Government of Malawi
Ministry of Natural Resources and Climate Change

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: 01 – 10 January 2023 | Season: 2022/2023 | Issue No.10

Release date: 14 January 2023

HIGHLIGHTS

- **Locally heavy rains experienced during the dekad…**
- **Weeding, banking and fertilizer application in progress over most areas…**
- **Wet conditions to persist over Malawi during 11 – 20 January 2023…**

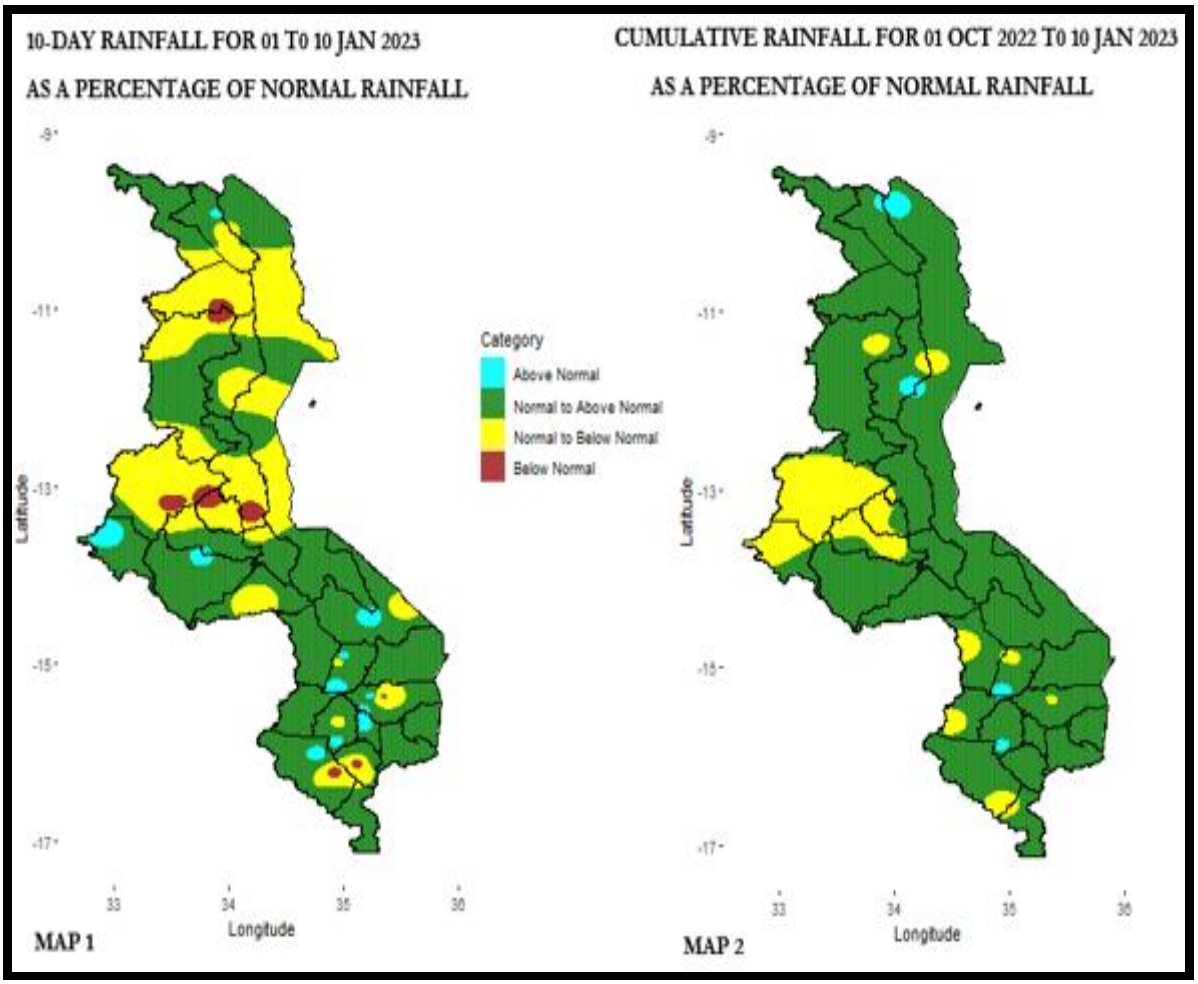

Figure 1: Observed dekadal and seasonal rainfall as percentage of normal for Malawi

1.0 WEATHER SUMMARY

During the period 01 to 10 January 2023, a broad equatorial trough influenced weather over Malawi resulting in scattered rainfall activities which were heavy at times.

