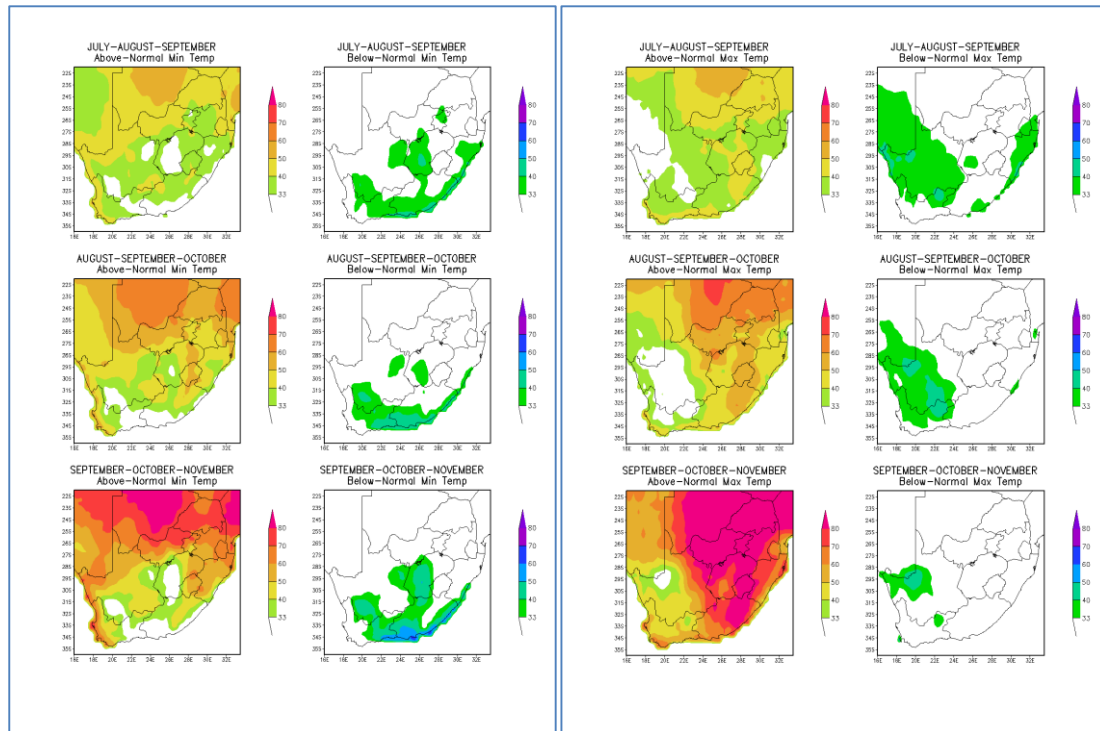


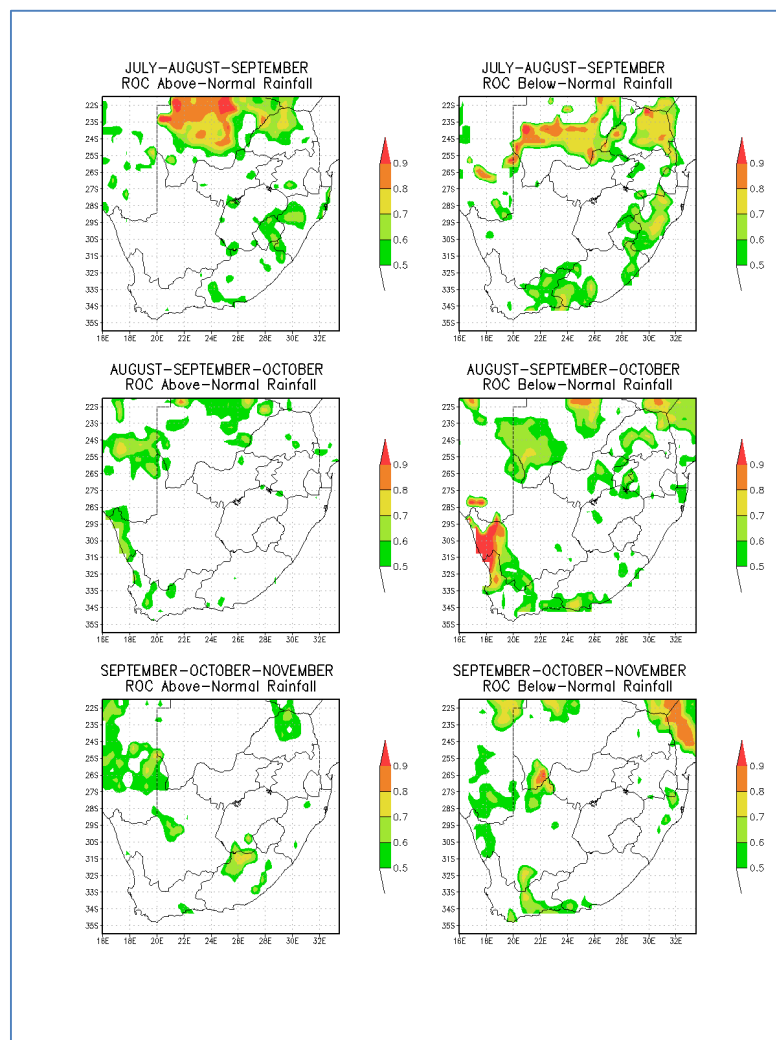
Figure 2: Probabilistic minimum (left panel) and maximum (right panel) temperature forecasts for the three overlapping seasons valid for the period of July to November 2017. Forecast quality for average seasonal temperature is indicated in the Appendix (Figure A2).

