



CUMULUS

28 MARCH 2025

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1 FUTURE 2 FOCUS 3 AGRICULTURE

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Summary

Wet conditions continue

Soft, autumn weather is expected to continue for the next few days. Rainfall will be above normal over the summer-rainfall region, including the summer-grain production region. The two wetter periods over the interior will be until the weekend and again the first half of next week, with a warmer, drier break in the weather during the weekend. With extensive cloud cover over the interior at times, maximum temperatures will be relatively low while minimum temperatures will be relatively high for this time of the year.

The two wetter periods will be associated with upper-air troughs over the southern parts, producing instability over the interior. While the occurrence of hail during this time of the year typically increases due to lower atmospheric temperatures, the systems during the next few days will not be particularly intense nor will there be a distinct wet/dry line over the central to eastern parts. The occurrence of severe storms will therefore likely not exceed the climatological mean for this time of the year, especially over the grain-production region, even though rainfall totals will be above normal. Cloudy, mild and wet conditions for extended periods may however impact crop production through fungal pathogens, reduced heat unit accumulation and difficulty with access to fields for management interventions in some areas.

The winter rainfall region will be dry and sunny except over the southern parts where an onshore flow will result in showers at times along the Garden Route. Dry and windy conditions coupled with warm daytime temperatures may enhance the fire hazard in the region.

Looking further ahead, forecast models remain optimistic for further rainfall over the interior continuing into mid-April, associated with the summer-like atmospheric circulation patterns we currently experience. At this stage, there is no clear indication of an intense cold spell that may result in widespread frost over the interior during the first ten days of April. Daytime temperatures will likely recover after the cooler conditions expected next week according to current outlooks.

The following is a summary of weather conditions during the next few days (until early next week):

- Temperatures will on average be near normal for this time of the year.
- Due to cloud cover and relatively high atmospheric moisture content, maximum temperatures will be relatively low over the interior while minimum temperatures will be relatively high.
- Hot daytime conditions will mostly be confined to the lower-lying north-eastern extremes such as the Lowveld and north-eastern parts of KZN.
- Rainfall will be above normal over most of the interior, but below normal over the south-western parts as well as the northern parts of the Limpopo River Valley.
- Rainfall will be below normal over the winter rainfall region where it will be dry for the most part.
- Partly cloudy to cloudy and mild conditions will dominate over large parts of the interior with scattered showers and thundershowers.
- The weekend will be relatively warm and dry, with a redevelopment of showers and thundershowers from Sunday afternoon onwards.
- There are no indications of a significant cold event with frost during the next few days until at least the middle of next week.

- The summer-grain production region will experience extensive cloud cover with mild daytime conditions and regular rainfall events in the form of showers or thundershowers. It will be windy over the western parts at times. The weekend will be relatively warm and dry.
- **The winter rainfall region** will be predominantly warm and dry. Southerly to south-easterly winds will dominate, resulting in showers along the Garden Route at times.

Overview of expected conditions over the main agricultural production areas

With two upper-air troughs moving over the southern parts and ridging high-pressure systems at the surface to the south of the country, above-normal rainfall is expected over the summer-rainfall region. Maximum temperatures will be in the mild category for the most part. The ridging high-pressure systems will also result in strong south-easterly winds over the south-western parts and some showers along the Garden Route at times.

Maize production region:

It will be cooler during the next few days over the region, with maximum temperatures relatively low for this time of the year due to cloud cover while minimum temperatures will be somewhat higher than the long-term mean, associated with higher moisture levels in the atmosphere and cloud cover.

- Maximum temperatures over the eastern grain-production areas will range between 18°C and 28°C. Minimum temperatures will be in the order of 10°C to 14°C.
- Maximum temperatures over the western grain-production areas will range between 23°C and 32°C. Minimum temperatures will be in the order of 14°C to 18°C.
- **Thursday (27th):** Partly cloudy to cloudy and mild with scattered showers and thundershowers. Moderate to fresh northerly to north-westerly winds are expected over the western parts.
- **Friday (28th):** Partly cloudy to cloudy and mild with scattered showers and thundershowers. Moderate to fresh northerly to north-westerly winds are expected over the western parts.
- **Saturday (29th):** Partly cloudy and mild with isolated thundershowers, but warm in the west. Moderate to fresh north-westerly to westerly winds are expected over the western parts.
- **Sunday (30th):** Partly cloudy and warm with isolated to scattered thundershowers.
- **Monday to Wednesday (31st- 2nd):** It will remain partly cloudy to cloudy and mild with scattered showers and thundershowers. These conditions could remain in place until mid-week.

Cape Wine Lands and Ruens:

