



RISK MANAGEMENT 2025/26

CUMULUS

by J Malherbe, R Kuschke



Contents

Summary	3
More early summer thundershowers expected	3
Overview of expected conditions over the main agricultural production areas	4
Daily summary of expected conditions (10 – 15 October)	6
Medium term rainfall summary	7
Possible extreme conditions - relevant to agriculture	8
Seasonal forecast	9
Current ENSO conditions:	9
Seasonal forecasts issued by various international institutions	11
CUMULUS seasonal outlook	12
Observed conditions	13
Rainfall (%): April to August 2025	13
Rainfall (mm): 1 September – 8 October 2025	14
Rainfall (% of long-term mean): 1 September – 8 October 2025	15
Rainfall (% of long-term mean): 1 – 8 October 2025	16
Vegetation Condition Index: September 2025	17
Sources of information	18

Summary

More early summer thundershowers expected

It will be relatively warm with isolated to scattered showers and thundershowers during the next few days over the summer rainfall region. Most of the interior will at some time experience thundershowers. Thundershowers will be more widespread this weekend as an upper-air system will traverse the interior and result in cloudy, mild conditions with showers and thundershowers moving through from west to east, including over the summer-grain production region.

By next week, circulation patterns will change, and drier westerly winds will start dominating the central to western and southern parts while it will also be cooler over the winter rainfall region with increased cloud cover and light showers at times. Thundershowers are still expected over the central to eastern parts of the summer rainfall region, while the central to southern and western interior should be dry. While a more westerly flow over the country will result in cooler conditions over the southern to western parts, the same circulation type will result in it becoming progressively hotter over the eastern to northeastern parts towards the middle of next week.

While precipitation is expected over most of the interior during the next few days, circulation patterns are not strongly positive for widespread above-normal rainfall currently. The intensity and position of atmospheric pressure systems support some precipitation and are not strongly supportive of widespread above-normal rainfall over the summer rainfall region currently. Moreover, several upper-air troughs and low-pressure systems locate far to the west, resulting in some rain over the western interior which is not necessarily an early-summer rainfall region. This feature is not necessarily a good sign for widespread rain over the central parts later this summer, but also not necessarily a strong negative sign.

Looking further ahead, the circulation patterns are expected to remain neutral for the remainder of October, with no indication currently of either very wet or dry conditions later this month. The atmospheric circulation patterns by next week will however result in the influx of drier, cooler air over the southern to western parts, associated with lower rainfall on average over the interior. This shift will happen in association with westerly winds on average locating further north over the southern hemisphere during the next few days. There are also some indications of drier conditions possible later in the month, associated with the expected areas of convection along the equator, favoring the Indian Ocean.

Given the current expected development of a La Niña, seasonal forecasts are indicative of a relatively wet summer to be expected over the interior, especially towards the mid-summer to late-summer period.

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

- Temperatures will on average be near normal to above normal for this time of the year.
- No frost is expected in the near term, but a cold front towards the middle of next week may result in colder conditions especially over the southern interior with the potential for frost over the southern parts according to current forecasts.
- It will be hot over the lower-lying northeastern parts, especially from the weekend onwards.
- Most of the summer rainfall region should experience thundershowers at times during the next few days.
- Conditions will remain favorable for thundershowers over the interior, but forecasts indicate drier conditions over the western to central parts by early next week, under the influence of dry westerly winds, while thundershowers

will likely focus somewhat further east to the central and eastern parts. Much of Limpopo and eastern Mpumalanga will remain dry.

- Total rainfall will remain below 20 mm over most parts, but some areas may receive higher totals during the period, including parts of Mpumalanga eastern Free State and KZN.
- Cloudy and mild conditions with showers and thundershowers will occur over large parts during the weekend, when a cloud band is expected to move from the western interior on Saturday to the eastern parts by Sunday.
- Dry, westerly to southerly winds are expected to invade the western to southern parts early next week, with lower temperatures over those areas. The associated frontal activity, low pressure systems and onshore flow may then also result in light showers at times over the winter rainfall region and further east into the Little Karoo and southwestern parts of the Eastern Cape.
- The lower-lying northeastern parts (Limpopo River Valley and Lowveld) will be hot throughout the period. It will also be hot over the northern to eastern parts of KZN at times. Maximum temperatures will increase further over these areas during the first half of next week.
- Thundershowers during this early part of the summer rainy season usually have an enhanced tendency to become severe. While there will be certain areas where severe storms may develop over the next few days, this will not be significantly different from what is typical for this time of the year during thundershowers.
- The summer-grain production region will receive rain in the form of isolated to scattered thundershowers, but totals during the period will remain below 20 mm for the most part. Higher totals are possible in some areas, such as the eastern Free State. Cloudy, cooler conditions are possible during the weekend with more widespread showers and thundershowers. By early next week, dry westerly winds may result in clearance over the western parts of the region while some thundershowers are still possible over the central to eastern parts of the region. Temperatures will on average be near normal to above normal, but it will be cooler during the weekend with extensive cloud cover.
- **The winter rainfall region** will be warm to hot through the weekend, but cooler conditions will occur from later Sunday. It will be cool next week over with light showers in places and westerly to southerly winds when cold front will influence the region. Rainfall totals will be low and most places should receive less than 5 mm in total.

Overview of expected conditions over the main agricultural production areas

Upper-air conditions will be favourable for showers and thundershowers, especially during the weekend over the interior, moving eastwards from the western to central parts towards the eastern interior. Current forecasts indicate dry, windy conditions over the western to southern parts next week while isolated to scattered thundershowers may persist over the northern to eastern parts. It will be warm for the most part, but somewhat cooler during the weekend when cloud cover will dampen daytime temperatures.

Maize production region:

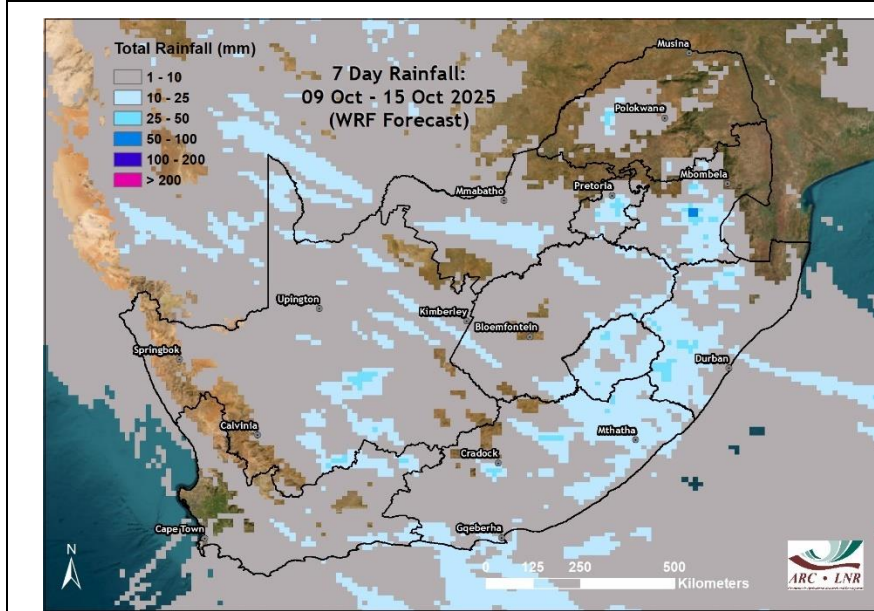
It will remain warm during the next few days over the region with typical spring thundershowers. There may also be a period of cloudy and mild conditions with more widespread showers and thundershowers during the weekend, advancing over the region from the west.

