



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: 11 – 20 January 2023

Season: 2022/2023

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HIGHLIGHTS

- Locally heavy rains experienced during the dekad...
- Banking and top fertilizer application in progress over most areas...
- Wet conditions to persist over Malawi during 21 – 31 January 2023...

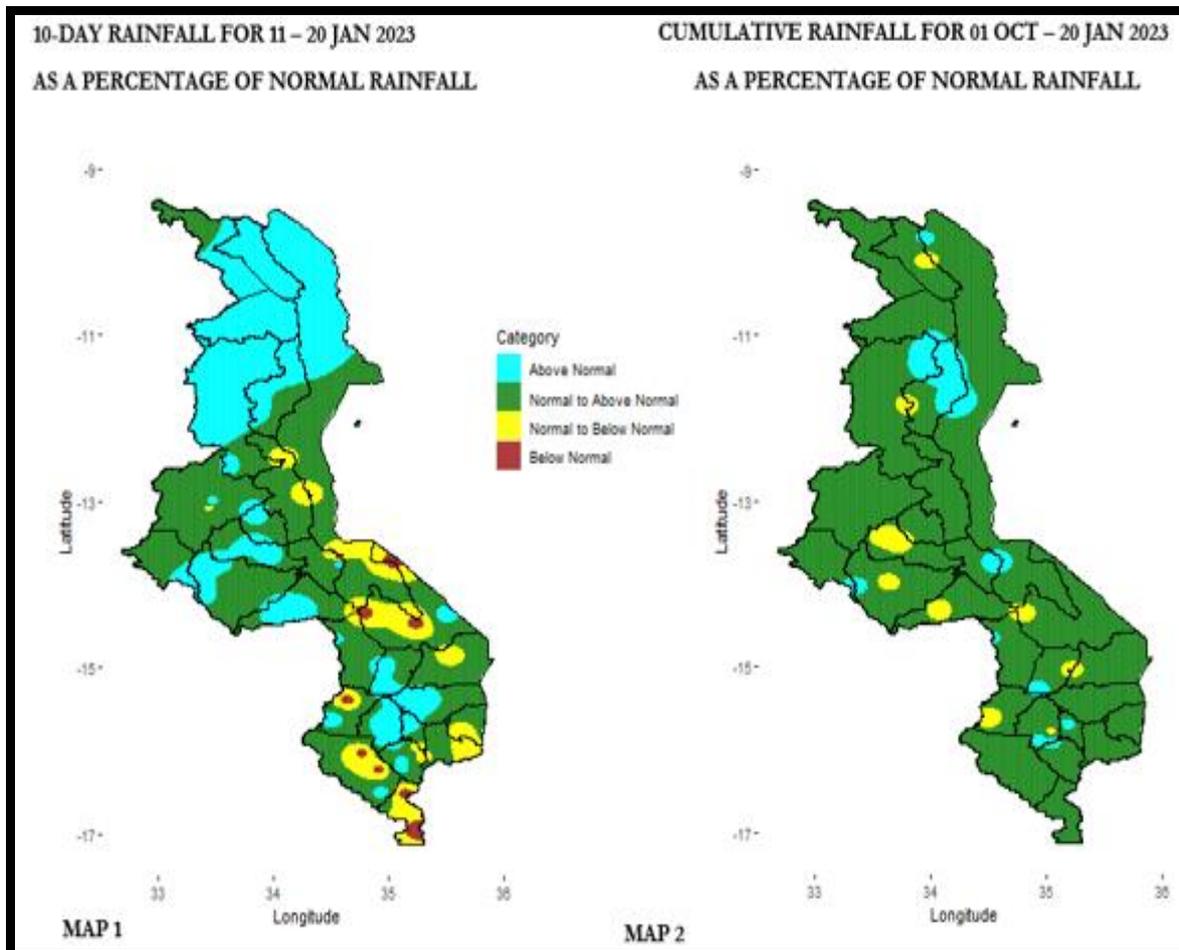


Figure 1: Observed dekadal and seasonal rainfall as percentage of normal for Malawi

1.0 WEATHER SUMMARY

During the period 11 to 20 January 2023, a broad rain belt influenced weather over Malawi resulting in scattered rainfall activities which were heavy at times.

1.1 RAINFALL SITUATION

During the second 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 majority of northern areas with pockets of normal to below rainfall amounts over central and southern areas of the country.

Stations that recorded at least 100.0mm of rainfall during the ten days included Bwengu Agriculture in Mzimba which recorded 376.6mm in 8 rainy days, Namitete in Lilongwe recorded 354.8mm in 7 rainy days, Salima Meteorological station recorded 311.4mm in 9 rainy days, Mpemba Veterinary in Blantyre recorded 239.5mm in 10 rainy days, Mzuzu Meteorological station recorded 234.5mm in 10 rainy days as well and Kasiya Agriculture in Lilongwe recorded 224.7mm in 9 rainy days.

