WE ARE WHERE YOU ARE

AgriSeker fa( ) EST. 2015

RISK MANAGEMENT 2025/26

CUMULUS

by J Malherbe, R Kuschke

Contents

Summary

Mild with more rain over the central to eastern parts

Scattered to widespread thundershowers are expected over large parts of the interior initially, but another cold front in the west will accompany dry westerly winds that will shift rainfall towards the eastern parts only during the weekend. However, towards next week, conditions will become more favorable again for isolated to scattered thundershowers over the interior, but these will remain largely in the east, according to current forecasts. Temperatures will be lower than normal over much of the summer rainfall region, associated at times with cloudy spells and with the influx of cooler air over the interior. The cooler conditions will not result in a recovery of heat units for crop production over the eastern parts of the summer-grain production region where it is lagging.

The rainfall over the interior will be associated with an upper-air trough moving over the country during the weekend, coupled with a ridging high responsible for a renewed influx of cooler, moist air from the east over the summer rainfall region. Following drier conditions expected over large parts during the weekend (except in the east, where thundershowers may persist), another upper-air trough will deepen over the interior while another high-pressure system will ridge around the country next week, resulting in a redevelopment of scattered showers and thundershowers over the interior. Current forecasts keep the thundershowers confined to the eastern parts of the country early in the week, gradually expanding into the central areas during the week.

Large-scale patterns are favorable for further thundershowers over the interior, with above-normal rainfall indicated for the eastern parts of South Africa. Large-scale convection patterns along the equator are conducive to enhanced rainfall over the subcontinent currently, and looking further ahead, these patterns are expected to persist at least until the second week of December. Currently, with westerly winds located further north (as shown in a negative Southern Annular Mode) and atmospheric conditions over the Pacific Ocean favorable for rain in southern Africa (as shown in a positive SOI), there is a tendency for relatively wet conditions over some parts of southern Africa while cold fronts and dry air still regularly invade the western to southern parts of South Africa, resulting in the potential for more intense storms where thundershowers occur. There are indications by some forecast models that a tropical low may become established over the northern parts of Botswana and Namibia by the middle of December. These forecasts are still very uncertain, but if realized, this will bring more favorable conditions for widespread rainfall over the summer-rainfall region. These developments will receive further attention going forward.

Given the development of a weak La Niña event, seasonal forecasts continue to indicate a relatively wet mid- to late summer over the interior. However, while still leaning towards normal to wetter-than-normal conditions, the latest forecasts issued in November limit the wet signal to the eastern parts of the country, while drier than normal conditions are indicated over the western parts.

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

- On average, temperatures will be near- to below normal over most parts, but above normal on average over the western parts, including the western to northern parts of the winter rainfall region.
- Total rainfall will be near normal to above normal, but below normal over the western parts where little to no rain is expected. Light falls are possible over the winter rainfall region and along the Garden Route.
- It will be cloudy and mild with showers and thundershowers over the eastern parts on Friday while a band of thundershowers will move across the western to central and south-eastern parts during the day. The band of thundershowers moving across the interior will reach the coast in the south and southeast (eastern parts of the Garden Route).
- A cold front will bring light showers to parts of the winter rainfall region on Friday/Saturday, including the West Coast.
- Dry air will spread over the interior from the west and south by Saturday. This will result in lower temperatures over the western to southern parts, with cool conditions in the south.
- Thundershowers will be confined to the eastern and north-eastern parts during the weekend.
- Thundershowers will initially be confined to the eastern parts early next week but may gradually expand again into the central areas later in the week.
- Light showers are possible along the Garden Route on Friday/Saturday, and again possibly by Tuesday
- Temperatures will be below normal for this time of the year over the eastern to south-eastern parts most of the time.
- It will be hot next week over the western parts, including the northern to western parts of the winter rainfall region.
- It will be warm over the central parts, with increasing temperatures indicated towards next week.
- Thundershowers over the interior, especially the central to western parts on Friday, and further east next week, will have an enhanced tendency to become severe.

The summer-grain production region will be mild for this time of the year, with temperatures on average below normal over the eastern parts of this region while it will be warm over the western parts. Total rainfall will be near normal to above normal over most of the southern to eastern parts of the region, with rainfall totals during the period in the order of 20 – 50 mm in many areas. It will be drier on average over the western to north-western parts of the region where it will be warm with westerly winds indicated most of the time from the weekend onwards.

The winter rainfall region will experience summery conditions. The southern parts such as the Garden Route will be cool while hot conditions will develop over the northern to western parts from Sunday onwards. Light showers are possible over the region on Friday and early Saturday, associated with a cold front that will bring temporary cooling. Light showers may occur in the south at times and southeasterlies will be strong in the southwest throughout the period.

Overview of expected conditions over the main agricultural production areas

It will be relatively mild over much of the interior, but warmer in the west. An upper trough and a ridging high will bring widespread rainfall on Friday as a cold front enters the southwest. Dry air behind the front will limit weekend thundershowers to the east. Early next week, a new upper-air trough over the interior and another ridging high will bring cooler conditions, increased cloud cover, and scattered thundershowers over the eastern areas, gradually expanding into the central parts.

Maize production region:

It will be mild over the region for this time of the year, but warm in the west. Isolated to scattered showers or thundershowers are expected on most days, but it will mostly be confined to the eastern parts during the weekend. There will also be cloudy cooler periods at times over parts of the region especially on Friday and possibly towards the middle of next week. The west will be relatively dry following the rain on Friday.