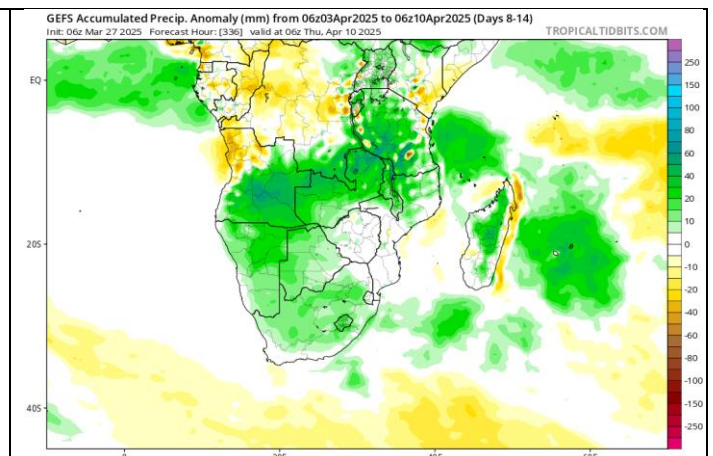
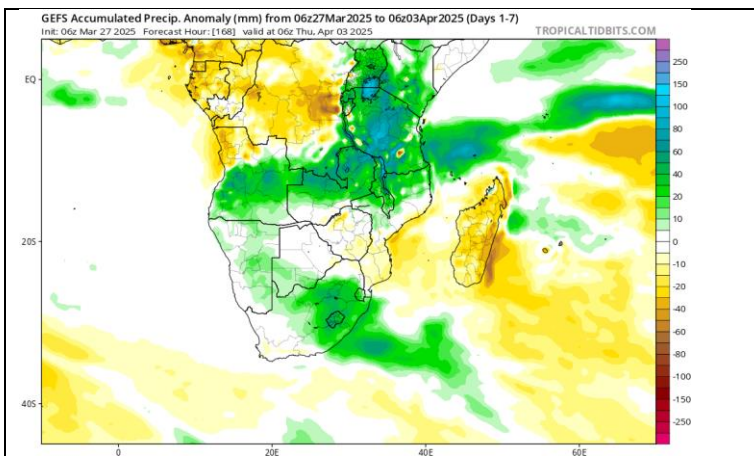
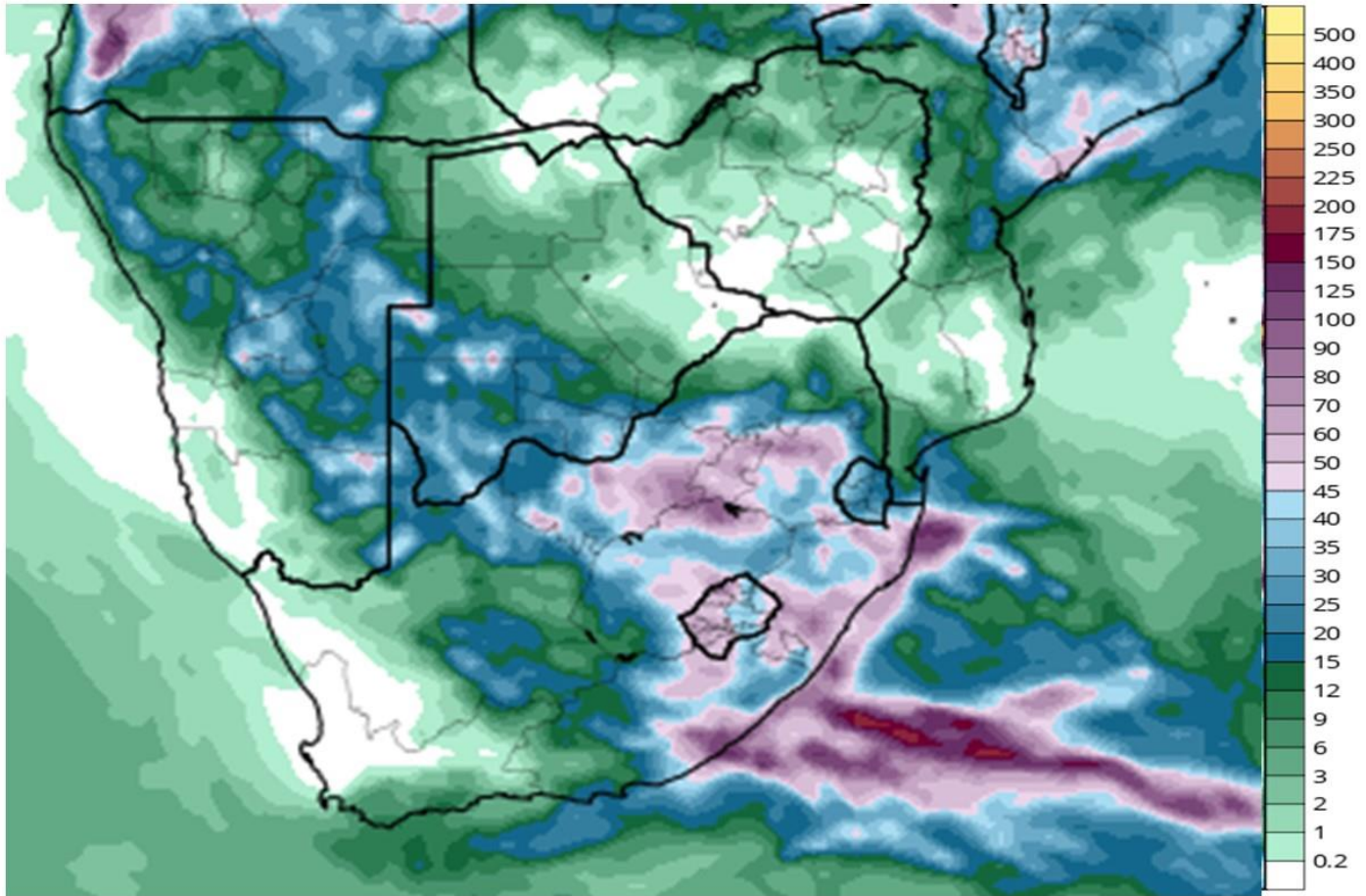
It will be dry over the region, except for showers in the south along the Garden Route from Sunday until Wednesday, associated with an on-shore flow from the South. The western to northern parts will be partly cloudy to sunny and warm for the most part. Strong south-easterly winds will dominate in the southwest, with a lull around Friday and Saturday.

Medium term rainfall summary

GFS Total Accumulated Precipitation (mm) from 06z27Mar2025 to 00z03Apr2025

Init: 06z Mar 27 2025 Forecast Hour: [162] valid at 00z Thu, Apr 03 2025

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The GFS ensemble forecast (consisting of several forecasts with small initialization differences) favors above-average rainfall over the interior, including the entire grain-production region during the next few days. Conditions for rain over the interior will remain favorable during the first 10 days of April (right). Early winter rainfall over the winter rainfall region is not indicated.

Possible extreme conditions - relevant to agriculture

The South African Weather Service issues warnings for any severe weather that may develop, based on much more information (and in near-real time) than the output of only 2 weather model (GFS and the ECMWF model) considered here in the beginning of a week-long (starting 27 March) period. It is therefore advised to keep track of warnings that may be issued by the SAWS (www.weathersa.co.za) as the week progresses.