All inquiries should be addressed to: The Director of Climate Change and Meteorological Services, P.O. Box 1808, Blantyre, MALAWI
Tel: (265) 1 822 014/106 Fax: (265) 1 822 215 E-mail: metdept@metmalawi.gov.mw Homepage: www.metmalawi.gov.mw

1.1 RAINFALL SITUATION

During the first dekad of January 2023, scattered rainfall activities were experienced over the country as shown in Map 1 above. The recorded dekadal rainfall amounts were within the normal to above normal ranges of historical dekadal rainfall amounts.

Stations that recorded at least 100.0mm of rainfall during the ten days included Chingale Agriculture in Zomba which recorded 252.6mm, Mpemba Veterinary in Blantyre recorded 196.1mm, Makoka Meteorological station in Zomba recorded 186.9mm, Baka Research station in Karonga recorded 163.6mm, Chiradzulu Agriculture recorded 154.3mm, Toleza in Balaka recorded 131.5mm, Phalula Agriculture in Balaka as well recorded 124.5mm, Kamuzu International Airport in Lilongwe recorded 123.1mm, Lujeri Tea estate in Mulanje recorded 117.0mm, Mpilipili in Mangochi recorded 112.3mm, Mzimba Meteorological station recorded 111.0mm, Salima Meteorological station recorded 100.3mm and Mulanje Boma recorded 100.1mm. Spatial distribution of the actual recorded dekadal rainfall amounts is shown in figure 2 below

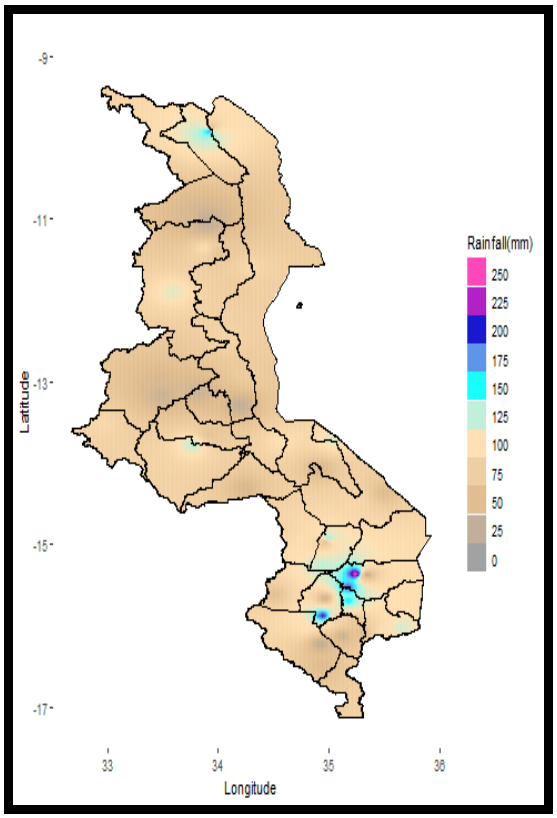

Figure 2: Observed dekadal rainfall for Malawi

In terms of rainy days, majority of stations which recorded the highest number of rainy days were in southern region. Makoka Meteorological station recorded the highest number of 9 rainy days, Chingale Agriculture, Chiradzulu Agriculture, Lujeri Tea estate, Mzimba Meteorological station, Chileka International Aiport in Blantyre and Zomba Agriculture all recorded 8 rainy days during the dekad under. More details are in figure 3 below.