- Maximum temperatures over the eastern grain-production areas will range between 25°C and 30°C. Minimum temperatures will range from 13°C to 18°C.
- Maximum temperatures over the western grain-production areas will range between 23°C and 33°C, with the lower temperatures during the weekend under cloud cover, especially towards the southwest. Minimum temperatures will be in the order of 14°C to 22°C, with the lower temperatures also during the weekend and possibly by Thursday next week.
- **Thursday (9th):** Partly cloudy and warm. Isolated thundershowers are expected in the afternoon and evening except in the southwest. Moderate to fresh northerly to northeasterly winds are expected later in the day over the central to western parts.
- **Friday (10th):** Partly cloudy and warm with isolated thundershowers. Moderate to fresh north-westerly winds are expected over the central to western parts, becoming westerly later.
- **Saturday (11th):** Partly cloudy and warm, becoming cloudy and mild from the west with scattered showers and thundershowers over the central to western parts. Only isolated thundershowers are expected over the north-eastern parts of the region where it will remain warm. Moderate to fresh westerly winds are expected over the central to western parts at times, associated with the movement of showers/thundershowers from the west.
- **Sunday (12th):** Cloudy to partly cloudy and mild with scattered showers and thundershowers over the central to eastern and north-eastern parts, but warmer and dry in the west.
- **Monday to Thursday (13th – 16th):** Current forecasts indicate a continuation of the development of isolated to scattered thundershowers over the region, mostly confined to the central to eastern parts. There will be frequent influxes of moderate to fresh dry north-westerly to westerly winds over the western to central parts of the region, keeping thundershowers confined to the northeastern, eastern and possibly central parts of the region. Current forecasts indicate the possibility of cooler air invading the region from the southwest, but not indicative of frost. However, the situation will be monitored. Thundershowers may shift even further east by Thursday, with mostly dry conditions over the region according to current forecasts and thundershowers confined to the north-eastern parts of the region.

Cape Wine Lands and Ruens: It will be warm to hot until the weekend. Thundershowers are possible toward the northeast, over the interior, but current forecasts limit these to areas northeast of the region. It will become cooler from Sunday onwards, with isolated light showers in places, especially over the southern parts. Westerly to southerly winds will dominate from Monday to Wednesday.

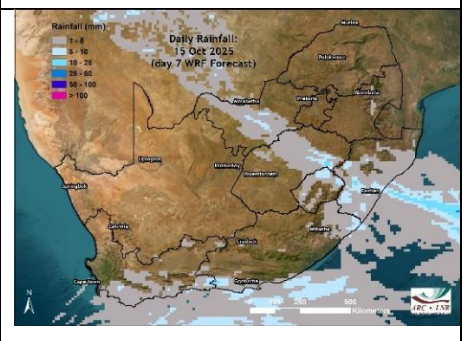
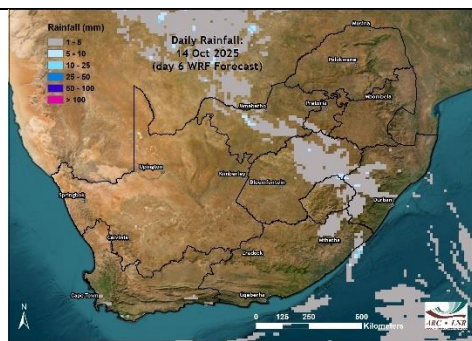
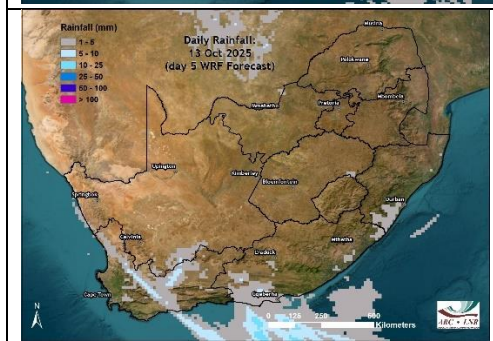
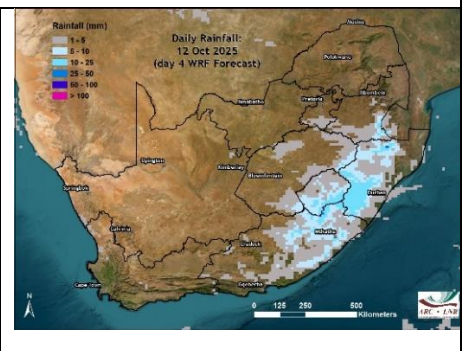
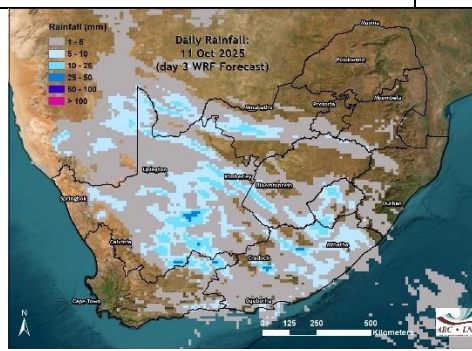
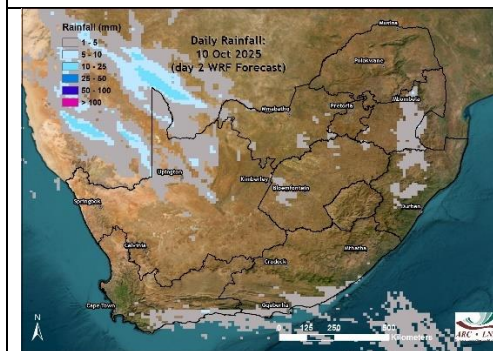
Daily summary of expected conditions (10 – 15 October)

(GFS forecast downscaled using WRF)



Rainfall

- Most of the country will receive some rain during the next few days, but totals are expected to remain below 20 mm over most areas.
- Light falls are also possible over the southern parts and winter rainfall region.
- The Limpopo River Valley and Lowveld will be dry.