According to current model projections (GFS / ECMWF models) of weather conditions during the coming week, the following may negatively affect agricultural activities and production:

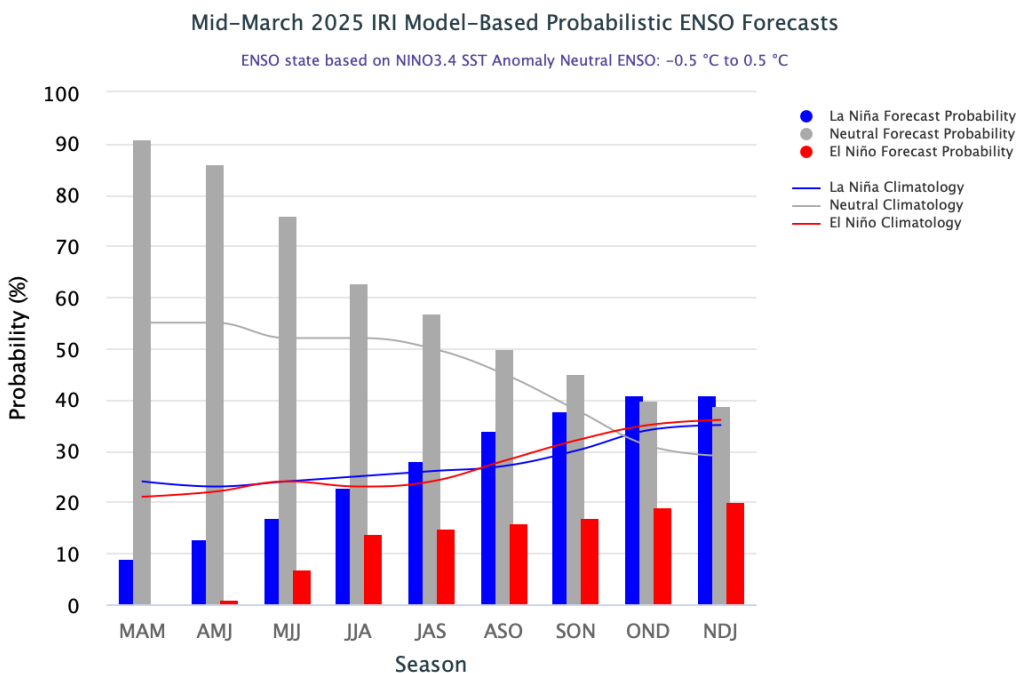
- **Wet conditions may be conducive to various fungal diseases:**
 - Maize production region.
- **Significant rainfall totals, exceeding 50 mm in 24h, may occur:**
 - Eastern North West, southern Gauteng and northern Free State: **Thursday and Friday (27th – 28th).**
- **More rain and low evaporation rates may result in waterlogged conditions and hinder access to fields:**
 - Maize production region.
- **Cloud cover at times and suppressed maximum temperatures may result in reduced accumulation of heat units:**
 - Northern to eastern maize-production region.
- **Some thundershowers will tend to become severe and produce strong wind gusts and hail:**
 - Central to eastern and southern parts of the Northern Cape, north-eastern parts of the Western Cape and the Eastern Cape interior: **Monday (31st).**
- **It will be hot, with maximum temperatures exceeding 35°C:**
 - North-eastern KZN: **Saturday to Tuesday (29th – 1st).**
 - Lowveld: **Friday to Tuesday (28th – 1st).**
 - Limpopo River Valley: **Sunday (30th).**
- **Dry, warm to hot and at times windy conditions will increase the fire hazard where vegetation is dry.:**
 - Western to southern interior, including the Karoo: **Friday to Sunday (28th – 30th).**
- **Dry, warm and at times windy conditions will increase the fire hazard where vegetation is dry:**
 - Western to northern parts of the winter rainfall region: **Thursday to Wednesday (27th – 2nd).**

Seasonal forecast

Current ENSO conditions:

The ENSO state has returned to neutral according to institutions such as the NOAA Climate Prediction Centre and the IRI that earlier identified La Niña conditions. This is based on evidence from the Sea Surface Temperatures which returned back to levels above La Niña thresholds and some atmospheric indicators such as the Southern Oscillation Index (SOI) also outside La Niña territory. Neutral conditions are expected to persist until next summer, with the chance for an El Niño looking very slim at this point.

The graph below shows the International Research Institute for Climate and Society (IRI) ENSO forecast.



International Research Institute for Climate and Society- <http://iri.columbia.edu/>

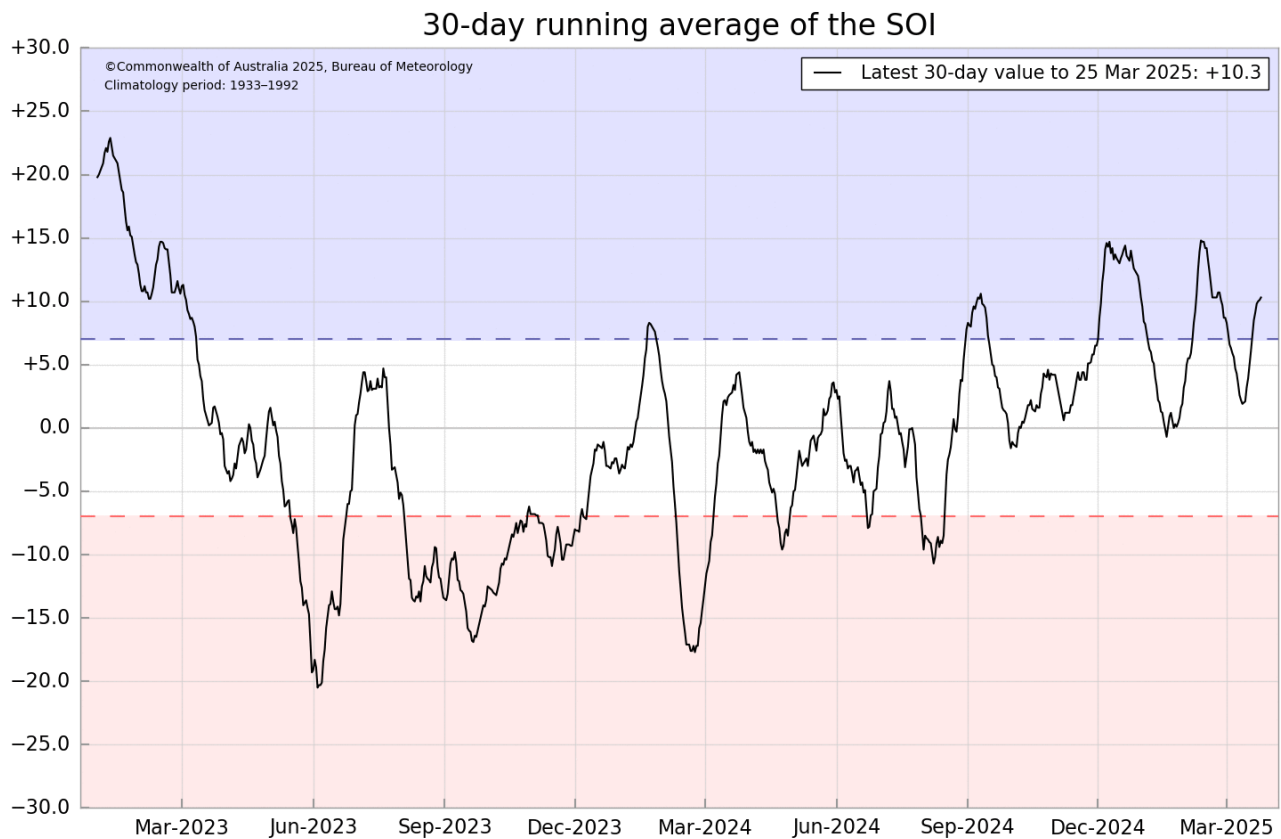
In their most recent update (issued 19 March), the IRI states that "As of mid-March 2025, the equatorial Pacific is transitioning from weak La Niña conditions to an ENSO-neutral state. This shift is marked by sea surface temperatures in the Niño 3.4 region that are now closer to average, with anomalies at -0.35°C for Feb, 2025, well above the -0.5°C threshold required for La Niña conditions. The IRI ENSO plume forecast indicates a high probability (91%) for ENSO-neutral conditions from Mar-May 2025, and these conditions are favored to continue through Sep-Nov 2025. For the later forecast seasons, Oct-Dec 2025 and Nov-Jan 2025/26, there is no strong preference for any category, although La Niña is slightly favored over ENSO-neutral. The probability of El Niño remains very low throughout the forecast period, increasing gradually from 1% in Apr-Jun to 20% in Nov-Jan 2025/26."