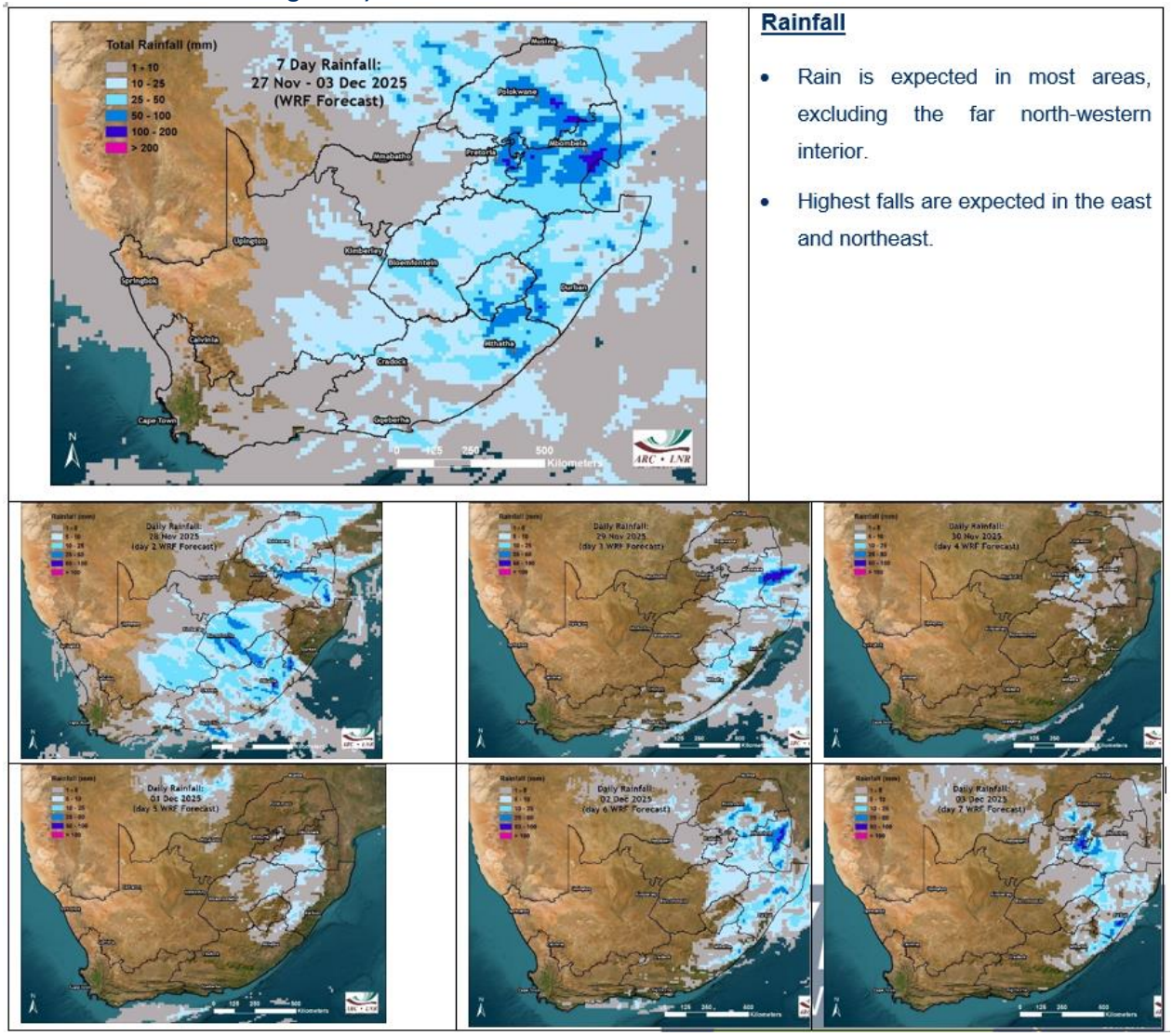
- Maximum temperatures over the eastern grain-production areas will range between 20°C and 27°C. Minimum temperatures will range between 9°C and 14°C.
- Maximum temperatures over the western grain-production areas will range between 26°C and 35°C, with the hottest conditions expected next week. Minimum temperatures will be in the order of 15°C to 21°C.
- **Friday (28th):** Partly cloudy to cloudy and cool over the eastern parts with showers. It will be warm in the west and partly cloudy, becoming cloudy with scattered thundershowers later from the west. .
- **Saturday (29th):** Partly cloudy and warm, but sunny in the west. Moderate to fresh westerly winds are expected over the western to central parts. Isolated thundershowers are expected over the north-eastern and eastern areas.
- **Sunday (30th):** Partly cloudy and warm with very isolated thundershowers over the western to central parts and moderate westerly winds. Isolated to scattered thundershowers are possible in the east and northeast.
- **Monday (1st):** Partly cloudy and warm with fresh northerly to north-westerly winds and scattered thundershowers over the central to eastern parts.
- **Tuesday to Thursday (2nd – 4th):** Current forecasts indicate partly cloudy and warm conditions over the region during this period with isolated to scattered thundershowers. Again, thundershowers may still be confined to the central to eastern areas with dry, warm weather in the west. It is possible that there may be cooler, cloudy conditions at times during this period too, over the eastern parts of the region, with more widespread thundershowers. Forecasts are uncertain this far ahead of time.

Cape Wine Lands and Rûens:

Summer-like conditions will persist through the period except for a short period with showers later Friday/early Saturday when a cold front will move across the region. The wind during the period will have a southerly to south-easterly direction and will be strong to gale-force over the southwestern parts most of the time. It will become hot during the days from Sunday onwards over the northern to western parts, including the Swartland. The southerly, onshore component in the wind will keep the Garden Route cooler, and light showers are possible over this region, particularly on Friday/Saturday and possibly again by Tuesday.

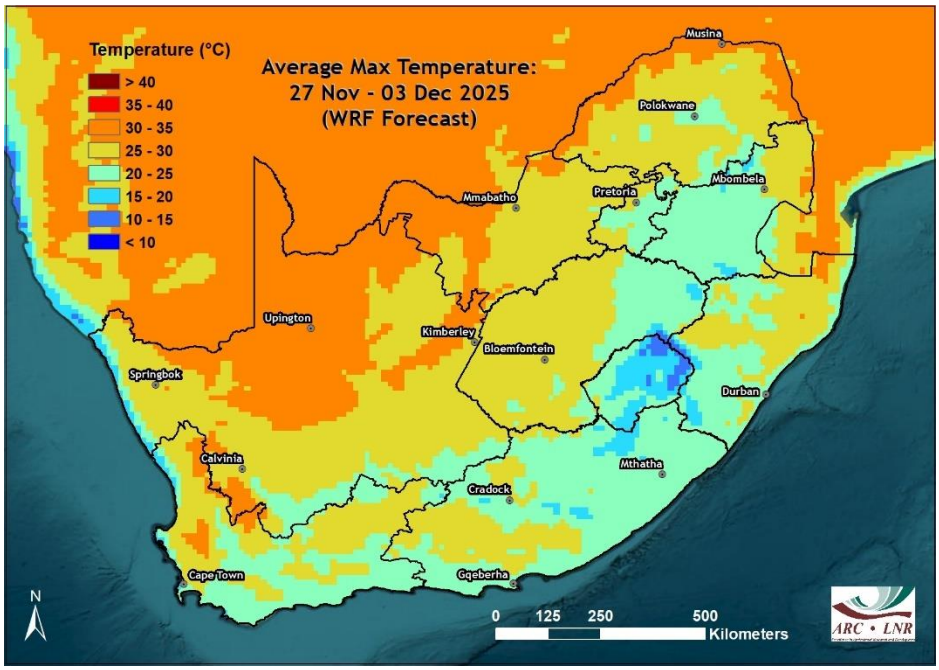
Daily summary of expected conditions (28 Nov – 3 Dec)

(GFS forecast downscaled using WRF)



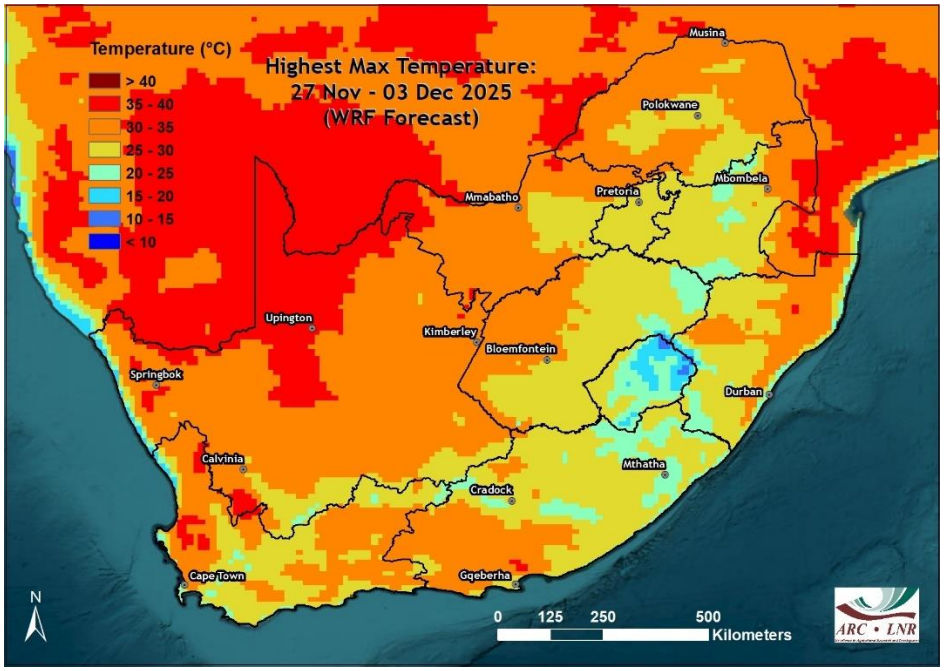
- Scattered to widespread thundershowers are expected over most of the country on Friday except in the far west. Light showers are possible over the winter rainfall region, including the West Coast.
- Thundershowers will be confined to eastern and southeastern areas by Saturday, with light showers in the south.

- Thundershowers will shift further east on Sunday, with dry conditions over most of the interior.
- Isolated to scattered thundershowers will occur mostly over the eastern parts next week from Monday to Wednesday.