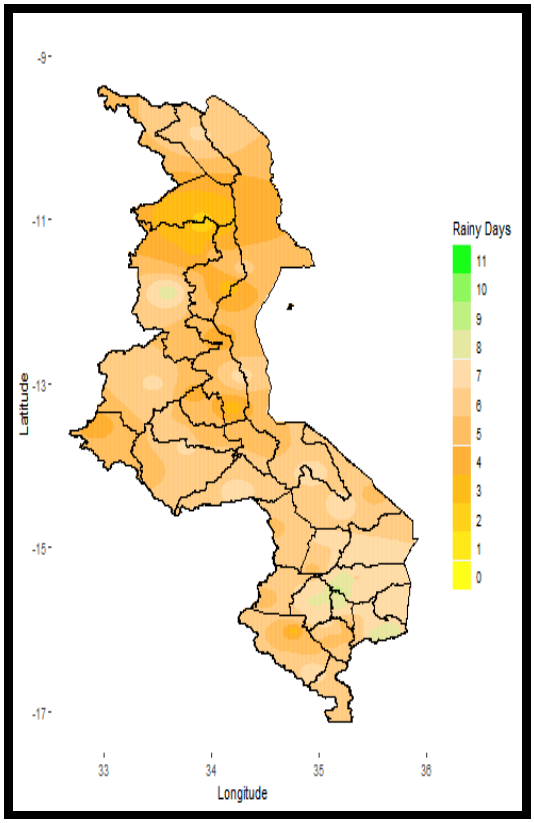

Figure 3: dekadal rainy days for Malawi, 01-10 January 2023

Cumulatively, since the start of October 2022 to 10 January 2023, normal to above normal rainfall amounts have been experienced over majority of areas of the country with pockets of normal to below normal rainfall amounts over all the three regions of the country as shown in Map 2 in figure 1 above. The normal to above normal status has been achieved largely due to the rainfall amounts received from the last dekad of December 2022 for most of central and northern areas.

1.2 AIR TEMPERATURE

Malawi experienced hot to locally very hot conditions during the period 01 to 10 January 2023. Mean daily maximum temperatures ranged from 24.5°C at Dedza Meteorological station to 34.2°C at Ngabu Meteorological station in Chikwawa. Mean daily minimum temperatures had ranged from 16.2°C at Dedza Meteorological station to 24.0°C at Ngabu Meteorological station.

1.3 RELATIVE HUMIDITY

During the period 01 to 10 January 2023, air over Malawi was moist. Mean daily average Relative Humidity values recorded from various weather stations had ranged from 62% at Bolero Meteorological station in Rumphi district to 89% at Makoka Meteorological station in Zomba district.

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 1.2 km per hour at Nkhotakota and Bolero Meteorological stations to 13.5 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 first dekad of January 2023. Mean daily values had ranged from 6.4 hours per day at Makoka to 8.3 hours per day at Ngabu Meteorological station and consequently the amount of Solar Radiation had ranged from 9.6 to 11.9 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. Maize crop stand is very encouraging in all the three regions particularly where fertilizer or manure has been applied.

Figure 4: soyabean field, Chigonthi Extension Planning Area, Central Malawi

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

However, some few areas over southern and central regions of the country have just received their effective planting rains, areas like Nkhoma in Lilongwe and Mikalango in Chikwawa district.

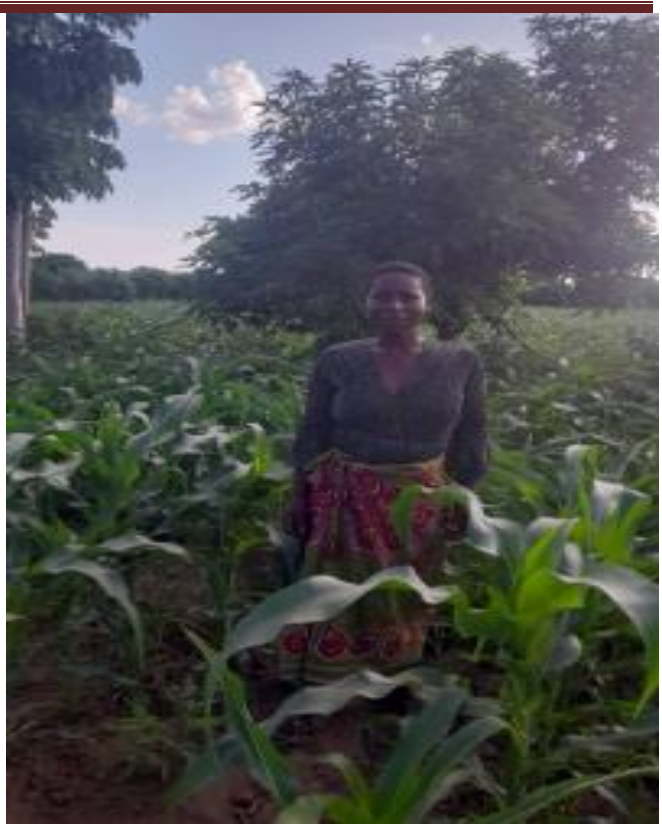

Figure 5: Ester Vanila, standing in her maize field, Kalambo Extension Planning Area, Chikwawa

Figure 6: Newly planted maize field, Mikalango Extension Planning Area, Chikwawa

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 and 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 7 below.