In their most recent update (18 March), the **Australian Bureau of Meteorology** states that “The El Niño Southern Oscillation (ENSO) in the tropical Pacific remains neutral:

- The El Niño–Southern Oscillation (ENSO) is neutral. SSTs in the central tropical Pacific have risen since February, with the latest Niño3.4 value (+0.14 °C for the week ending 16 March) remaining firmly within the neutral range and reaching a positive value for the first time since August 2024.
- The Bureau's model predicts neutral ENSO (neither El Niño nor La Niña) until at least August. This is consistent with all surveyed international models..... <http://www.bom.gov.au>.

The Southern Annular Mode (SAM) is currently still positive and expected to remain in positive to neutral territory during next week or two. A positive SAM during autumn may indicate fewer cold fronts in the southern African region than normal for this time of the year.

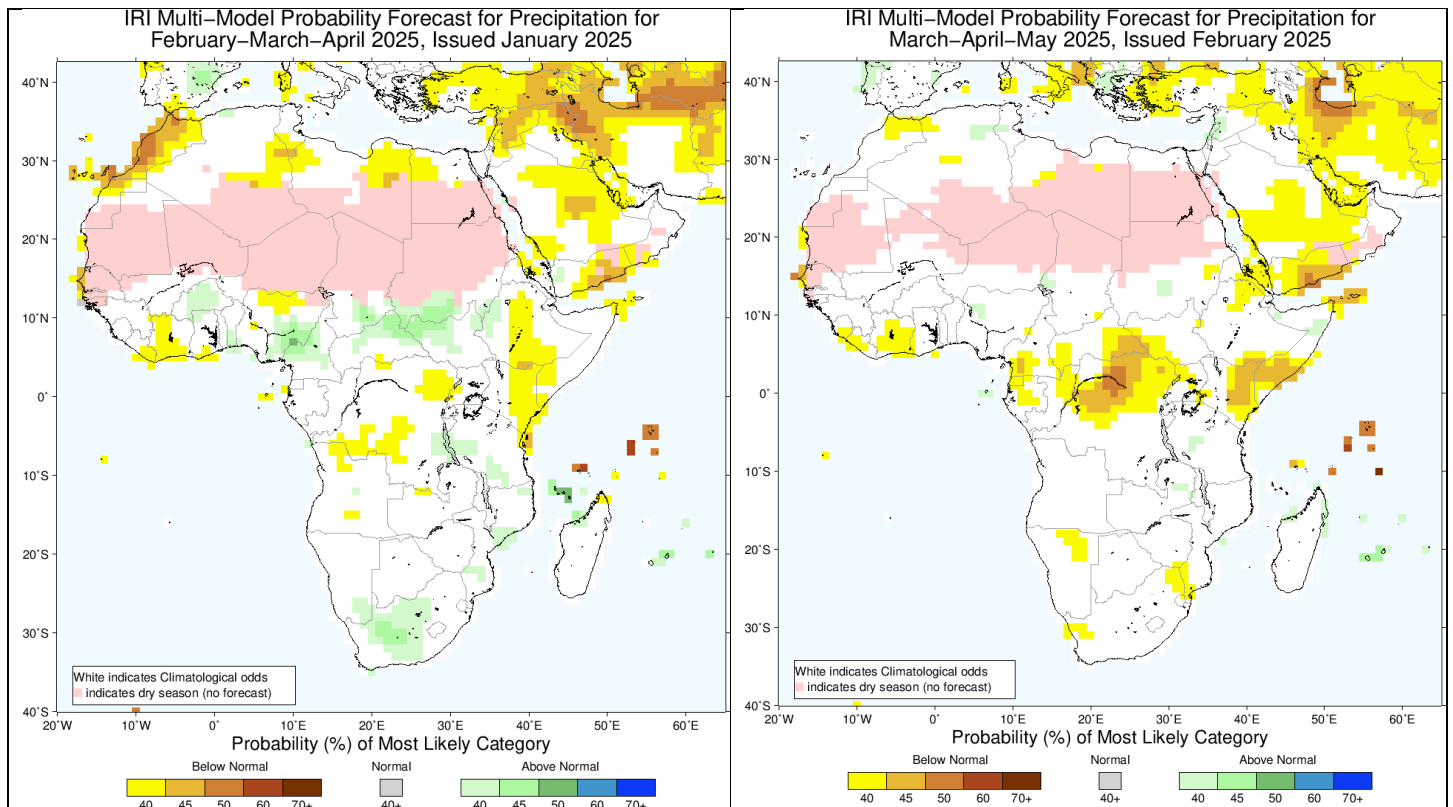
The 30-day Southern Oscillation Index (SOI) is currently +10.3 and therefore representing atmospheric pressure patterns in the Australia – Pacific region indicative of Neutral to cool conditions. The slow upward trend in the SOI since summer 2023/24 seems to have reached a peak.



