

Malawi 10-day Weather and Agrometeorological Bulletin

"In support of National Early Warning Systems and Food Security"



Be wise be weather-wise
Department of Climate Change and
Meteorological Services

Period: 21 – 31 December 2022

Season: 2022/2023

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HIGHLIGHTS

- Scattered rainfall activities experienced over the country...
- Weeding, banking and fertilizer application in progress over most areas...
- Wet conditions to persist over Malawi during 01 – 10 January 2023...

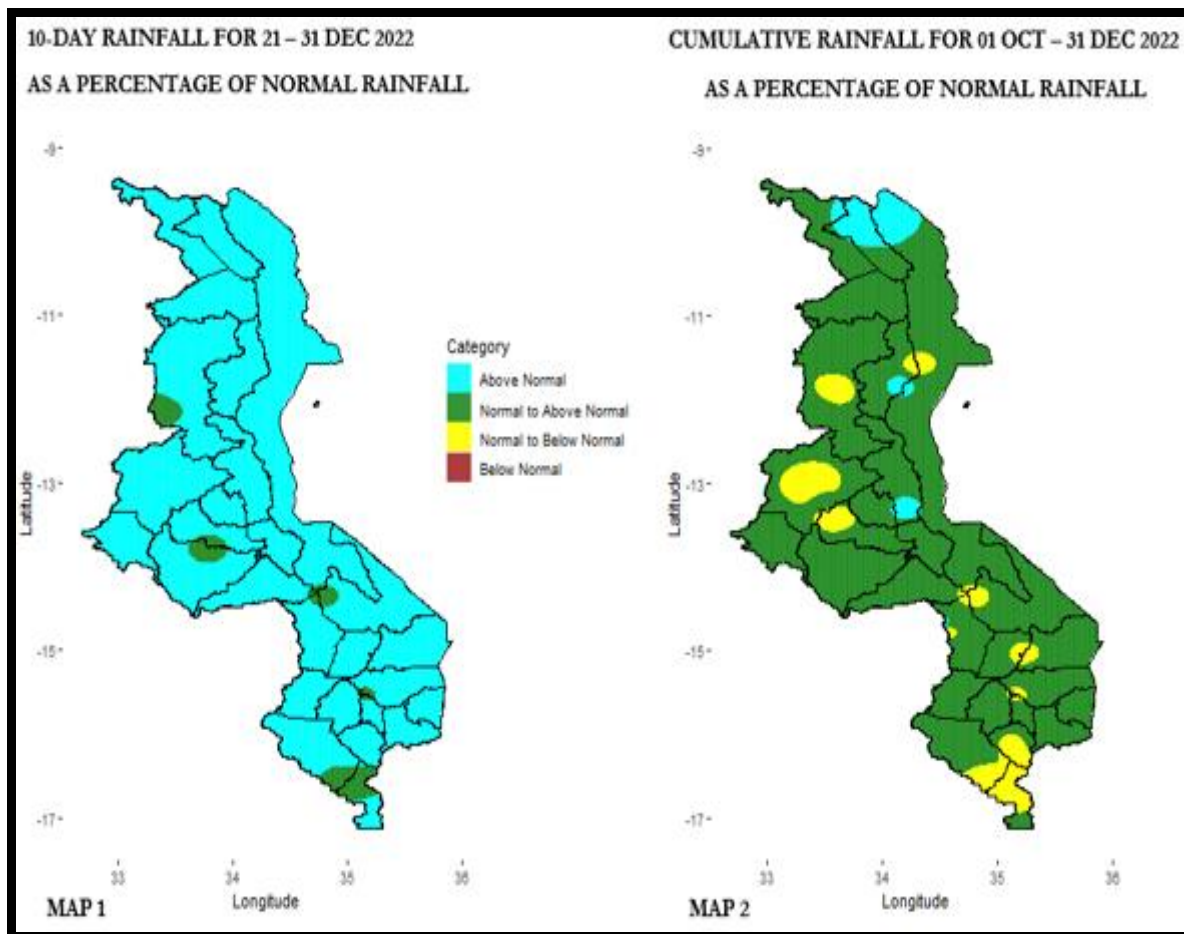


Figure 1: Observed dekadal and seasonal rainfall as percentage of normal for Malawi

1.0 WEATHER SUMMARY

During the period 21 to 31 December 2022, Congo airmass influenced weather over Malawi resulting very wet weather being experienced over the country.