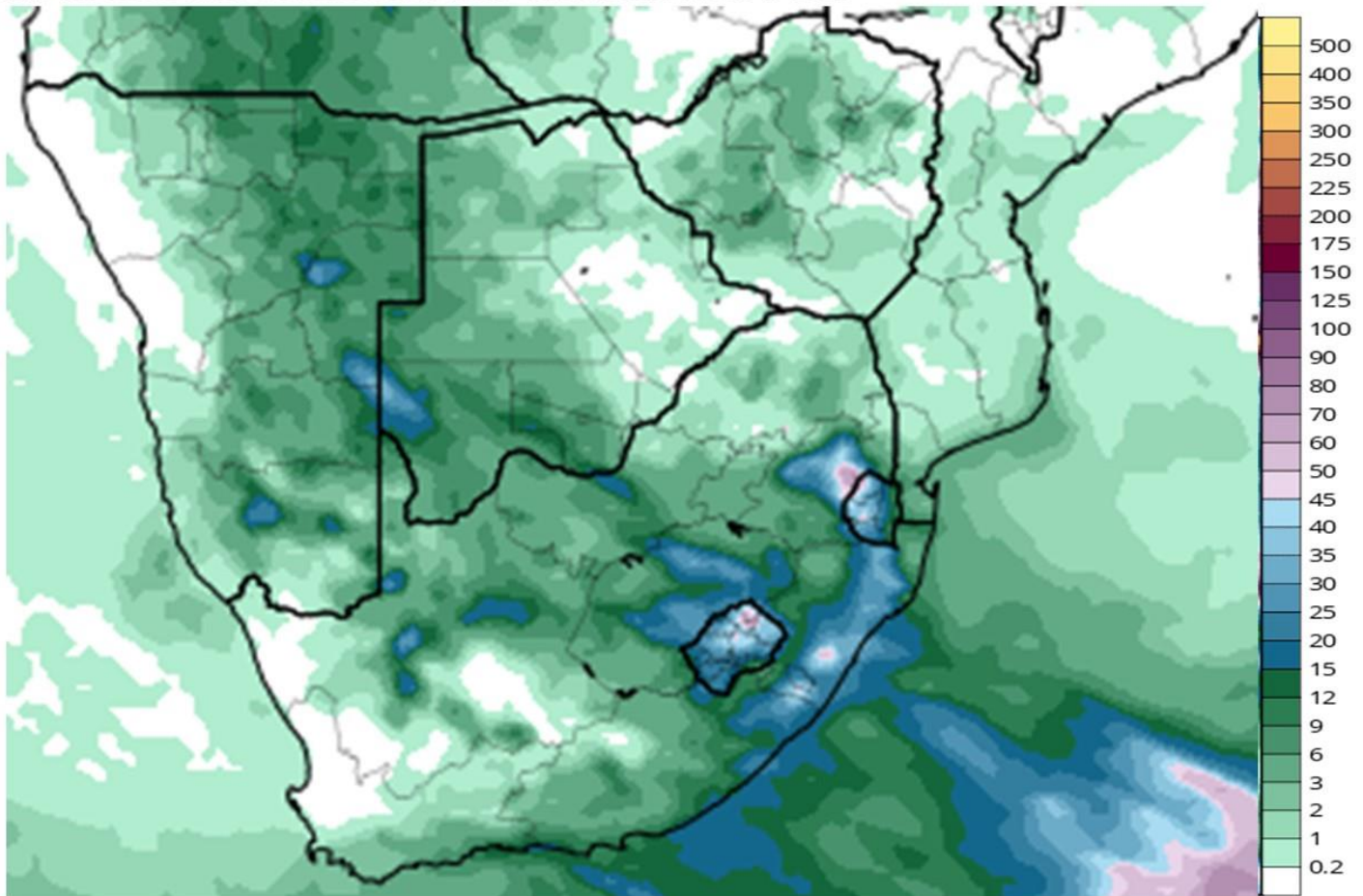
- Showers and thundershowers will occur over the interior, spreading from west to east during the weekend.
- Thundershowers (mostly isolated) will remain in place over the central to eastern parts, with the northeast expected to remain dry.
- Light showers are also possible in the southwest and south next week, mostly over parts of the winter rainfall region and along the Garden Route, into parts of the Karoo.

Medium term rainfall summary

GFS Total Accumulated Precipitation (mm) from 18z09Oct2025 to 06z17Oct2025

Init: 18z Oct 09 2025 Forecast Hour: [180] valid at 06z Fri, Oct 17 2025

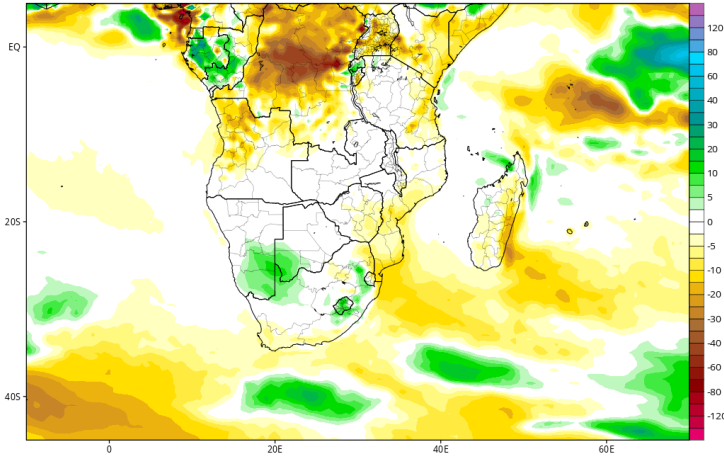
TROPICALTIDBITS.COM



GEFS Accumulated Precip. Anomaly (mm) from 00z09Oct2025 to 00z16Oct2025 (Days 1-7)

Init: 00z Oct 09 2025 Forecast Hour: [168] valid at 00z Thu, Oct 16 2025

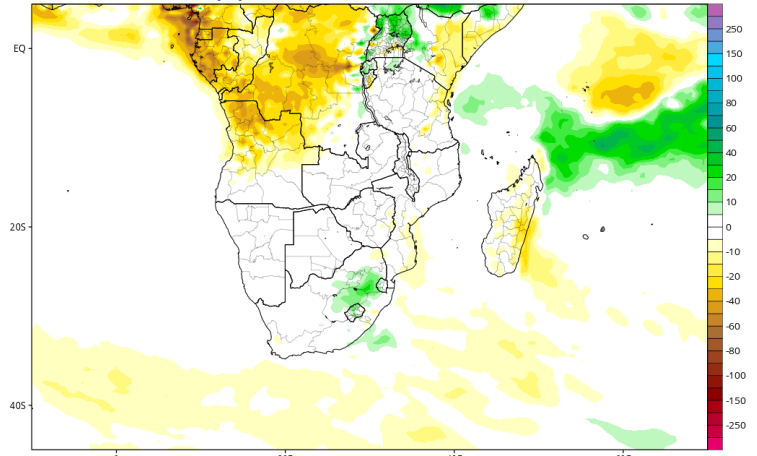
TROPICALTIDBITS.COM



GEFS Accumulated Precip. Anomaly (mm) from 18z16Oct2025 to 18z23Oct2025 (Days 8-14)

Init: 18z Oct 09 2025 Forecast Hour: [336] valid at 18z Thu, Oct 23 2025

TROPICALTIDBITS.COM



The GFS ensemble forecast (consisting of several forecasts with small initialization differences) favors near-average to above-average rainfall over the summer rainfall region, including the summer-grain production region and excluding the far northeastern parts. These forecasts suggest a continuation of early summer thundershowers over much of the interior for the next two weeks.