Average maximum temperatures

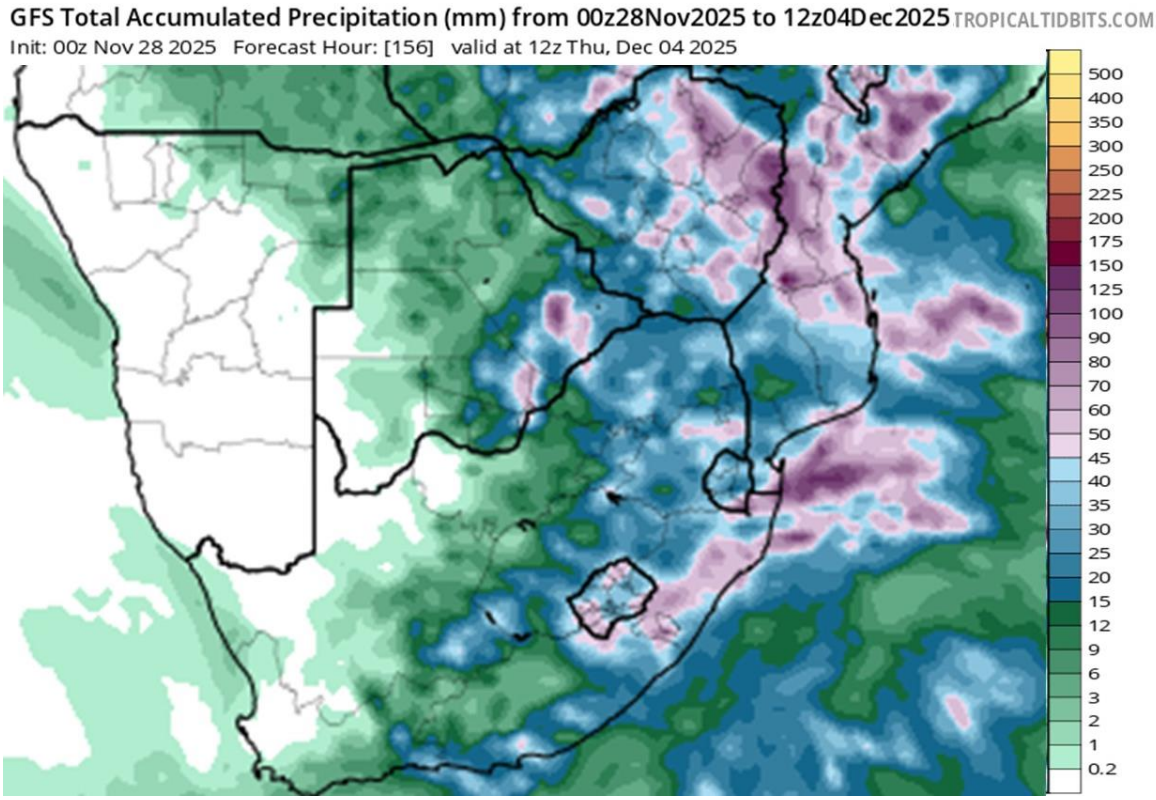
- Average maximum temperatures will range between 20 and 30°C over most of the interior, and it will be cooler than during the previous week.

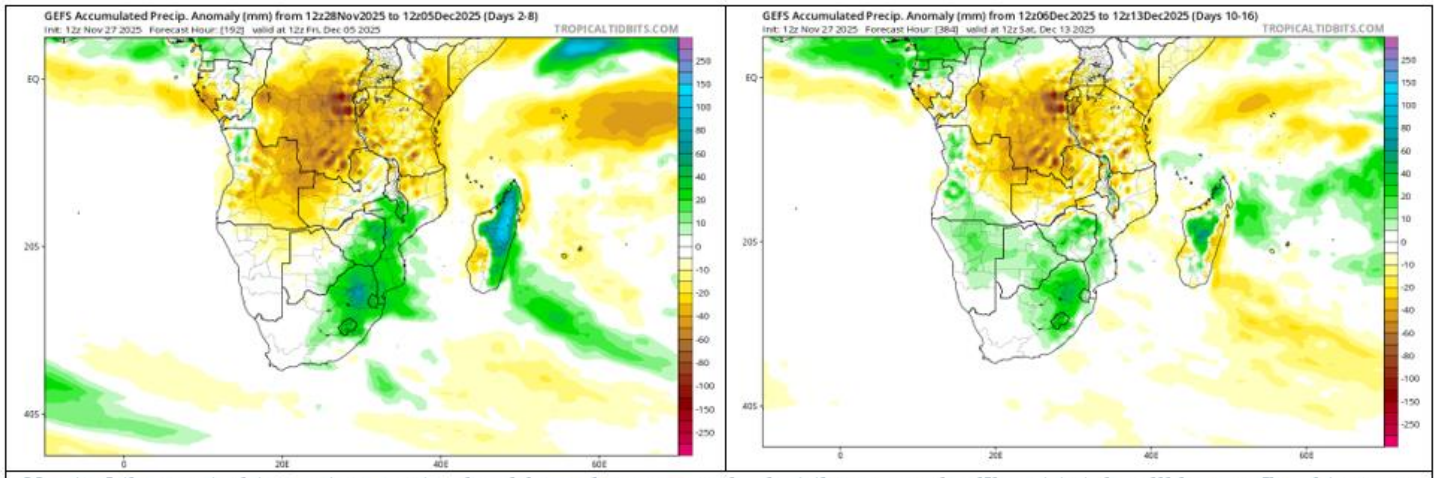


Highest maximum temperatures

- **Highest temperatures, exceeding 35°C, are expected:** Over the western to northern parts of the Northern Cape and western to north-western parts of the Western Cape next week.
- It will be hot over the Lowveld and north-eastern KZN on Friday and possibly again by Tuesday.

Medium term rainfall summary





Most of the central to eastern parts should receive some rain, but the more significant totals will be confined to areas over the eastern to southern parts while it will be dry towards the west and northwest (top). The GFS ensemble forecast (consisting of several forecasts with small initialization differences) favors above-average rainfall over the eastern parts during the next few days (left), continuing into at least the second week of December (right).

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 models (GFS and the ECMWF model) considered here in the beginning of a week-long period (28 November – 4 December). 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:

Cloudy and cool conditions may result in the development and spread of fungal pathogens:

- Eastern parts of the summer-grain production region: **Friday (28th).**

It will be hot, with maximum temperatures exceeding 35°C:

- Central to north-western and northern parts of the Northern Cape, northern to western parts of the Western Cape, including the Swartland: **Sunday to Thursday (30th – 4th).**
- Lowveld and north-eastern KZN: **Friday (28th) and Tuesday (2nd).**

Warm to hot, dry and at times windy conditions will increase the fire hazard where vegetation is dry:

- South-western interior, including the western to northern parts of the winter rainfall region: **Sunday to Thursday (30th – 4th).**

Some thundershowers may become severe, producing strong, gusty winds and hail:

- Eastern parts of the Northern and Western Cape Provinces, western parts of the Eastern Cape, south-western parts of North West and western to central parts of the Free State: **Friday (28th).**
- KZN interior, Mpumalanga, eastern to northern Free State, Gauteng, Limpopo: **Sunday to Wednesday (30th – 3rd). These conditions may occur further west on Thursday (4th), but forecast are uncertain.**

Strong to gale-force south-easterly winds are possible:

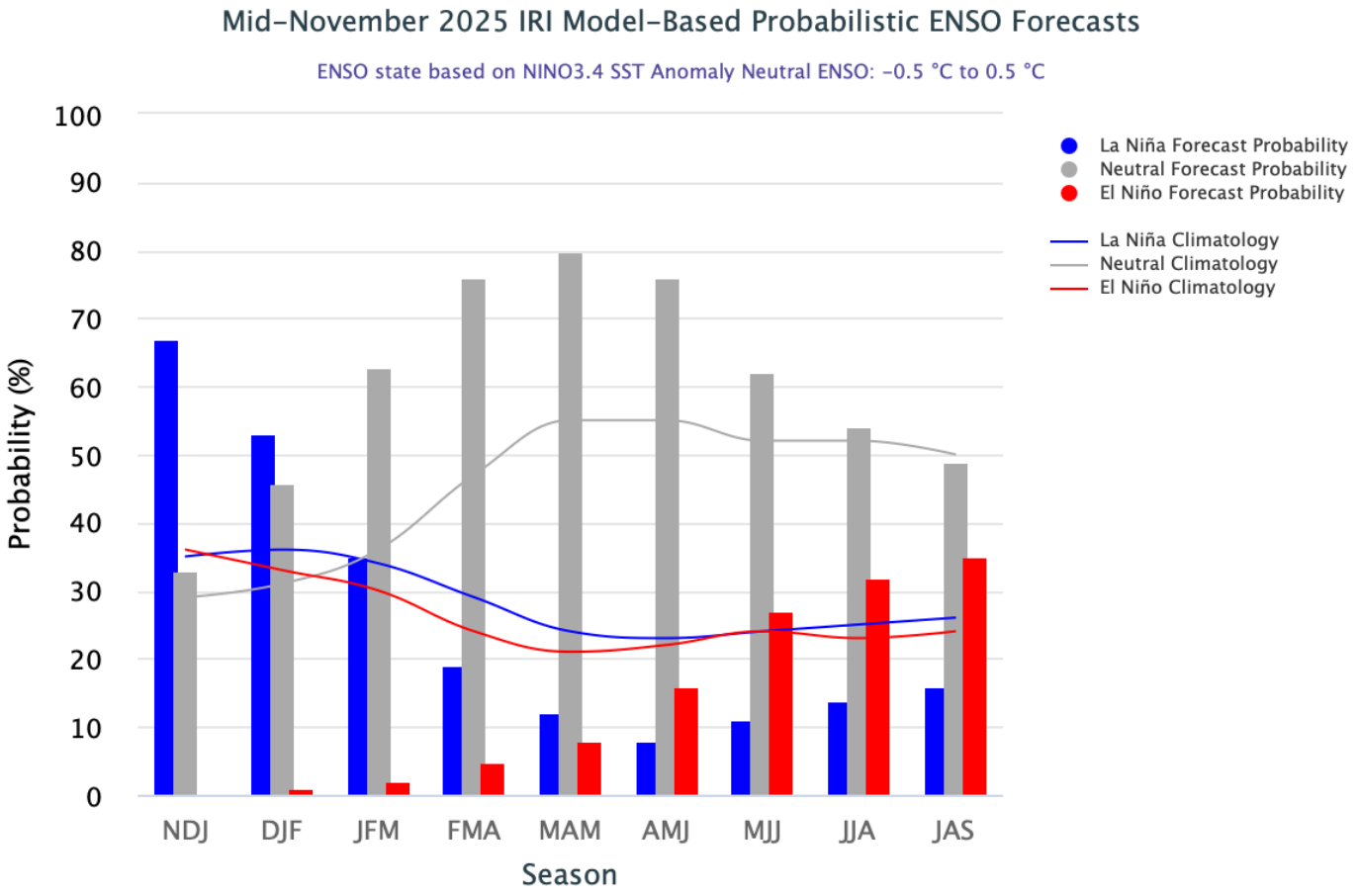
- South-western parts of the Western Cape: **Friday to Thursday (28th – 4th).**

Seasonal forecast

Current ENSO conditions:

While only some institutions classify the climate state as a La Niña currently, La Niña conditions, both in the ocean and atmosphere, are present. If these conditions persist sufficiently long, the period will be recognized as a La Niña event.

The graph below shows the International Research Institute for Climate and Society (IRI) ENSO forecast, with La Niña conditions expected to reach a peak in mid-summer.



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

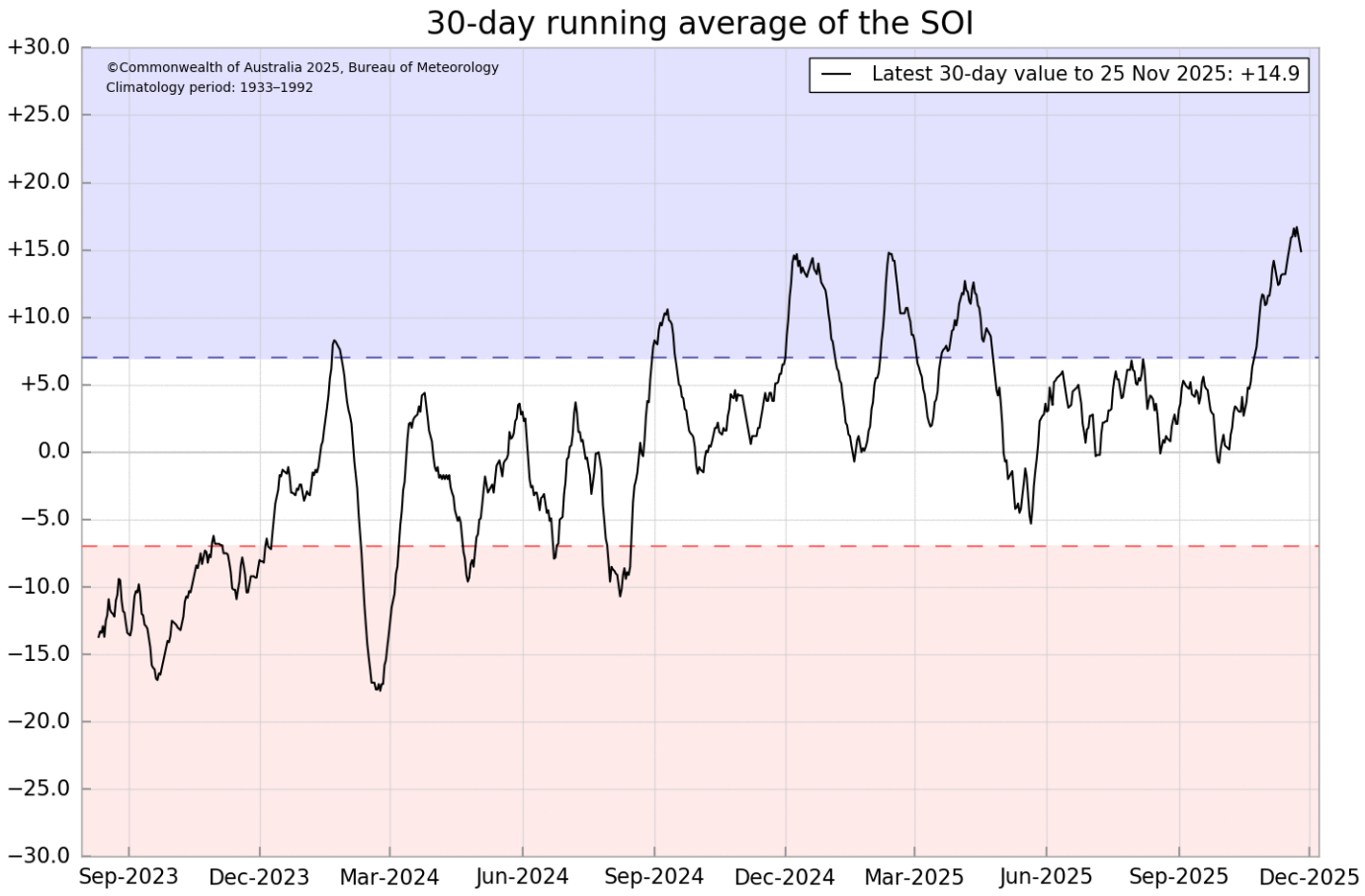
In their most recent update (issued 19 November), the IRI states that" As of mid-November 2025, the equatorial Pacific is in a La Niña state, with sea surface temperatures in the Niño 3.4 region hovering near the La Niña threshold and continuing a gradual cooling trend. The IRI ENSO plume forecast places the probability of La Niña at 67% for November–January, easing to 53% for December–February 2025/26. From January–March onward, conditions begin shifting toward ENSO-neutral, which becomes the dominant outlook. Neutral probabilities rise to 63% at the start of the year and remain the leading state through the forecast period ending in July–September 2026. El Niño probabilities stay very low—below 10%—through March–May 2026, but gradually increase thereafter, reaching 16% in April–June, 27% in May–July, 32% in June–August, and 35% by July–September 2026."