1.1 RAINFALL SITUATION

During the last dekad of December 2022, scattered rainfall activities were experienced over the country as shown in Map 1 above. The recorded rainfall amounts were higher than the normal of historical dekad rainfall amounts.

Stations that recorded at least 200.0mm of rainfall during the ten days included Ntchisi Boma which recorded 335.0mm, Lujeri Tea estate in Mulanje recorded 308.0mm, Mpemba Veterinary in Blantyre recorded 297.1mm, Mlangeni in Ntcheu recorded 273.5mm, Bvumbwe Meteorological station recorded 273.5mm, Nkhotakota Meteorological station recorded 263.9mm, Mulanje Boma recorded 234.1mm, Chinthche Agriculture in Nkhata Bay recorded 231.0mm, Chancellor College recorded 220.9mm, Namwera Agriculture in Mangochi recorded 209.9mm and Zomba Agriculture recorded 209.8mm. A spatial distribution of the actual recorded dekad rainfall amounts is shown in figure 2 below

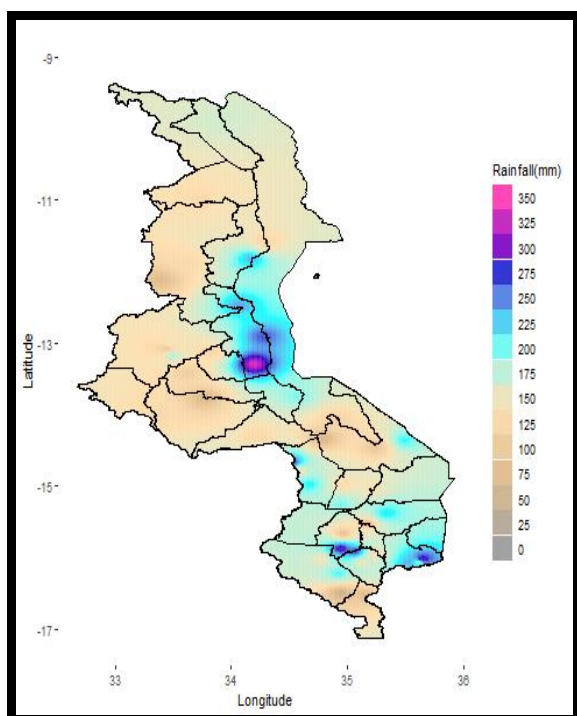


Figure 2: Observed dekad rainfall for Malawi

In terms of rainy days, more rainy days were recorded over northern and lakeshore areas of the country. Stations with highest number of rainy days included Karonga, Mzuzu, Dwangwa and Nkhotakota which all recorded 11 rainy days. More details are in figure 3 below.

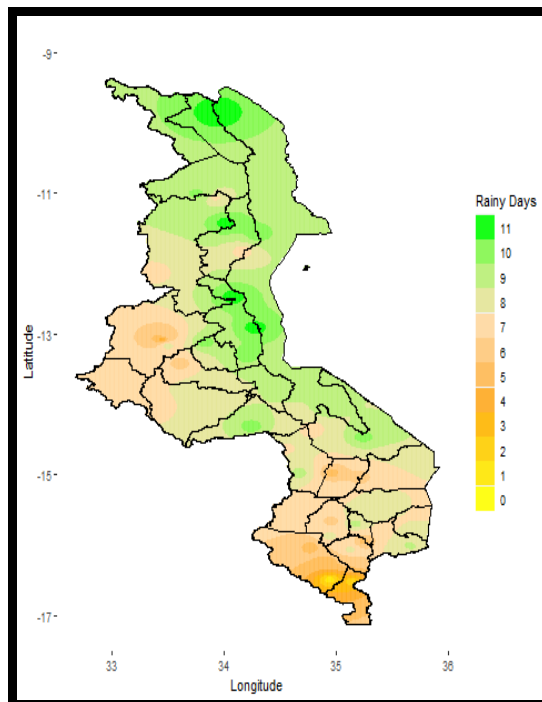


Figure 3: dekad rainy days for Malawi

Cumulatively, since the start of October 2022 to 31 December 2022, normal to above normal rainfall amounts have been experienced over majority of areas of the country as shown in Map 2 in figure 1 above. This has been achieved largely due to the rainfall amounts received during the dekad under review for most of central and northern areas.