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 (10 - 16 October). 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:

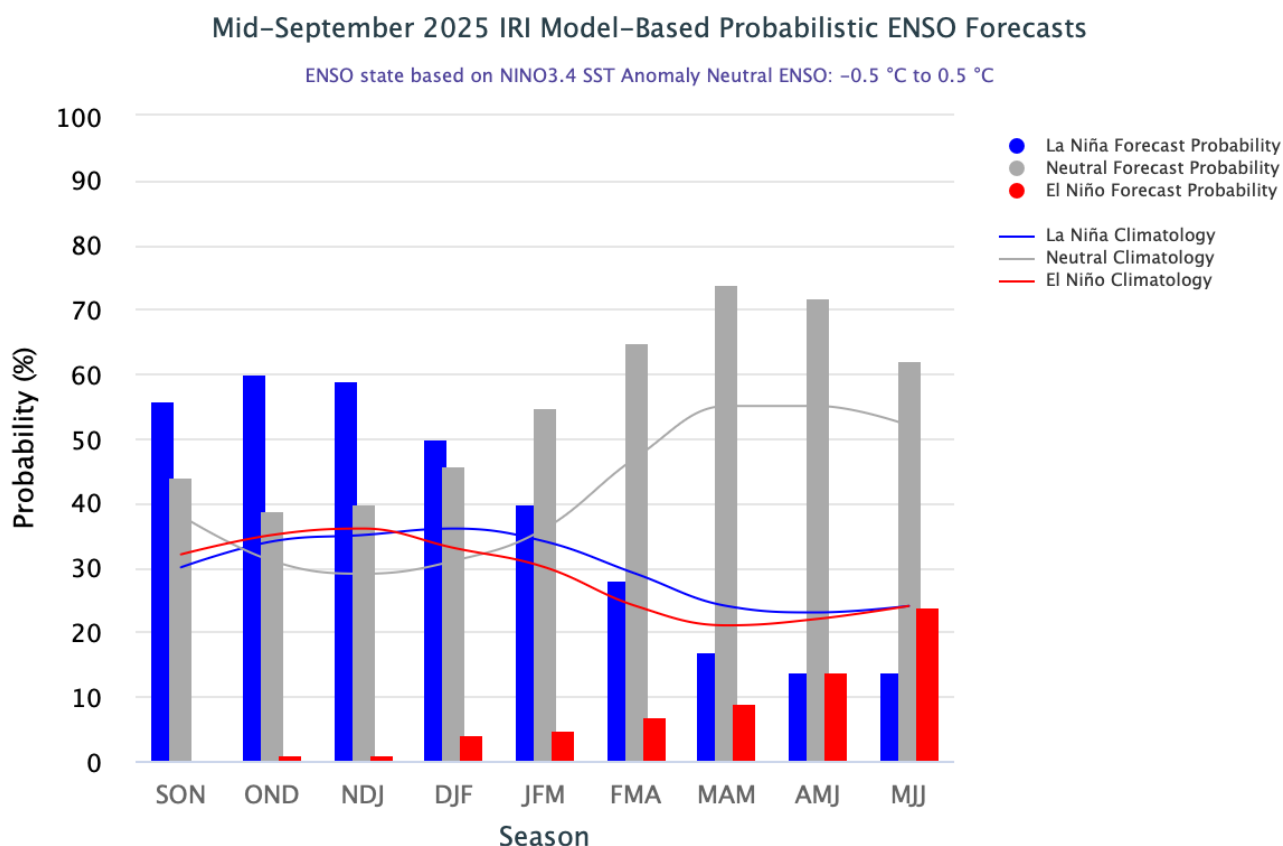
- **Some thundershowers will tend to become severe and produce strong wind gusts and hail:**
 - Interior of the Northern Cape, eastern parts of the Western Cape, northern to western parts of the Eastern Cape: **Saturday (11th).**
 - Central to eastern Free State, southern Mpumalanga: **Tuesday and Wednesday (14th, 15th).**
- **It will be hot, with maximum temperatures exceeding 35°C:**
 - Lowveld and Limpopo River Valley: **Saturday to Thursday (11th – 16th).**
 - North-eastern parts of KZN: **Saturday (11th) and Tuesday to Wednesday (14th – 15th)**
- **Dry, warm to hot and windy conditions will increase the fire hazard where vegetation is dry:**
 - Northern Interior: **Monday to Thursday (13th – 16th).**
- **Cool, wet and windy conditions may pose a threat to small stock:**
 - Karoo, southern interior of the Western and Eastern Cape Provinces: **Wednesday to Thursday (15th- 16th).**
- **Frost may occur:**
 - Over the southern interior, southern escarpment, depending on the intensity and movement of the cold front: **Thursday morning (16th)**

Seasonal forecast

Current ENSO conditions:

A weak La Niña is expected to develop by spring/early summer according to institutions such as the NOAA Climate Prediction Centre and the IR. Oceanic and atmospheric conditions currently support a trend towards the development of a La Niña

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/>

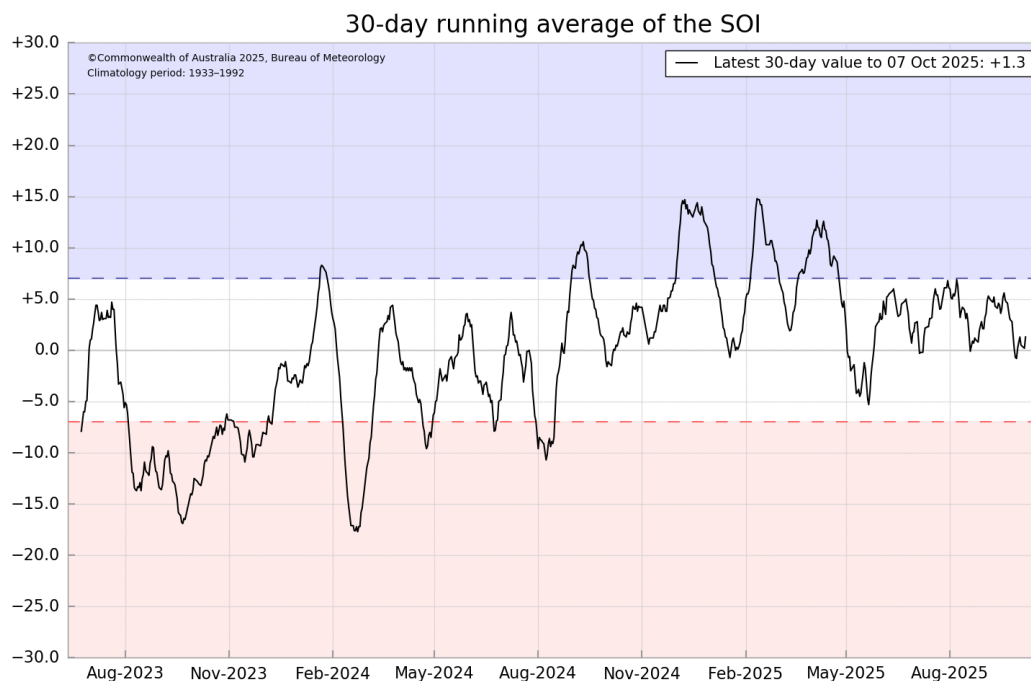
In their most recent update (issued 19 September), the IRI states that " As of mid-September 2025, both atmospheric and oceanic indicators continue to show ENSO-neutral conditions; however, there are indications that the tropical Pacific may evolve towards weak La Niña conditions in the coming months. The Southern Oscillation Index (SOI) for August 2025 fell within the ENSO-neutral ranges. Low-level (850-hPa) wind anomalies were easterly across the east-central and eastern Pacific. Below-average OLR, indicating enhanced convection and increased precipitation, was observed over parts of Indonesia, while above-average OLR, associated with suppressed convection and reduced precipitation, was present over and around the Date Line. Over the past few months, below-average sea surface temperatures have gradually intensified in the east-central and eastern Pacific. These anomalies have continued to strengthen, supported by enhanced trade winds across the equatorial Pacific. If this cooling trend persists, it may signal the onset of La Niña conditions in the coming months".