In their most recent update (27 November), the **Australian Bureau of Meteorology** states that "El Niño–Southern Oscillation (ENSO) remains neutral but there are signs La Niña may be developing:

- Latest assessments of the El Niño–Southern Oscillation (ENSO) indicate La Niña is underway. There are clear signs the tropical Pacific ocean and atmosphere are now coupled, meaning they are acting to reinforce and sustain the La Niña pattern.
- Observations in the tropical Pacific Ocean have been consistent with La Niña conditions since early October. The latest relative Niño3.4 SST index value for the week ending 23 November 2025 is −0.93 °C. Sustained values below −0.8 °C are consistent with a La Niña pattern. Weekly values of the relative Niño3.4 index have been fluctuating around the La Niña threshold since mid-to-late September.
- Atmospheric indicators, such as trade winds, pressure and cloud patterns over the equatorial central Pacific, also show consistent signs of La Niña. As at 23 November 2025, the 30-day Southern Oscillation Index (SOI) is +16.1, while the 90-day SOI value is +8.5. Sustained 90-day SOI values above +7.0 are indicative of La Niña. Trade wind strength and cloud patterns have been indicative of La Niña since at least mid-to-late September.
- Short-term 30-day SOI values are likely more positive due to Severe Tropical Cyclone Fina developing near Darwin from 19 November 2025, lowering surface pressure in the region. Transient tropical systems can affect the short-term SOI during the summer months and are not necessarily a reflection of the state of the climate system.
- The Bureau's model currently predicts that tropical Pacific Ocean temperatures are likely to remain at La Niña levels until early 2026 before returning to neutral. This timing aligns with most international models assessed..." ***http://www.bom.gov.au***

The Southern Annular Mode (SAM) is currently still in negative territory and expected to further decrease during the next few days. Negative values in the SAM are associated with enhanced westerly winds and influx of dry air over the interior, especially over the western to central parts. This sometimes increase the tendency for thundershowers over the central to eastern parts to become severe.

The 30-day Southern Oscillation Index (SOI) have increased further +14.9 and therefore representing atmospheric pressure patterns in the Australia – Pacific region indicative of La Niña conditions. Such atmospheric conditions are positively correlated with above-normal rainfall over the summer rainfall region o South Africa.

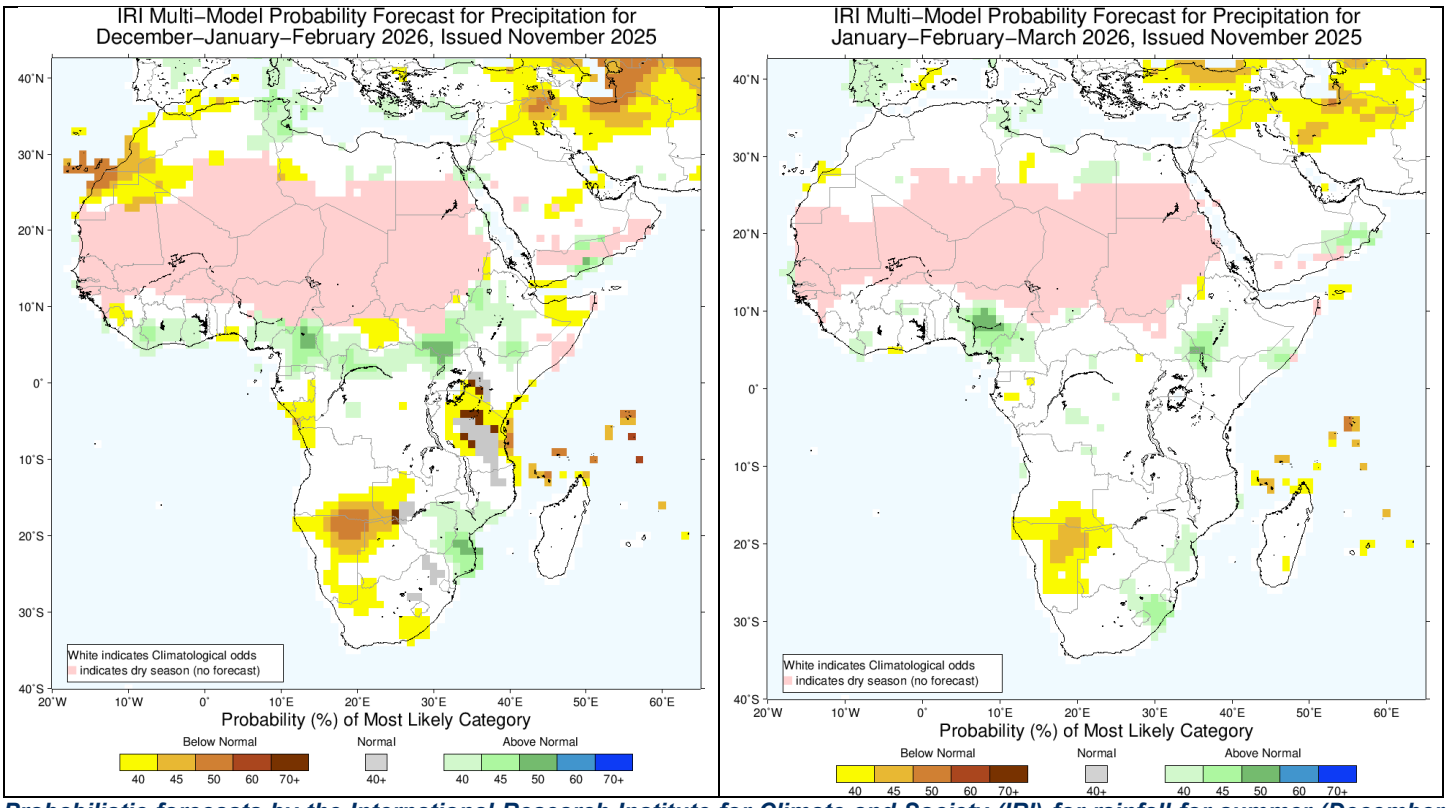


Australian Bureau of Meteorology - **http://www.bom.gov.au**

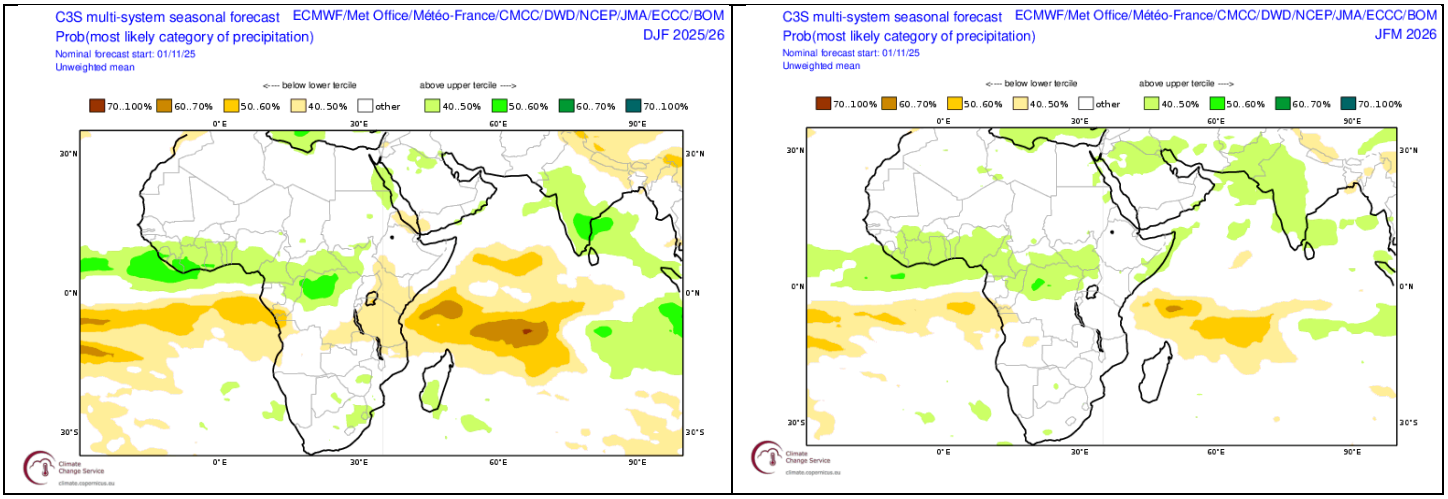
Seasonal forecasts issued by various international institutions

Seasonal forecasts (updated in November 2025) continue to indicate normal to above-normal rainfall over parts of the summer-rainfall region, especially in the east. This outlook is linked to expectations that the current weak La Niña in the Pacific Ocean will strengthen.