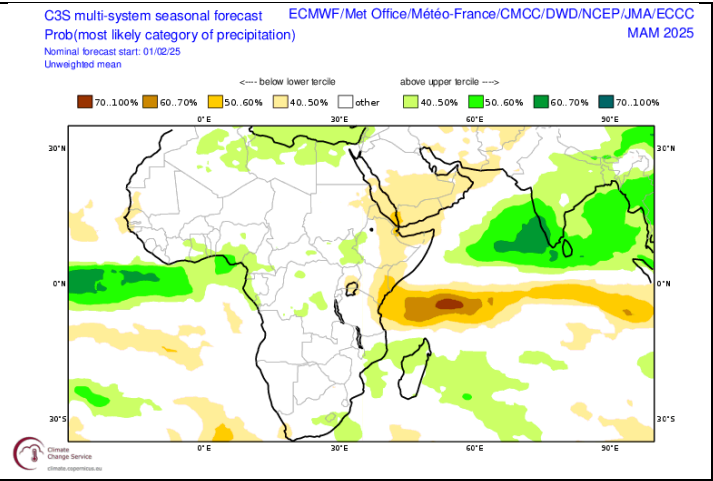
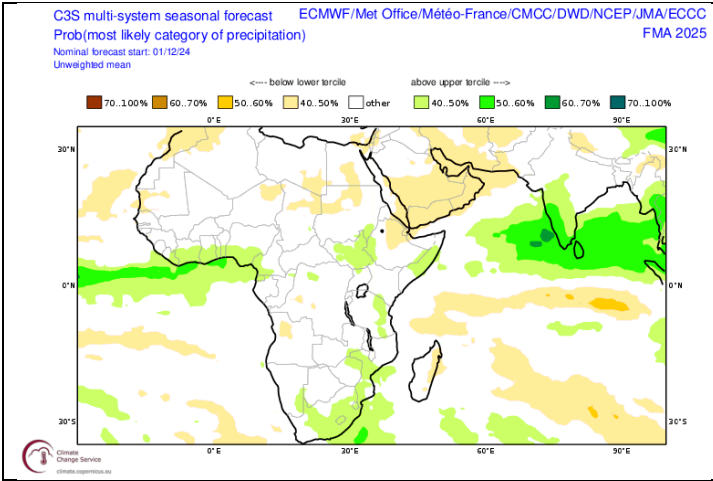
Australian Bureau of Meteorology - <http://www.bom.gov.au>

Seasonal forecasts issued by various international institutions

Seasonal forecasts (updated in January and February 2025) remain relatively neutral for late summer given the weak signal from the Pacific Ocean but have trended slightly positive for rainfall over the summer rainfall region. The IRI seasonal forecast (first pair of maps) for the period February to April indicates an enhanced probability for relatively wet conditions over the central interior while the forecast for autumn leans to neither wet nor dry conditions. This is still very much an uncertain forecast due to the weak state of ENSO, or a very late and weak La Niña event according to some institutions. The COPERNICUS multi-model assimilated forecast (second pair of maps) also shows the expectation of relatively wet conditions over large parts of the interior during late summer, together with also a much more subdued, neutral outlook for autumn.



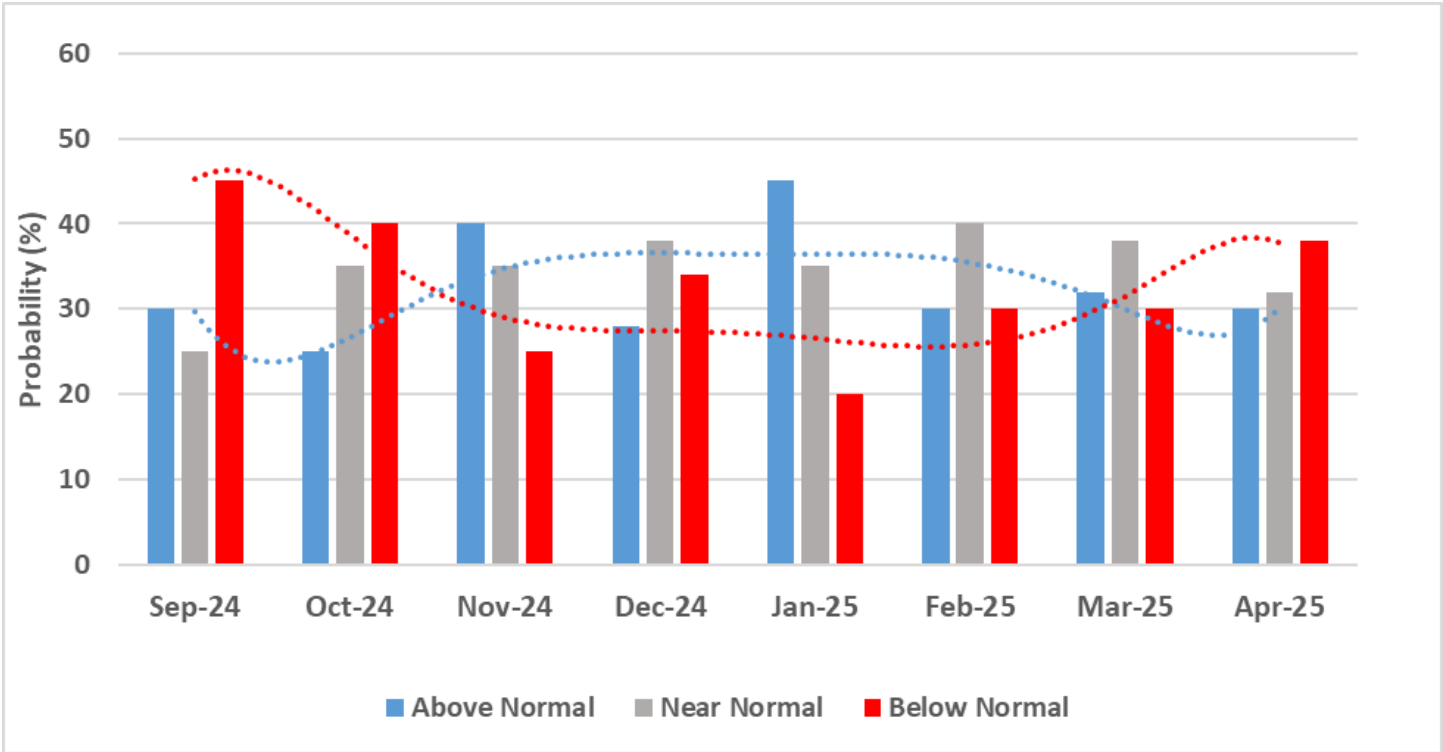
Probabilistic forecasts by the International Research Institute for Climate and Society (IRI) for rainfall for late summer/autumn (February to April 2025, right – Forecast issued in 2025-01) and autumn (March to May 2025, right – Forecast issued in 2025-02).