In their most recent update (30 September), 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) remains neutral. The latest relative Niño3.4 SST index value for the week ending 28 September 2025 is $-0.80\text{ }^{\circ}\text{C}$. Values between $-0.8\text{ }^{\circ}\text{C}$ and $+0.8\text{ }^{\circ}\text{C}$ are considered ENSO-neutral while sustained values below $-0.8\text{ }^{\circ}\text{C}$ (for at least 3 months) are considered indicative of La Niña. Sub-surface waters in the central tropical Pacific remain cooler than average although atmospheric indicators (pressure, wind and cloud patterns) remain mostly neutral.
- The Bureau's model currently predicts the tropical Pacific is likely to meet La Niña levels briefly during spring, before returning to neutral by summer. International models indicate some further cooling is likely, also reaching La Niña levels during spring, with all but one returning to neutral by the end of summer. For a La Niña event to be considered established, an atmospheric response would also need to be observed.....” <http://www.bom.gov.au>. ..

The Southern Annular Mode (SAM) is currently moving into negative territory. The expected negative values in the index are indicative of westerly winds and associated cold front locating further north than usual. This is also associated on average with lower rainfall over the summer rainfall region, especially the eastern to northeastern parts.

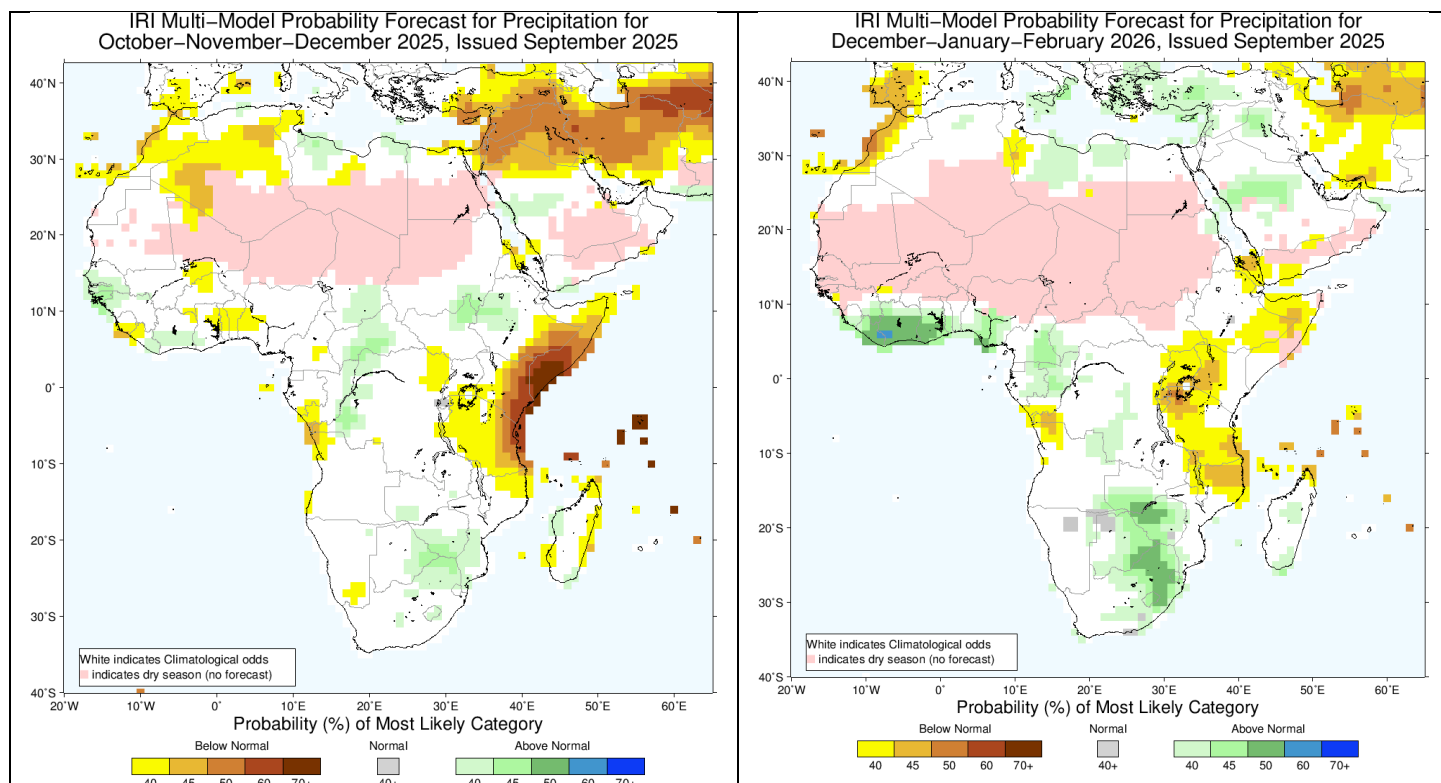
The 30-day Southern Oscillation Index (SOI) is currently +1.3 and therefore representing atmospheric pressure patterns in the Australia – Pacific region indicative of Neutral conditions.



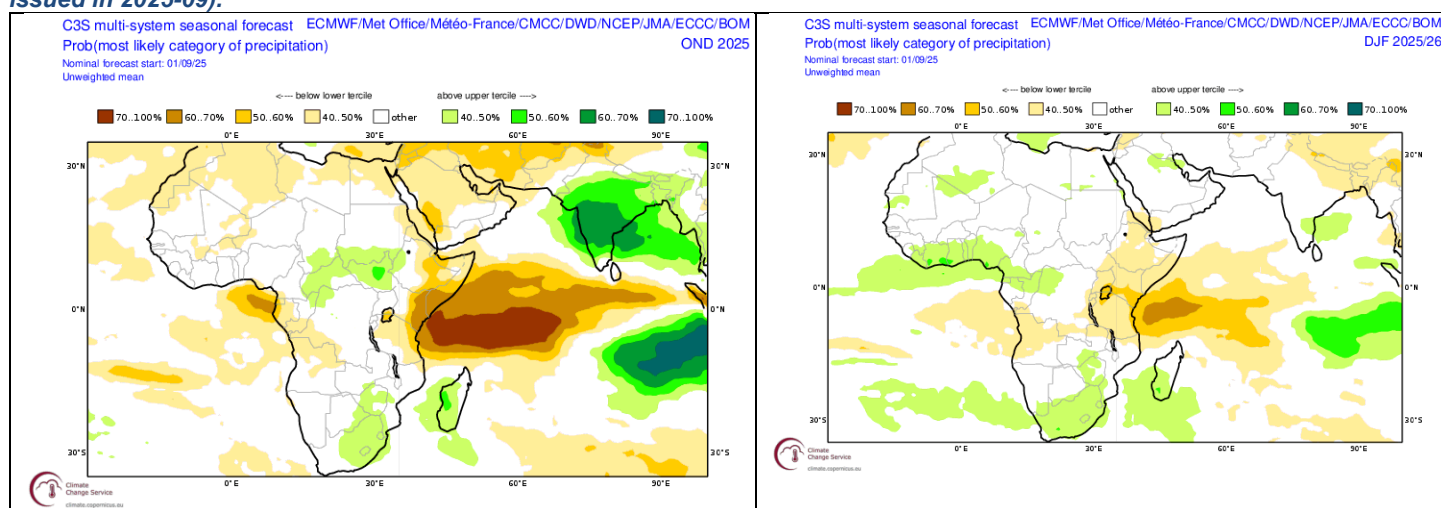
Australian Bureau of Meteorology - <http://www.bom.gov.au>

Seasonal forecasts issued by various international institutions

Seasonal forecasts (updated in September 2025) favour normal to above-normal rainfall over the summer rainfall region, especially toward mid- and late-summer. This is the result of the expectation of the intensification of the La Niña event in the Pacific Ocean.



