



4 November 2019

Seasonal forecast for summer 2019/20 and the current state of drought in South Africa.

An uncertain summer outlook - be prepared for impacts associated with below-normal rainfall and above-normal temperatures.

At the start of the 2019/20 summer rainfall season, large parts of South Africa are in the grip of extreme drought, but in particular areas over Limpopo, KwaZulu-Natal, North West, Mpumalanga, Eastern Cape and Northern Cape. These drought conditions extend northwards into much of the southern African region.

The Summer Season Forecast

The rainfall forecast for early-summer (Nov-Dec-Jan) from the South African Weather Service seasonal prediction system indicates enhanced probabilities of below-normal rainfall over the far eastern parts of the country, while above-normal rainfall is predicted to be more likely for the western to central parts. Towards mid-summer (Dec-Jan-Feb), predictions indicate an increased likelihood of below-normal rainfall conditions. Likewise, higher than normal temperatures are expected this summer. It may be noted that forecasts from other prediction centres for this summer season indicate even higher and more widespread probabilities of below-normal rainfall and above-normal temperatures over southern Africa compared to the SAWS forecast, in particular for the mid-summer period (e.g. <https://iri.columbia.edu/our-expertise/climate/forecasts/seasonal-climate-forecasts/> and https://climate.copernicus.eu/charts/c3s_seasonal/c3s_seasonal_spatial_mm_rain_3m?facets=undefined&time=2019100100,744,2019110100&type=tsum&area=area11).

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It may also be noted that, at least over South Africa, the onset of summer rainfall is late and the September and October rainfall totals have been below normal. The first significant rainfall of this summer season only occurred at the start of November 2019.

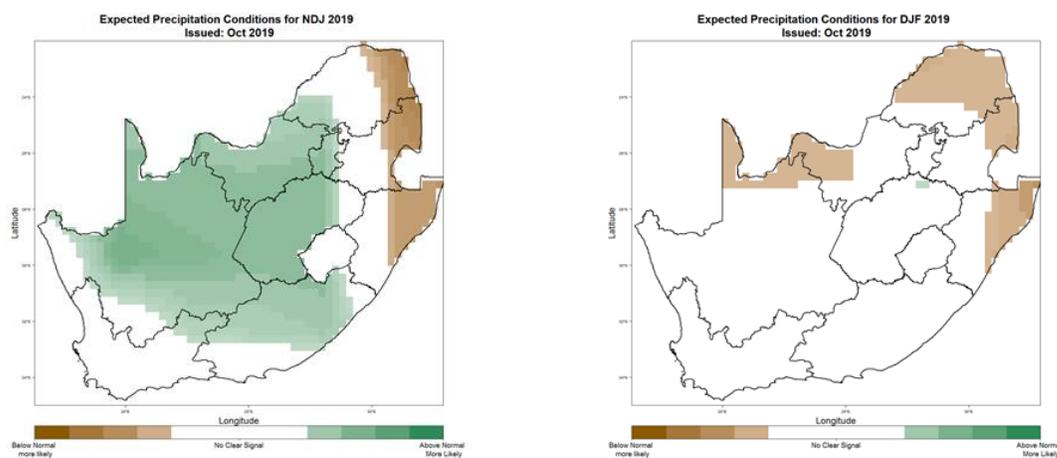


Figure 1: November–December–January 2019 (NDJ; left), December–January–February 2020 (DJF; Right) seasonal precipitation prediction. Maps indicate the highest probability from three probabilistic categories namely Above-normal, Near-Normal and Below-Normal

Impacts/ Implications of the current seasonal forecasts

Although the El Niño Southern Oscillation (ENSO) is predicted to most likely remain in a neutral state through the summer in 2019/20, it should be noted that this is likely to be a warm neutral rather than cool neutral state. Under such forcing, the atmospheric response may assume an El Niño type impact, consistent with the multi-model prediction systems being indicative of enhanced likelihoods of below-normal rainfall.

In light of the above assessment, it is clear that southern African farmers, water managers and government entities need to prepare for impacts associated with the likelihood of below-normal rainfall and above-normal temperatures during the summer of 2019/20. Furthermore, there is low soil moisture currently available to support crop planting and growth. If these conditions persist, they are likely to impact on available soil moisture, water availability for irrigation, and increased heat stress on livestock. Overall, the growing conditions for summer crops and pasture production will generally be constrained if the predicted rainfall and temperatures prevail.

Additionally, the predicted high temperatures, in addition to the recent heat waves, will lead to heat stress and have an impact on human and animal health. During this period, an increased energy demand for cooling and groundwater pumping will most likely be expected.

The predicted climatic conditions echo government's calls that water users and communities should apply water saving and conservation strategies to sustain the limited water resources.

The South African Weather Service will continue to closely monitor and communicate climate conditions and their tendencies; provide timeous monthly updates and further engage with the media, relevant government departments and the National Disaster Management Centre.

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