Probabilistic multi-model forecasts by the ECMWF COPERNICUS Programme for rainfall for late summer/autumn (February to April 2025; left - Forecast issued in 2025-01) and autumn (March to May 2025, right – Forecast issued in 2025-02).

CUMULUS seasonal outlook

This outlook is based on the typical observed rainfall patterns over the **north-eastern half** of the country (including most of the summer grain production region), associated with the cyclic variability of the global climate system. Summers that are similar to 2024/25 usually experience near normal rainfall in total, with a delayed start and a wetter signal during November and again by January/February.



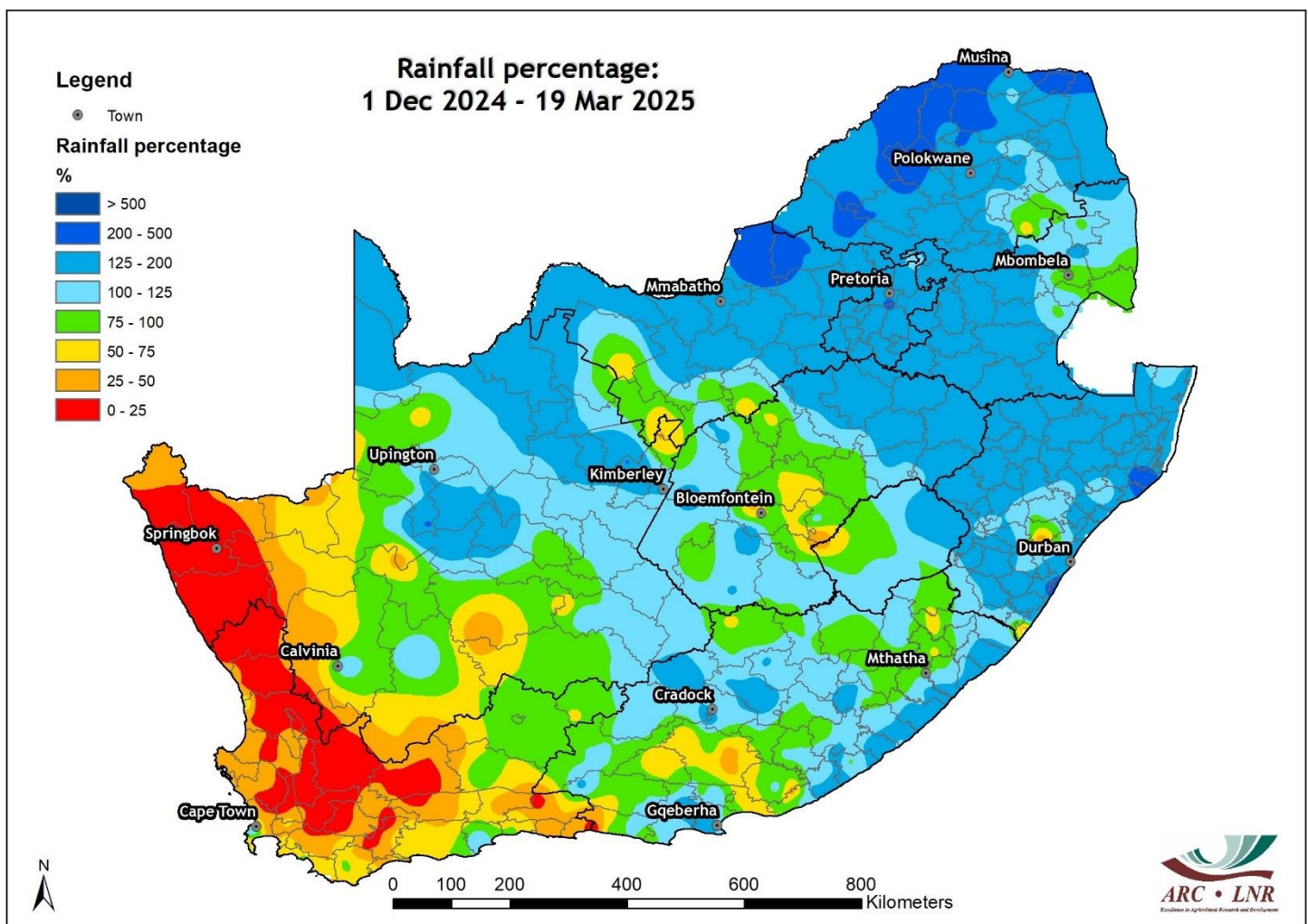
Probabilistic forecast for rainfall over the summer rainfall region, based on the natural cyclic nature of the climate system as seen in decadal variability, per month for the period September 2024 – April 2025 (Forecast issued in 2024-10).