Probabilistic forecasts by the International Research Institute for Climate and Society (IRI) for rainfall for early summer (October to December 2025, left – Forecast issued in 2025-09) and mid- to late summer (December to February 2025/26, right – Forecast issued in 2025-09).



Probabilistic multi-model forecasts by the multi-system COPERNICUS Programme for rainfall for early summer (October to December 2025, left – Forecast issued in 2025-09) and mid- to late summer (December to February 2025/26, right – Forecast issued in 2025-09).

CUMULUS seasonal outlook

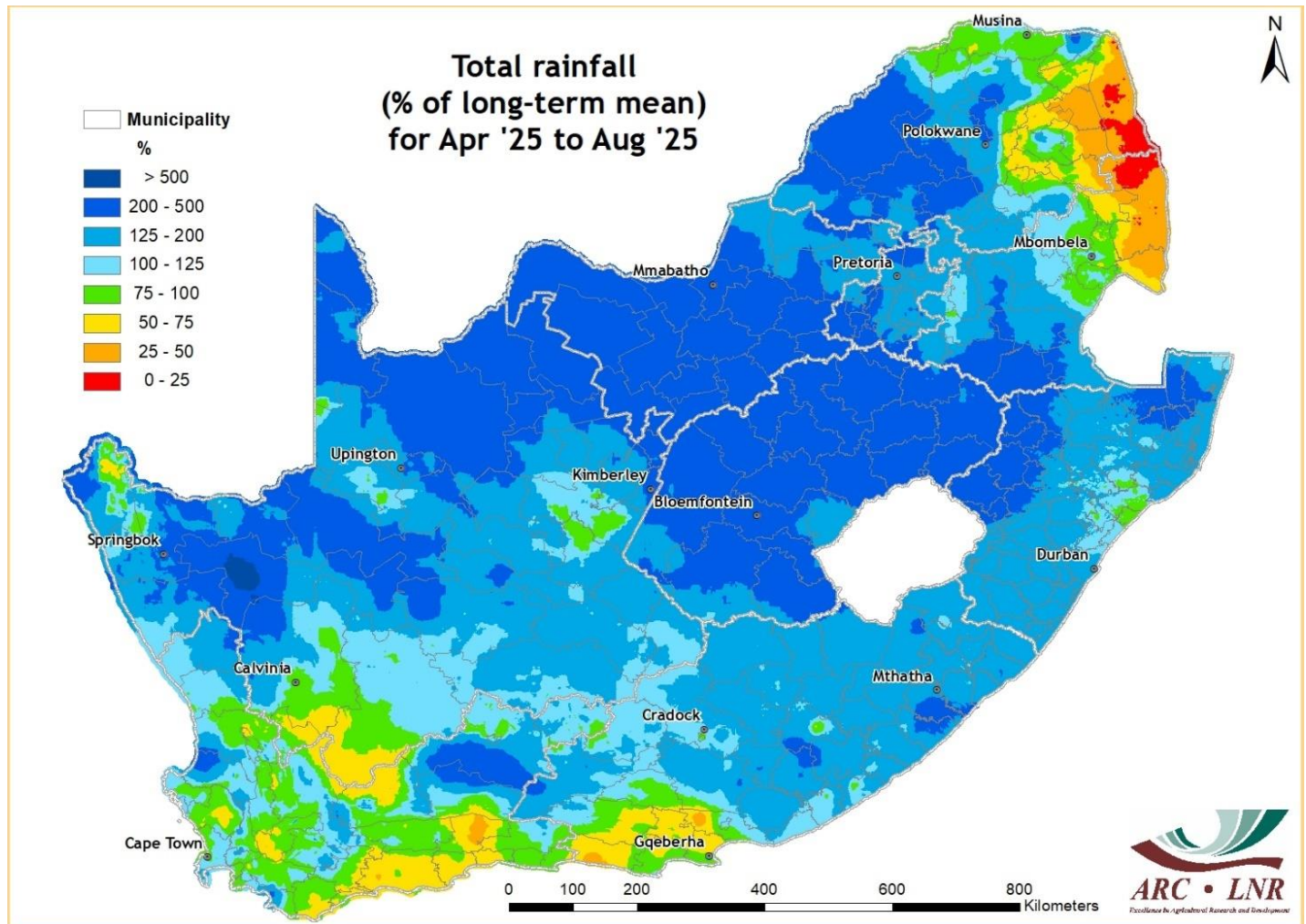
This outlook is based on the typical observed rainfall patterns over the north-eastern half of the country (including most of the summer grain-production region), which are associated with the cyclic variability of the global climate system. Summers similar to 2025/26 usually experience near-normal rainfall 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