1.2 AIR TEMPERATURE

Malawi experienced hot to locally very hot conditions during the period 21 to 31 December 2022. Mean daily maximum temperatures ranged from 24.2°C at Dedza Meteorological station to 38.5°C at Ngabu Meteorological station in Chikwawa, with absolute maximum temperature of 40.5°C recorded at the station. Mean daily minimum temperatures had ranged from 16.4°C at Dedza Meteorological station to 25.3°C at Ngabu Meteorological station.

1.3 RELATIVE HUMIDITY

During the period 21 to 31 December 2022, air over Malawi was relatively moist. Mean daily average Relative Humidity values recorded from various weather stations had ranged from 64% at Ngabu Meteorological station to 84% at Mzuzu Meteorological station in Mzimba.

1.4 WIND SPEEDS

During the period under review, most parts of Malawi experienced light to moderate wind speeds. Daily average wind speeds measured at a height of two metres above the ground level across the country had ranged from 0.8 km per hour at Nkhotakota Meteorological station to 11.5 km per hour at Chileka Meteorological station in Blantyre.

1.5 SUNSHINE HOURS

Generally medium to long hours of bright sunshine were observed over Malawi during the last dekad of December 2022. Mean daily values had ranged from 6.5 hours per day at Bvumbwe to 8.7 hours per day at Ngabu Meteorological station and consequently the amount of Solar Radiation had ranged from 9.6 to 12.3 cal/cm²/day.

2. AGROMETEOROLOGICAL ASSESSMENT

During the period under review, the main on-farm activities have been weeding and application of basal fertilizer for majority of northern and central region framers. Majority of farmers over southern areas are reported to be banking and top dressing.

The rainfall experienced during the dekad under review supported vegetative growth and development of maize as well as other crops but also enabled rice growing farmers to transplant over northern and central lakeshore areas of the country.



Figure 5: a livestock farmer, preparing feed for his stock, northern Malawi



Figure 6: soya bean field over central Malawi



Figure 4: farmer top dressing, Kunthembwe Extension Planning Area, Southern Malawi



Figure 7: banked maize field over southern Malawi

Furthermore, the rains supported growth and development of pasture as well as availability of water for livestock for livestock farmers countrywide.

For proper utilization of rain water, farmers should adhere to principles of good agricultural practices including moisture conservation, timely control of weeds, pests and diseases; and fertilizer/ manure application. Water harvesting technologies should also be practiced for future use during periods of suppressed rainfall.

3. PROSPECTS FOR 2022/2023 RAINFALL SEASON

The 2022-2023 rainfall is expected to be influenced by La Nina conditions that have been established over eastern-central equatorial Pacific Ocean. Global models project that these conditions are likely to persist throughout the season. The rainfall forecast for the second part of the 2022/2023 season is that:

“During January to March 2023, most areas in the south, center and the north are expected to receive normal to above-normal cumulative rainfall amounts.”

At national level, there are higher prospects of normal to above normal cumulative rainfall amounts over most parts during sub-season January February March (JFM) of the 2022/2023 season.

During the month of January 2023, normal to above normal rainfall amounts are anticipated for majority of areas over Malawi with pockets of normal to below normal projections for some areas of the country. Refer to figure 8 below.