However, the projected wet signal for mid- and late summer has weakened considerably compared to the September forecast update. As a result, the western parts of the country are now expected to be drier than normal during this period.



Probabilistic forecasts by the International Research Institute for Climate and Society (IRI) for rainfall for summer (December 2025 to February 2026, left – Forecast issued in 2025-11) and late summer (January to March 2026, right – Forecast issued in 2025-11).



Probabilistic multi-model forecasts by the multi-system COPERNICUS Programme for rainfall for mid-summer (December 2025 to February 2026, left – Forecast issued in 2025-11) and mid- to late summer (January to March 2026, right – Forecast issued in 2025-11).

CUMULUS seasonal outlook

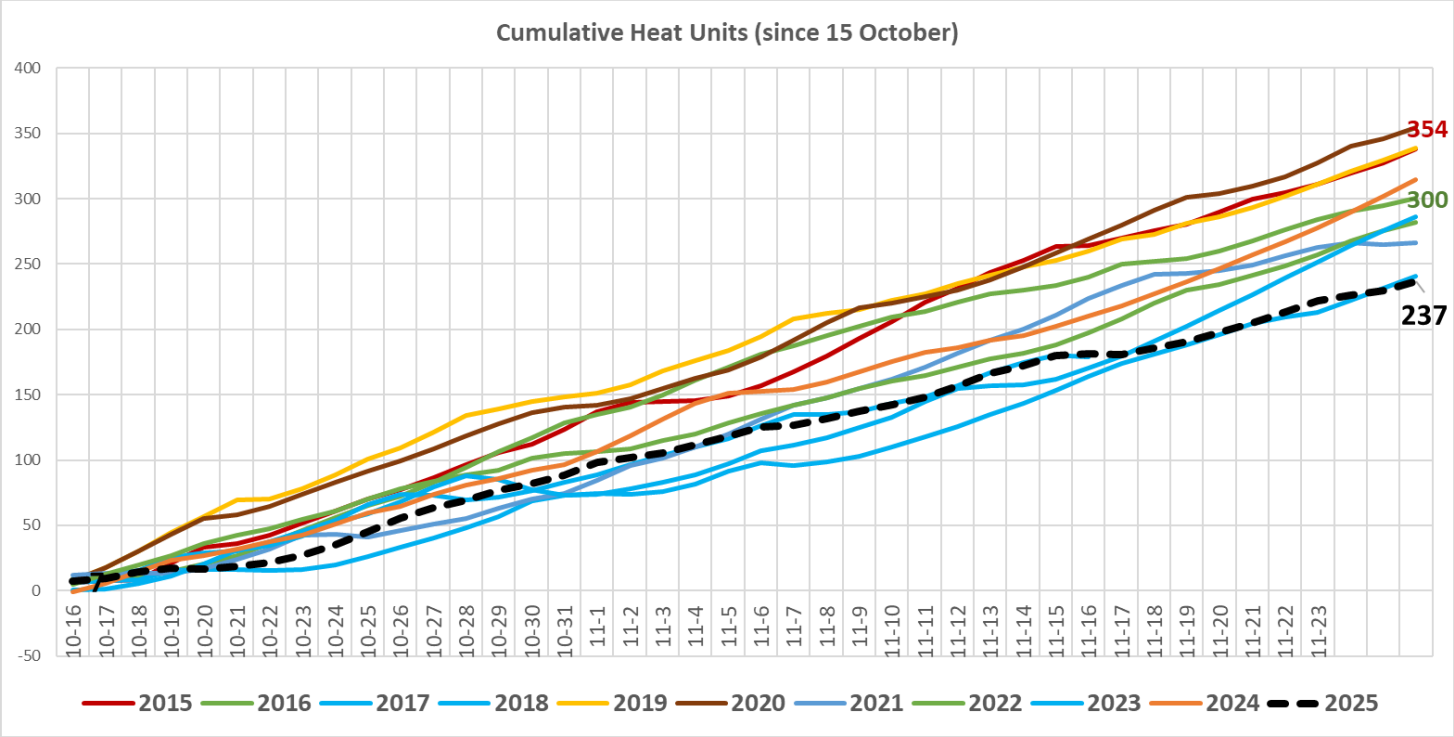
This outlook is based on the typical observed rainfall patterns over the north-eastern half of the country (including most of the summer grain-production region), which are associated with the cyclic variability of the global climate system. Summers similar to 2025/26 usually experience near-normal rainfall totals over the north-eastern parts of the country. There is a tendency for above-normal rainfall during January, while relatively dry conditions are usually observed during February and early March.

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

- **October**: Near-normal to above-normal rainfall over the north-eastern half of the summer rainfall region.
- **November**: Near-normal to below-normal rainfall over the north-eastern half of the summer rainfall region.
- **December**: Somewhat wetter earlier in the month but usually trending drier into early January over the north-eastern half of the summer rainfall region.
- **January**: Relatively dry early in the month, but above-normal rainfall is possible during the second half over the north-eastern half of the summer rainfall region.
- **February-early March**: Near-normal to below-normal rainfall over the north-eastern half of the summer rainfall region.
- **Mid- to late March**: Above-normal rainfall over the north-eastern half of the summer rainfall region.