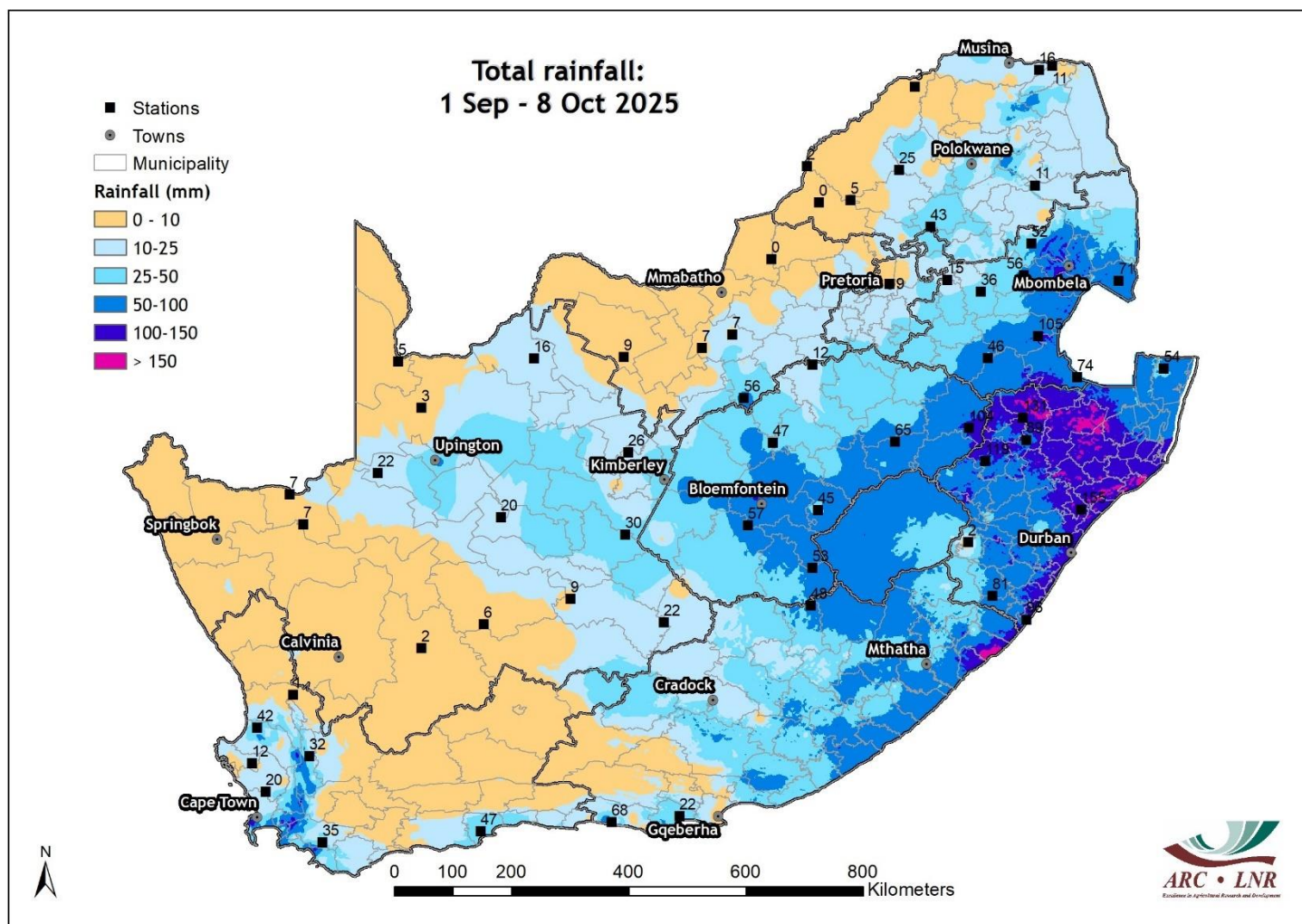
Observed conditions

Rainfall (%): April to August 2025



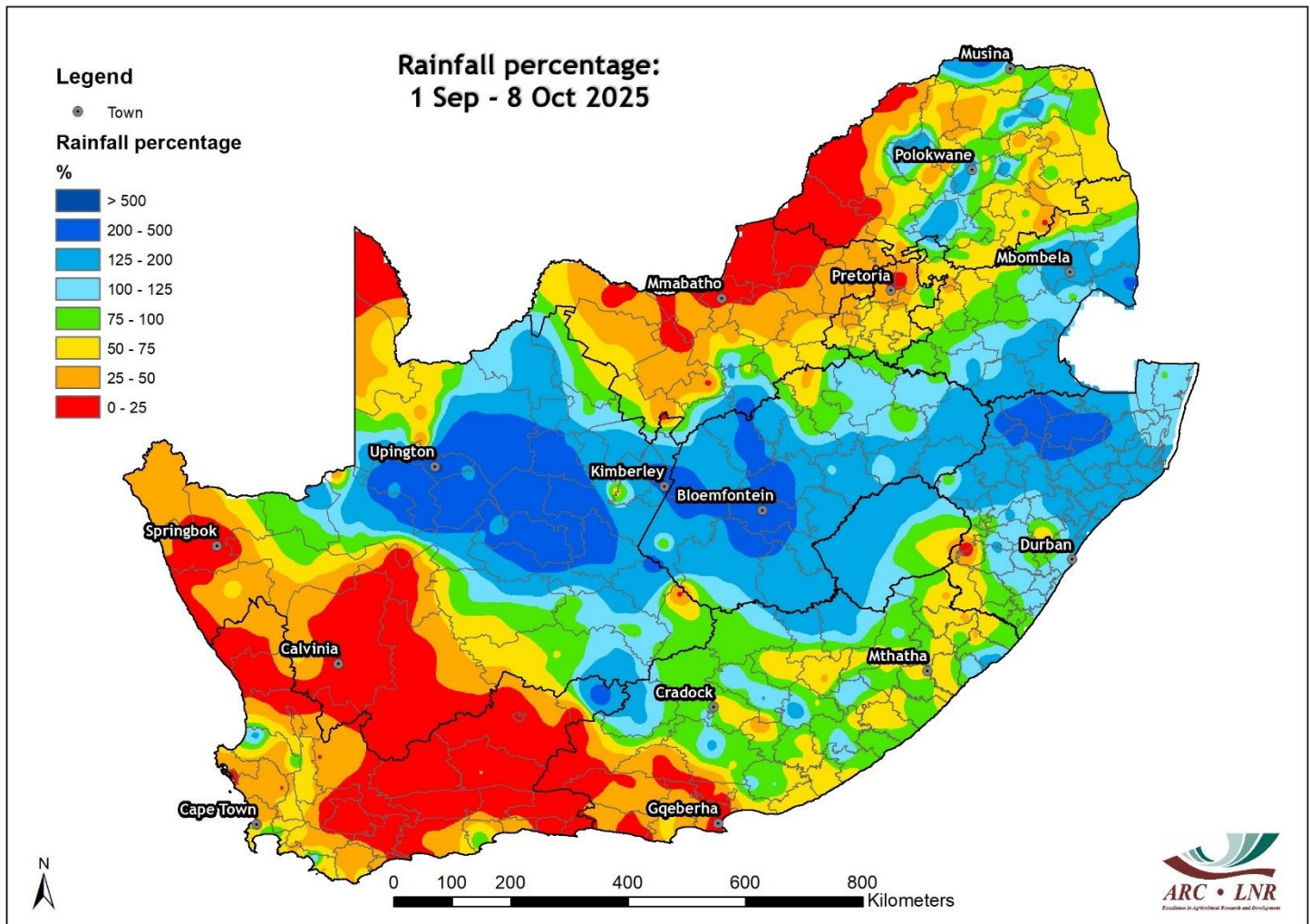
Most of the summer-rainfall region received above average during the autumn to winter period, except for the Lowveld where it was drier than average. Rainfall was near normal in total over the winter rainfall region, where it was dry in August and thereafter.