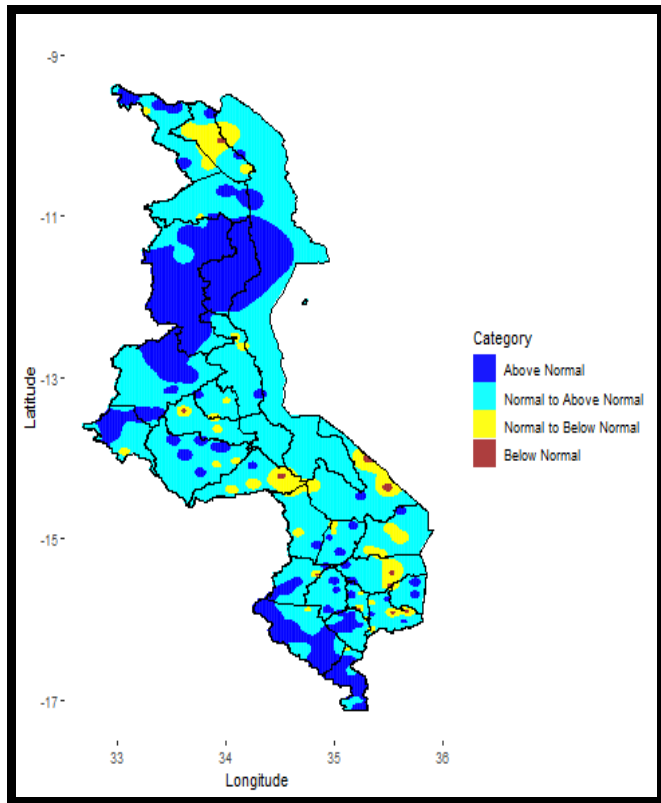


Figure 8: January 2023 rainfall forecast categories

In terms of temperature, normal conditions are anticipated to prevail during the month of January over majority of areas of the country with pockets of warmer than usual temperature conditions over some areas in all the three regions of the country. Cooler than usual conditions are projected over some areas in Salima. More details as shown in figure 9 below.

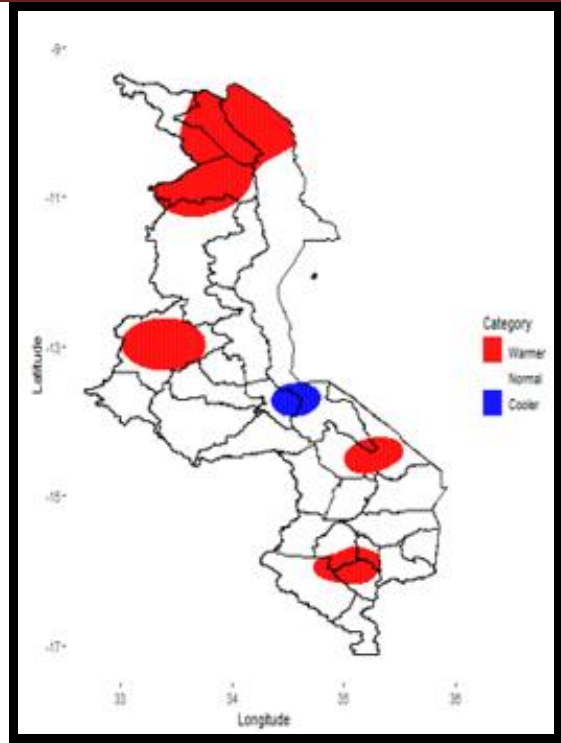


Figure 9: January 2023 temperature forecast categories

4. OUTLOOK FOR 01-10 JANUARY 2023

Wet conditions are anticipated over Malawi during the first dekad of January 2023. The anticipated dekadal rainfall amounts are generally within the normal to above normal categories of the historical dekadal amount.

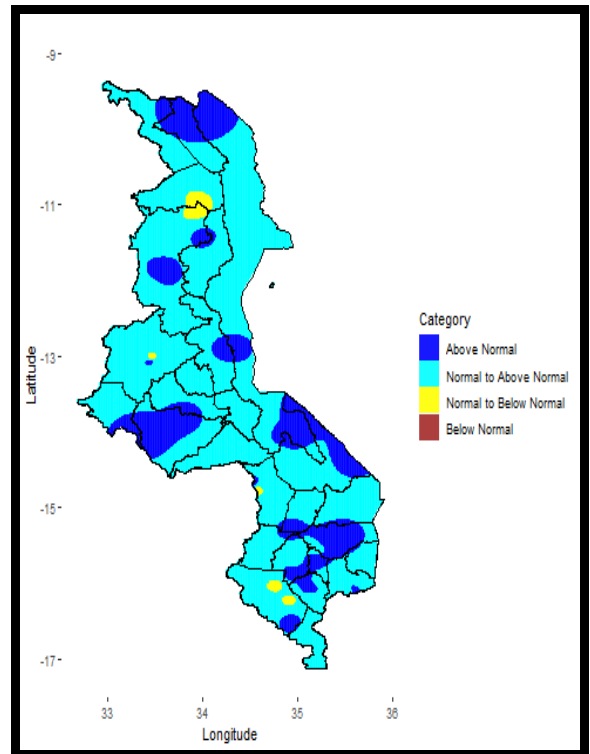


Figure 10: Dekadal rainfall outlook for Malawi for 01-10 January 2023 as percentage of normal rainfall