Typical patterns during similar summers, over the north-eastern half of the summer rainfall region, are:

- September – October: Relatively dry conditions over the north-eastern half of the summer rainfall region
- November: Near-normal to above-normal rainfall over the north-eastern half of the summer rainfall region
- December: Near normal to below-normal rainfall over the north-eastern half of the summer rainfall region
- January: Above-normal rainfall over the north-eastern half of the summer rainfall region
- February-March: Near-normal rainfall over the north-eastern half of the summer rainfall region
- April: Below-normal rainfall over the north-eastern half of the summer rainfall region

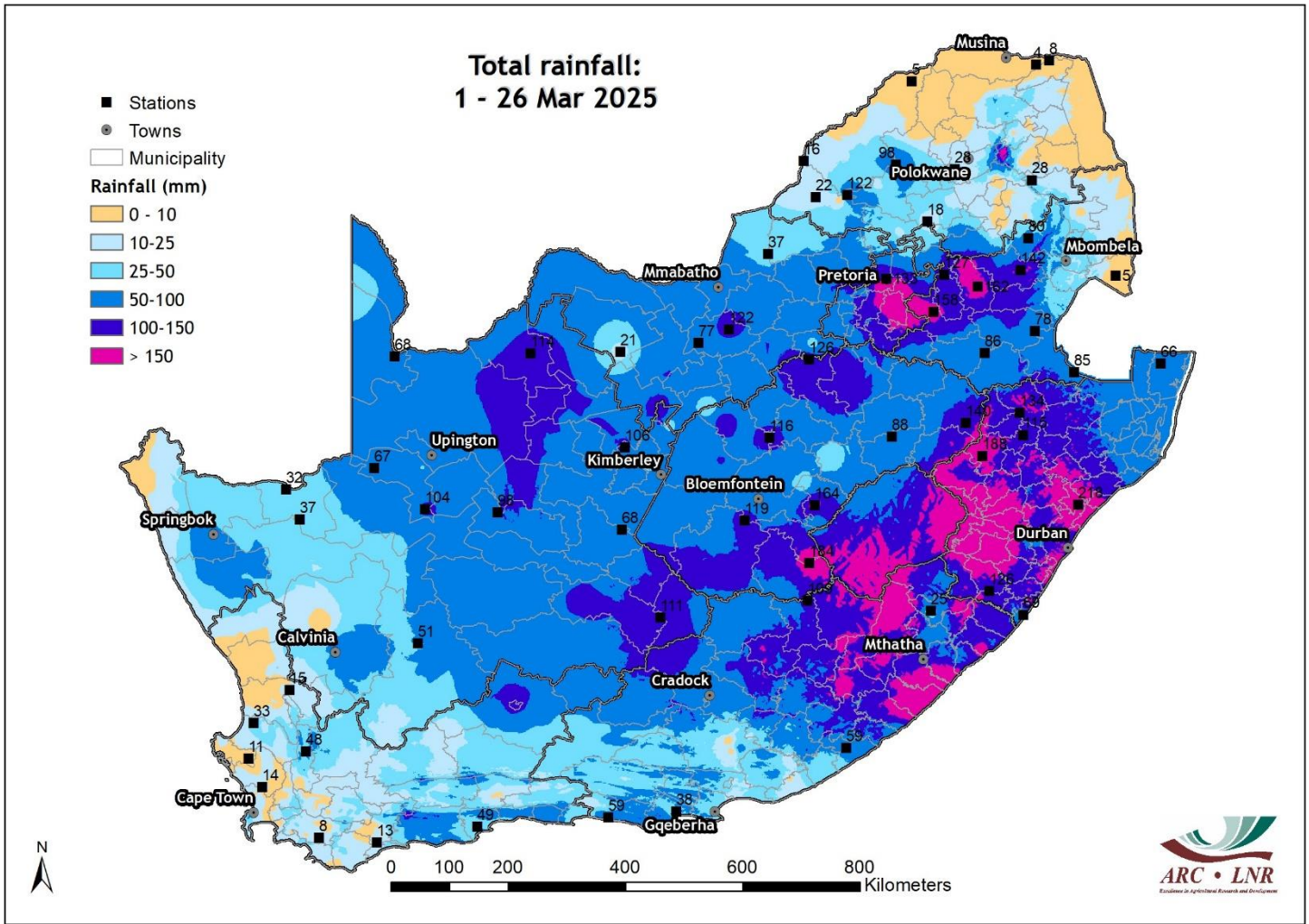
Observed conditions

Rainfall (%): 1 December 2024 – 19 March 2025



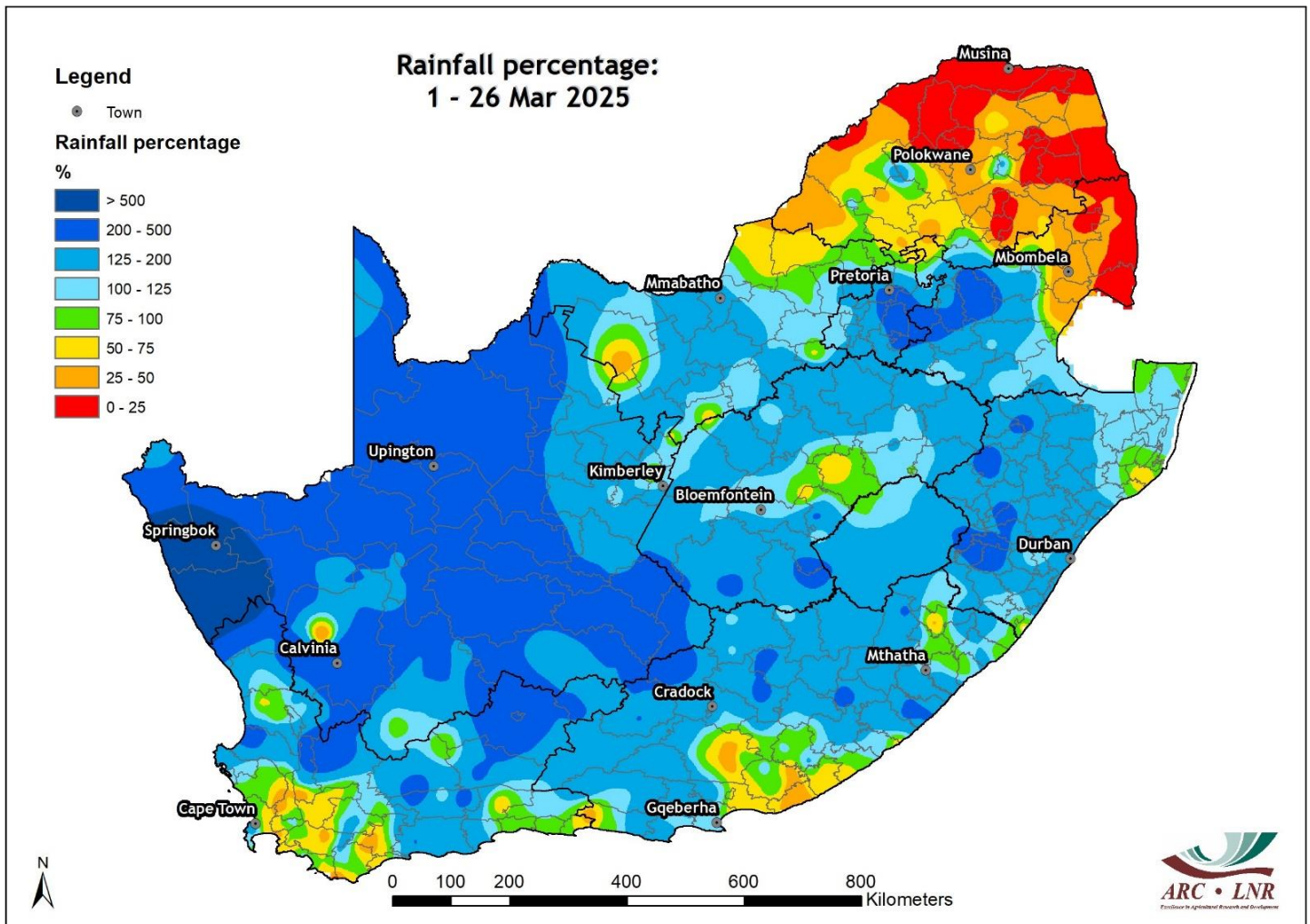
Most of the summer-rainfall region received near-average to above average rainfall for the period 1 December to 19 March. The central to north-western parts of the Free State, including a large part of the western summer-grain production region, received below-average rainfall. Little to no rain occurred over the winter rainfall region.