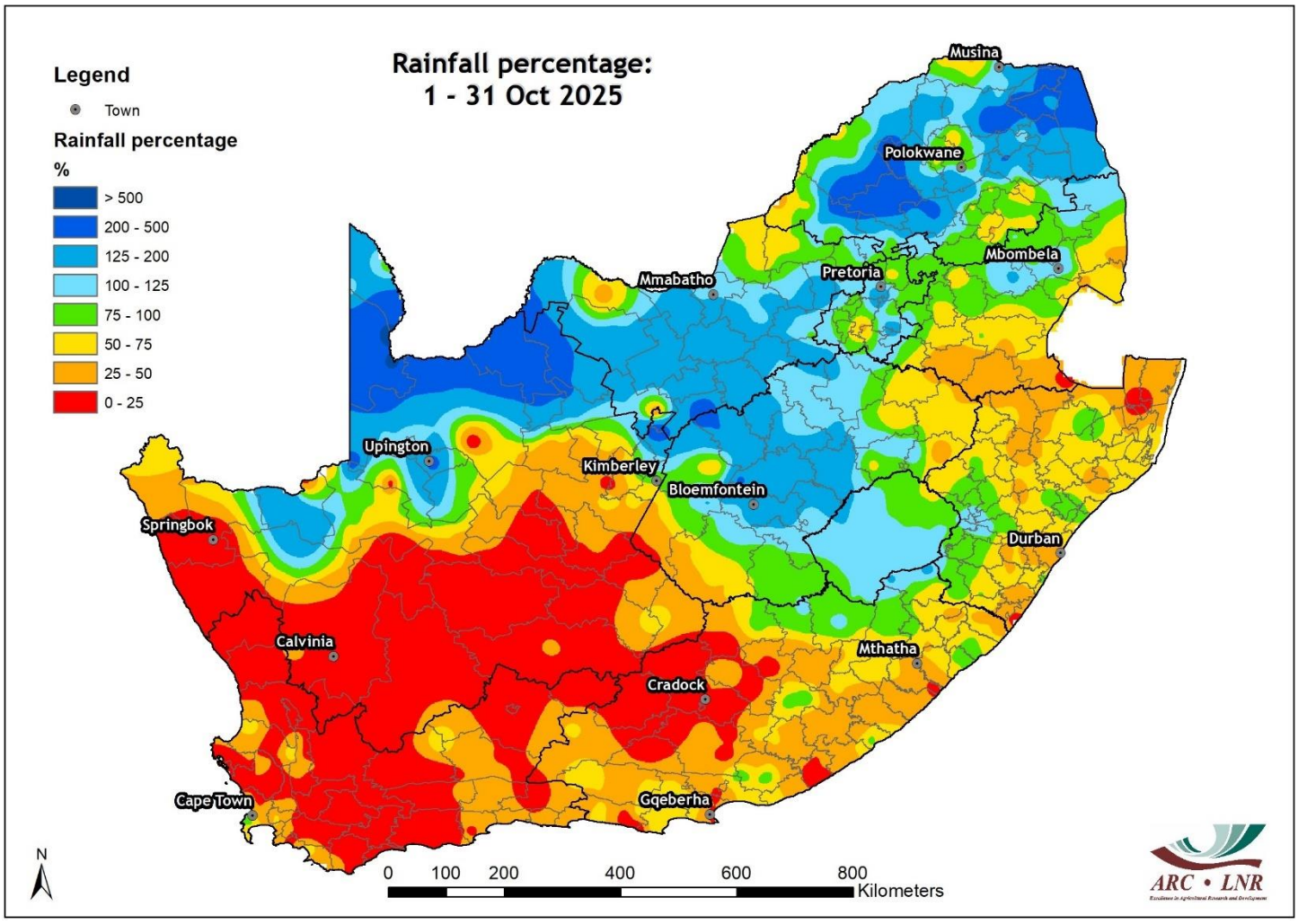
Observed conditions

Cumulative heat units since 15 October



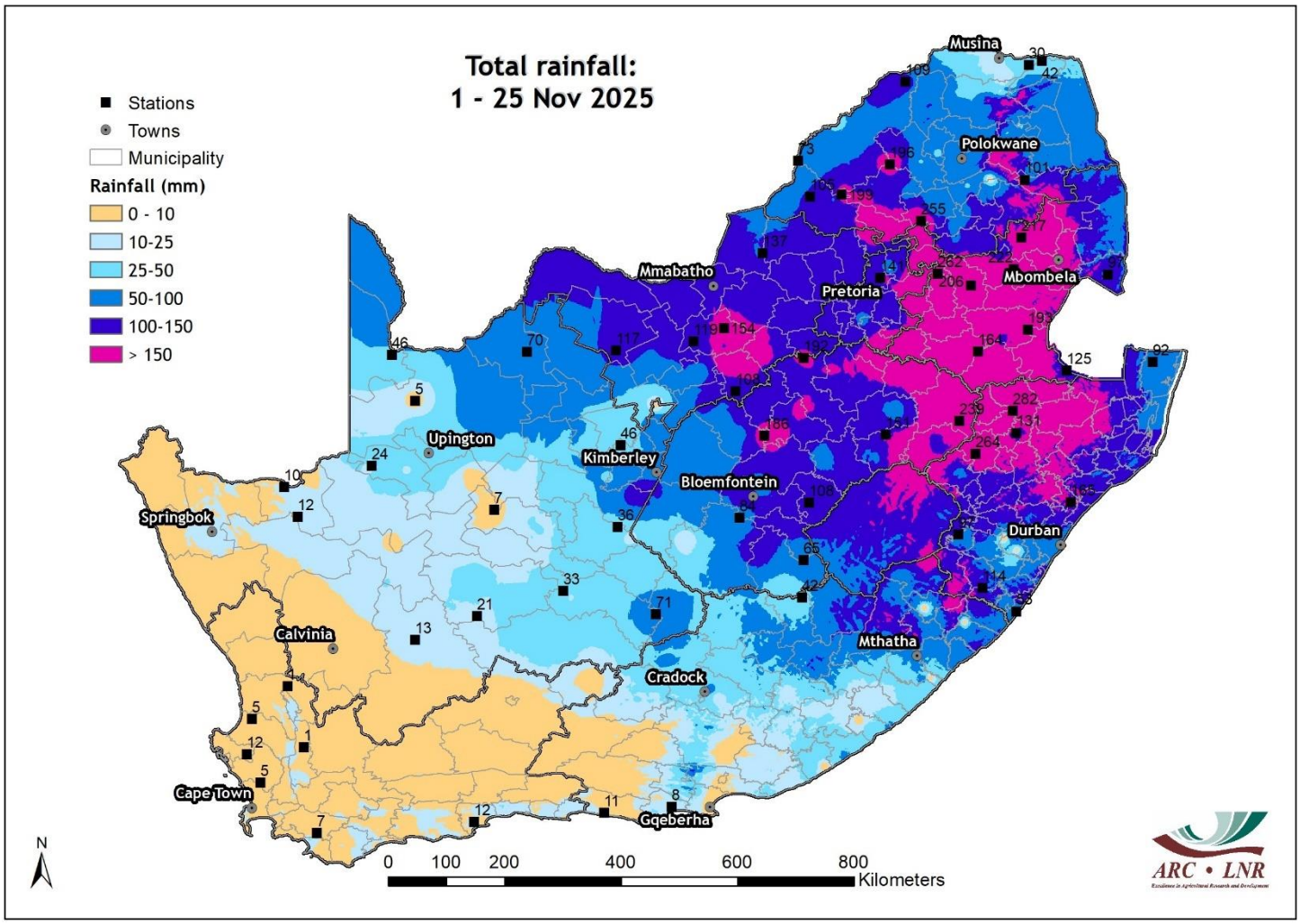
Accumulated heat units in the Ermelo region. The current summer (broken black line) has seen the lowest accumulation of heat units relative to the other summers since 2015. At 237 compared to the average value in the order of 300, this summer lags about 20% behind.

Rainfall (% of long-term mean): 1 –31 October 2025



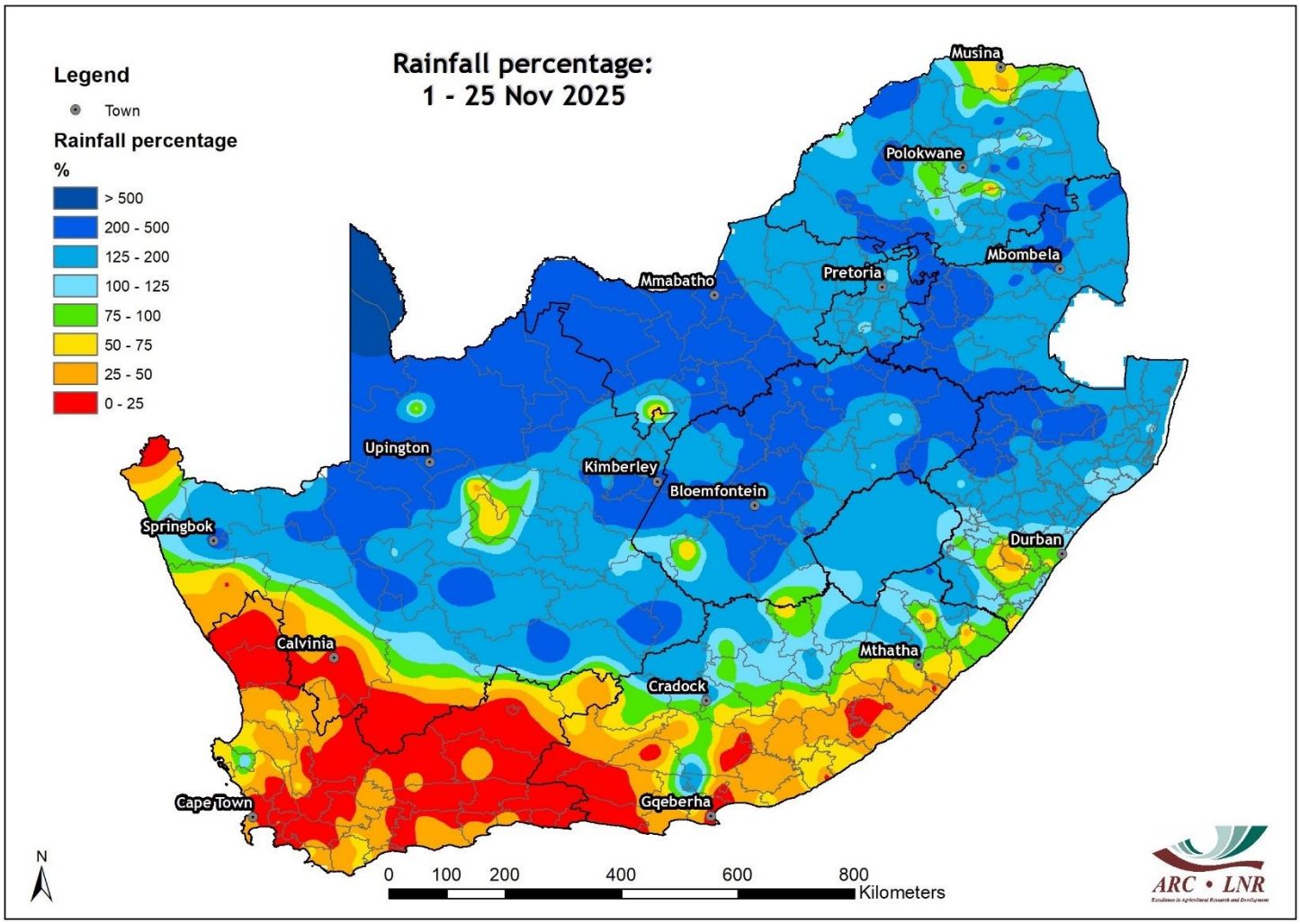
Above-average rainfall has occurred over some of the northern parts of the country in October, but most of the southern and western parts, as well as large areas of the northern Free State, Mpumalanga, and KwaZulu-Natal, experienced below-average rainfall.