## Contributing Institutions

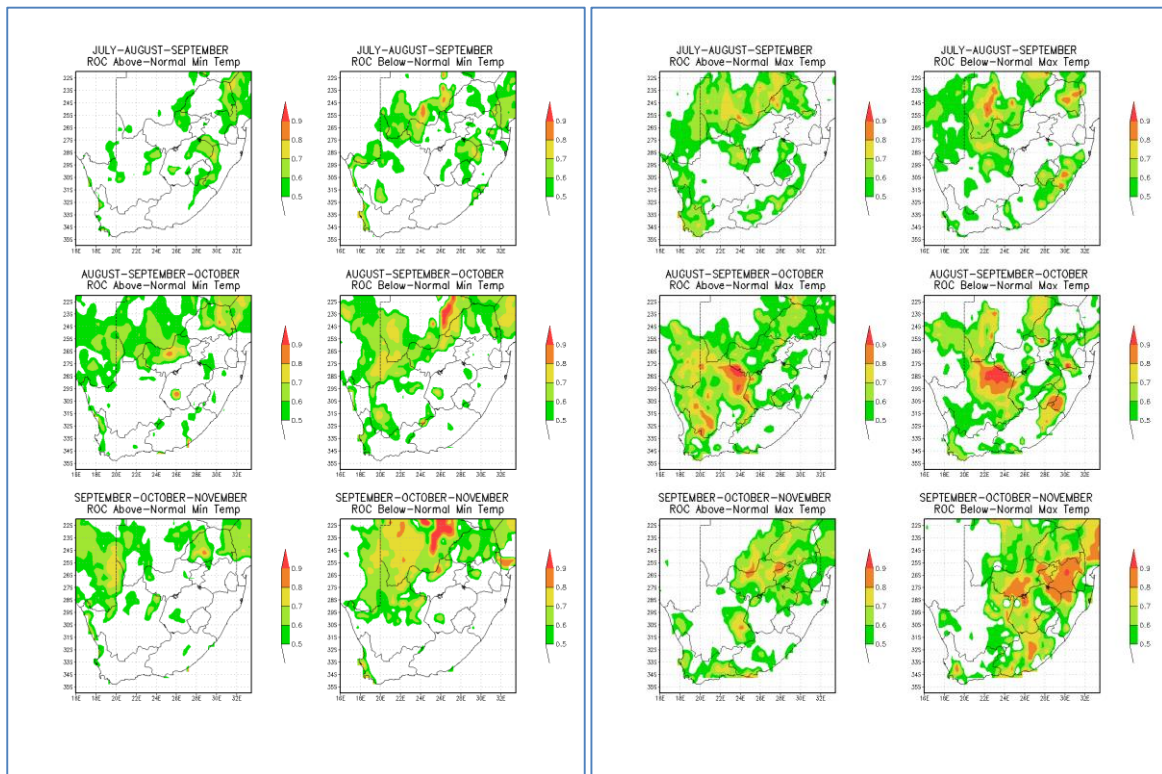
All the forecasts are a result of an objective multi-model prediction system developed at the South African Weather Service. This system consists of long-range forecasts produced by the following institutions:



## Appendix



**Figure A1:** The skill of the forecasting system in discriminating wet or dry events during the forecasting period as shown in the caption of each plot. Those regions with no shades imply that the forecasts are not better than chance.



**Figure A2:** The skill of the forecasting system in discriminating hot or cold events during the forecasting period as shown in the caption of each plot. Those regions with no shades imply that the forecasts are not better than chance.