Rainfall (mm): 1 - 26 March 2025



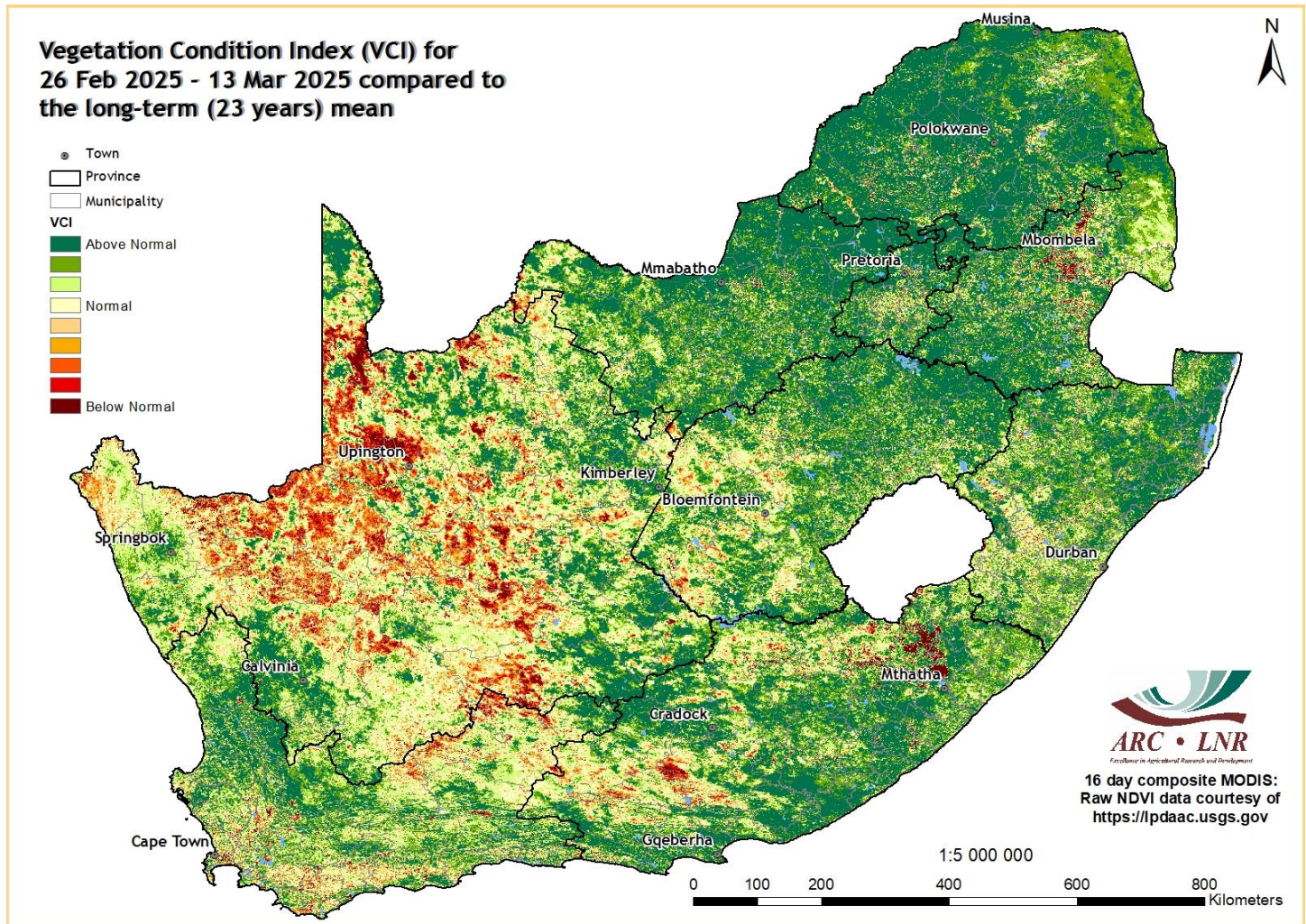
Most of the grain production region received between 50 and 150 mm during March up to the 26th. Most of the central to eastern interior received in excess of 50 mm. Little to no rain was recorded over the lower-lying extreme north-eastern to eastern parts. The winter rainfall region received some rain, but totals were mostly below 25 mm.

Rainfall (% of LT mean): 1 - 26 March 2025



Large parts of the interior, including most of the summer-grain production region, received above average rainfall during the first 26 days of the month. The Lowveld and Limpopo River Valley were relatively dry.

Vegetation Condition Index: Early March 2025



By early March, vegetation activity remained above normal over most of the country due to widespread rain from mid-December onwards. Vegetation is stressed over parts of the central Northern Cape where widespread above-average rainfall only occurred in March. Vegetation activity remained above normal over the winter rainfall region following above-normal rainfall during the previous winter, but vegetation activity is below normal over parts of the grain-production regions.