Rainfall (mm): 1 to 25 November 2025



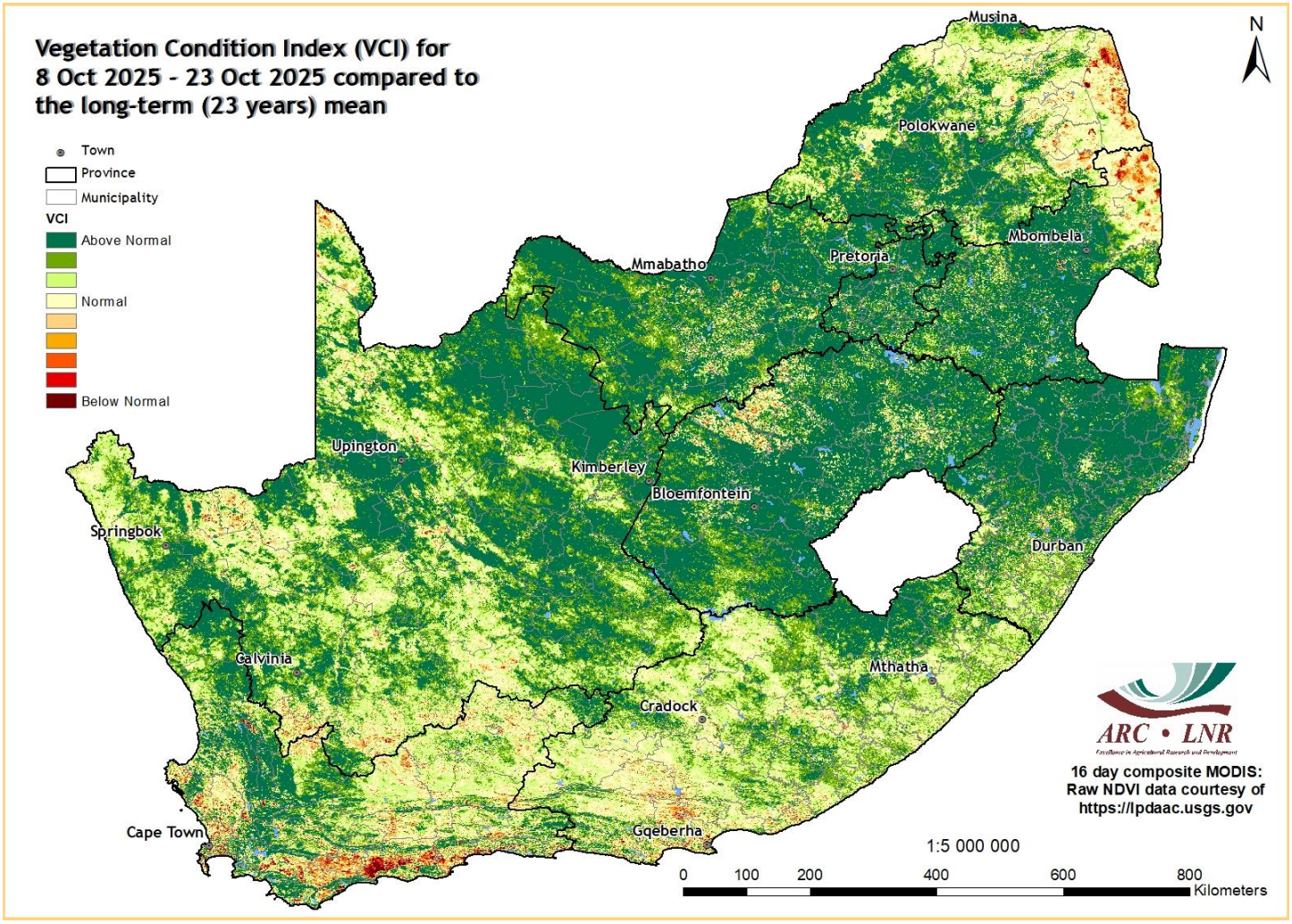
Large areas in the east, including most of the summer-grain production region, have received more than 100 mm of rain so far in November. Much of Mpumalanga (excluding the Lowveld) and adjacent areas in the surrounding provinces recorded more than 150 mm. In contrast, little to no rain occurred over the southwestern interior, and low totals were observed across the winter rainfall region.

Rainfall (% of long-term mean): 1 –25 November 2025



Above-average rainfall occurred over most of the summer rainfall region. The Eastern Cape and Western Cape, including the winter rainfall region, received below-average rainfall.

Vegetation Condition Index: October 2025



Vegetation activity by October was above normal over most areas, following widespread rain above-normal rainfall until April and again by August-October over large parts of the interior. The Lowveld is an exception, where it has been relatively dry since February. Over the winter rainfall region, especially the eastern parts of the region, and further east along the Garden Route, below normal rainfall is having a negative impact on vegetation activity.

Sources of information

Seasonal forecasts: Published by the COPERNICUS Programme (***https://climate.copernicus.eu/seasonal-forecasts***)

Rainfall, temperature and wind maps over South Africa for the past week:
Agricultural Research Council - Institute for Soil, Climate and Water (ISCW) – Climate Data Bank. Data recorded by the automatic weather station network of the ARC-ISCW.

Vegetation condition maps: Copernicus Global Land service, distributed by VITO.

Information related to: ENSO, IOD and SOI:
Australian Bureau of Meteorology - ***http://www.bom.gov.au***
Climate Prediction Center - ***http://www.cpc.ncep.noaa.gov***
International Research Institute for Climate and Society- ***http://iri.columbia.edu/***

Information related to the SAM:
The Annular Mode Website - ***http://www.atmos.colostate.edu/ao/index.html***

SST map:
NOAA Climate Prediction Center - ***http://www.cpc.ncep.noaa.gov***

Daily conditions over South Africa:
WRF model downscaling of GFS forecasts.

Fires:
MODIS data, distributed by the Land Processes Distributed Active Data Center (LP DAAC), located at the US Geological Survey's EROS Data Center

Soil moisture:
https://nasagrace.unl.edu/

Precipitation and temperature outlooks for the coming week:
https://www.tropicaltidbits.com/