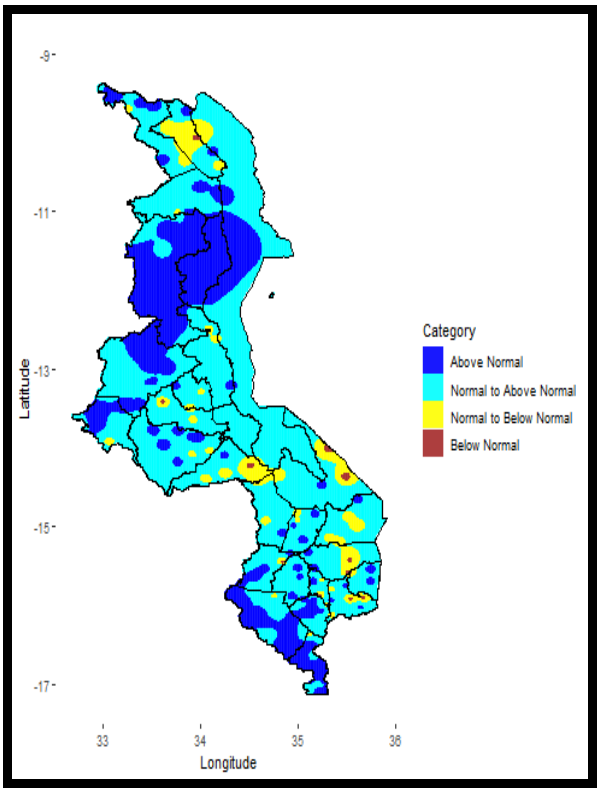

Figure 7: January 2023 rainfall forecast categories

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 (represented by red colour). Cooler than usual conditions are projected over some areas in Salima (represented by blue colour). More details as shown in figure 8 below.

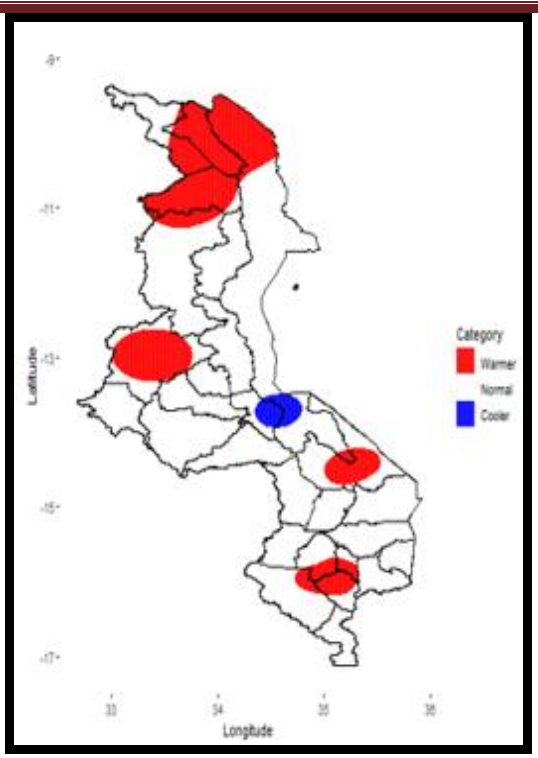

Figure 8: January 2023 temperature forecast categories

4. OUTLOOK FOR 11-20 JANUARY 2023

Wet conditions are anticipated over Malawi during the second dekad of January 2023. The anticipated dekadal rainfall amounts are generally within the normal to above normal categories of the historical dekadal amount with isolated cases of normal to below normal projections over central and northern areas.

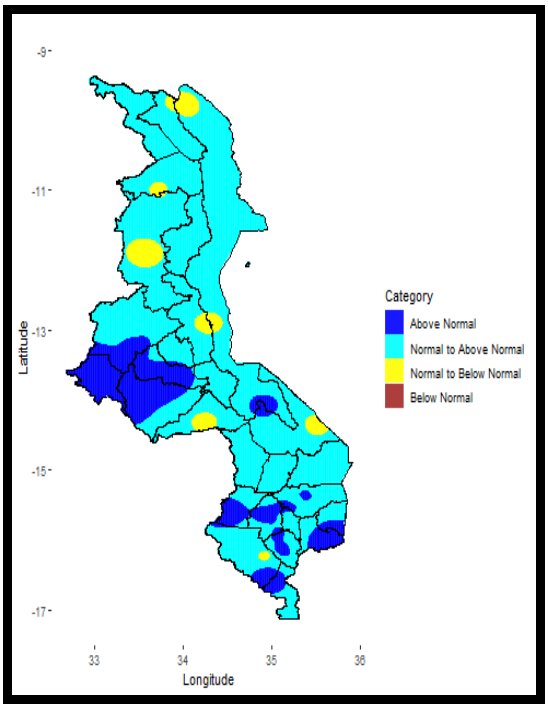

Figure 9: Dekadal rainfall outlook for Malawi for 11-20 January 2023 as percentage of normal rainfall