Rainfall (mm): 1 September – 8 October 2025



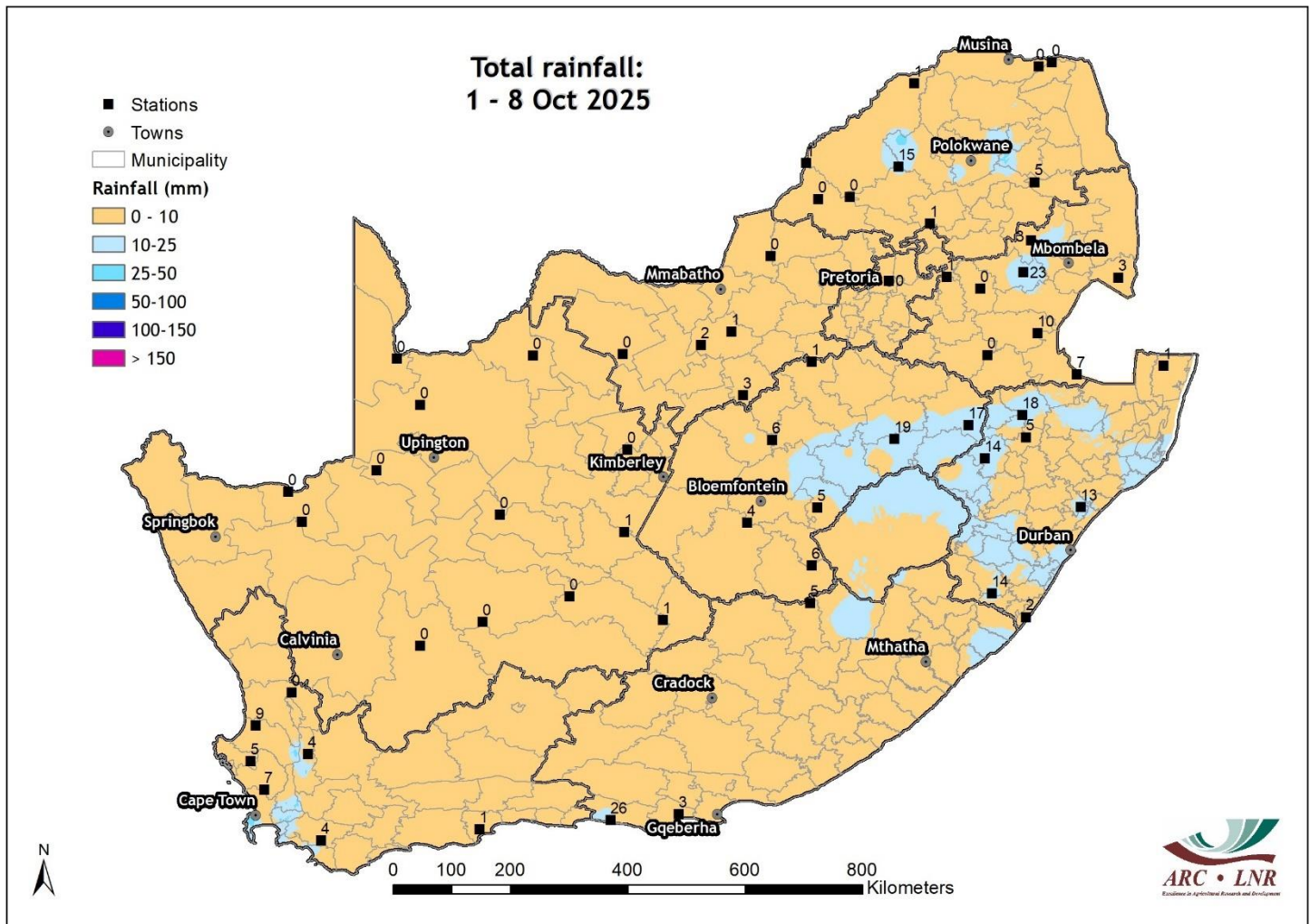
Large areas in the east, including much of the Free State, received more than 50 mm of rain during September and into early October, with parts of KZN and the north-eastern Eastern Cape receiving more than 100 mm in total. Rainfall totals exceeding 20 mm occurred as far west in the summer rainfall region as the eastern half of the Northern Cape. Totals remained below 20 mm over the northern parts. Rainfall totals also remained largely below 20 mm over the grain-production areas of the winter rainfall region, indicating a disappointing end to the winter rainy season following relatively dry conditions in August.

Rainfall (% of long-term mean): 1 September – 8 October 2025



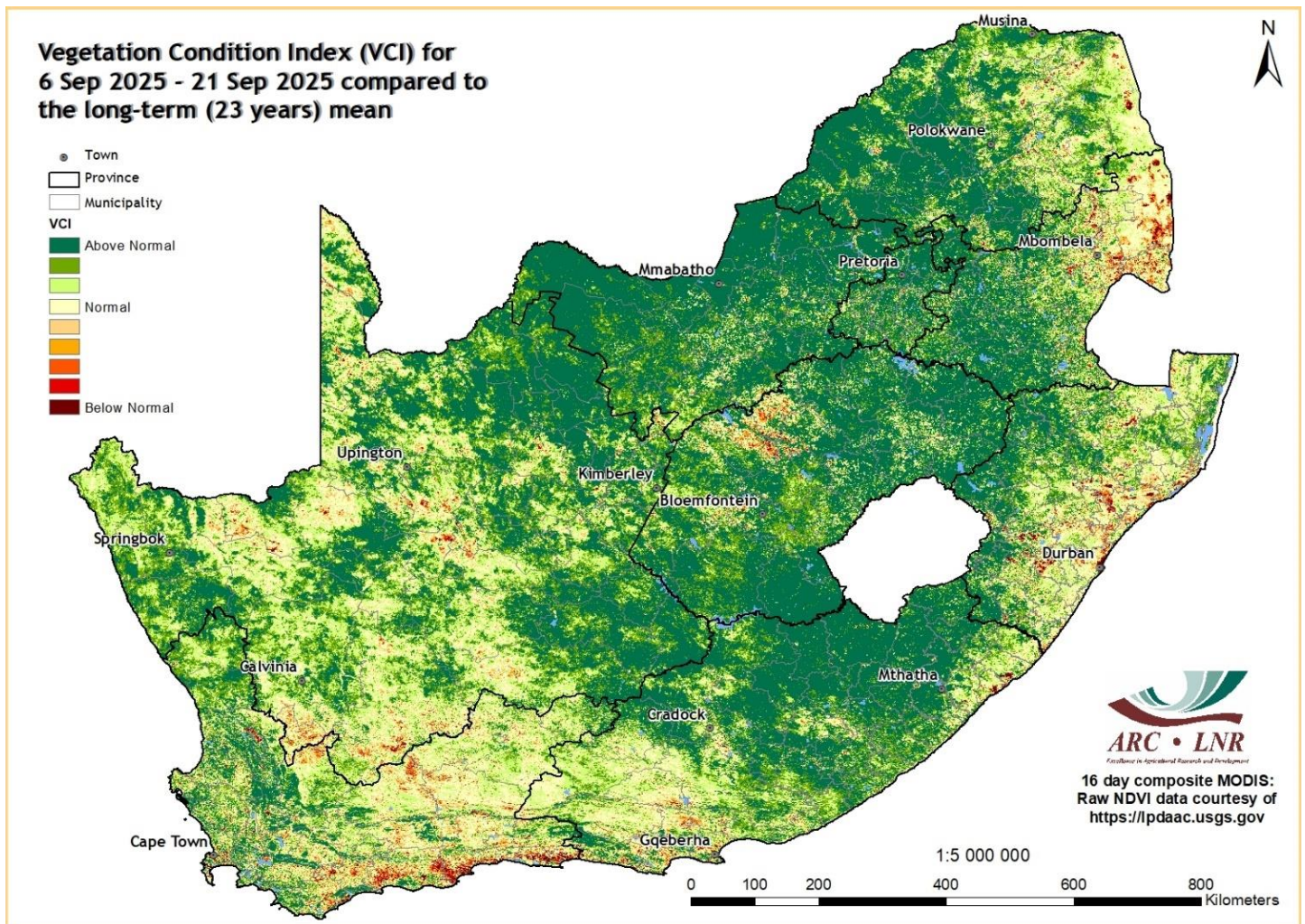
Most of the central interior and eastwards towards KZN and the eastern Highveld received above-average rainfall during the September to early October period. It was relatively dry over the southwestern parts, including the winter rainfall region, and the northern interior.

Rainfall (% of long-term mean): 1 – 8 October 2025



Isolated thundershowers remained in place into October over large parts, but totals have been low until the 8th. Some showers also occurred over the winter rainfall region, but totals remained below 10 mm for the most part.

Vegetation Condition Index: September 2025



Vegetation activity by September was above normal over most areas, following widespread rain above-normal rainfall until April and again by August-September over 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:

Center for Ocean-Land-Atmosphere Studies (COLA) and Institute of Global Environment and Society (IGES) – <http://Wxmaps.org>