Spatial distribution of the actual recorded dekadal rainfall amounts is shown in figure 2 below

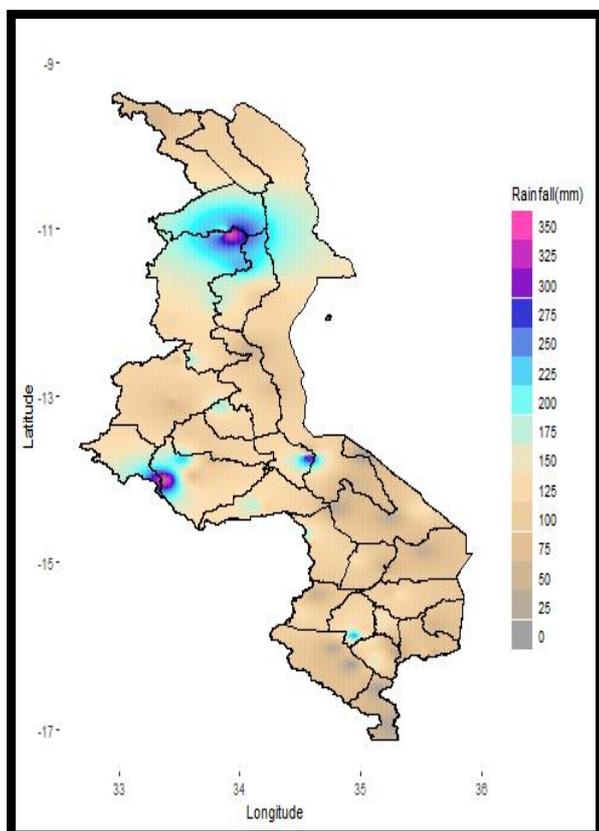


Figure 2: Observed dekadal rainfall for Malawi

In terms of rainy days, majority of stations which recorded the highest number of rainy days were spread across the three regions of the country. Mpemba Veterinary, Rumpho Boma and Mzuzu Meteorological station had a rainy day on each day during the dekad under review. More details are in figure 3 below.

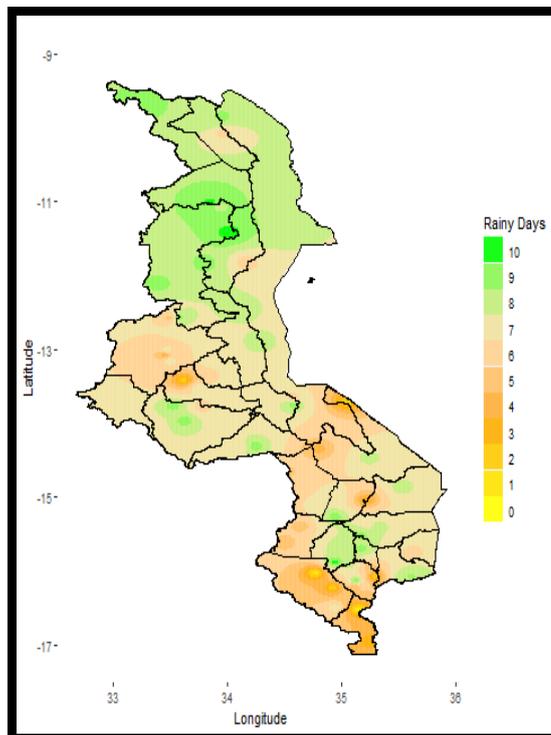


Figure 3: dekadal rainy days for Malawi, 11-20 January 2023

Cumulatively, since the start of October 2022 to 20 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.

1.2 AIR TEMPERATURE

Malawi experienced hot conditions during the period 11 to 20 January 2023. Mean daily maximum temperatures ranged from 23.8°C at Dedza Meteorological station to 33.6°C at Ngabu Meteorological station in Chikwawa. Mean daily minimum temperatures had ranged from 14.7°C at Kasungu Meteorological station to 24.4°C at Ngabu Meteorological station.

1.3 RELATIVE HUMIDITY

During the period 11 to 20 January 2023, air over Malawi was moist. Mean daily average Relative Humidity values recorded from various weather stations had ranged from 66% at Ngabu Meteorological station in to 89% at Mzuzu Meteorological station.

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 1.1 km per hour at Bolero 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 second dekad of January 2023. Mean daily values had ranged from 6.4 hours per day at Mzuzu Meteorological station to 8.2 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, there was continued good temporal and spatial distribution of rainfall in all the three regions of the country. The main on-farm activities have been banking and application of top dressing fertilizer for majority of northern and central region framers as well as those that planted late over southern areas. Farmers were still accessing farm inputs under the Malawi Government's Affordable Inputs Programme (AIP) and through other initiatives.

The rainfall experienced during the dekad under review supported vegetative growth and development of maize as well as other crops but also enabled rice to establish itself in rice growing areas over northern and central lakeshore areas of the country after it was transplanted. Maize crop stand is very encouraging in all the three regions particularly where fertilizer or manure has been applied.



Figure 4: Maize tasseling, Kunthembwe Extension Planning Area, southern Malawi

However, there have reports of flooding leading to crop wash aways as well as sporadic cases of Fall Army Worm infestation. This has the potential of derailing the good crop stand thereby affecting production at local scale.

For proper utilization of rain water during the 2022/2023 rainfall season, farmers are encouraged to adhere to principles of good agricultural practices including use of moisture conservation, timely control of weeds, pests and diseases; and fertilizer/ manure application.



Figure 5: Fall Army Worm infested maize plant, Kunthembwe Extension Planning Area, southern Malawi

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.

4. OUTLOOK FOR 21- 31 JANUARY 2023

Wet conditions are anticipated over Malawi during the last 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 southern areas of the country.

The anticipated rainfall amounts, are going to ensure continued availability of water for plant growth and development as the major crops such as maize, soya, beans among others, are at a critical stage where moisture availability is a must.

Furthermore, farmers are advised to continuously monitor the growing season for proper planning and utilization of the forecast in their various agricultural activities like fertilizer application and banking.

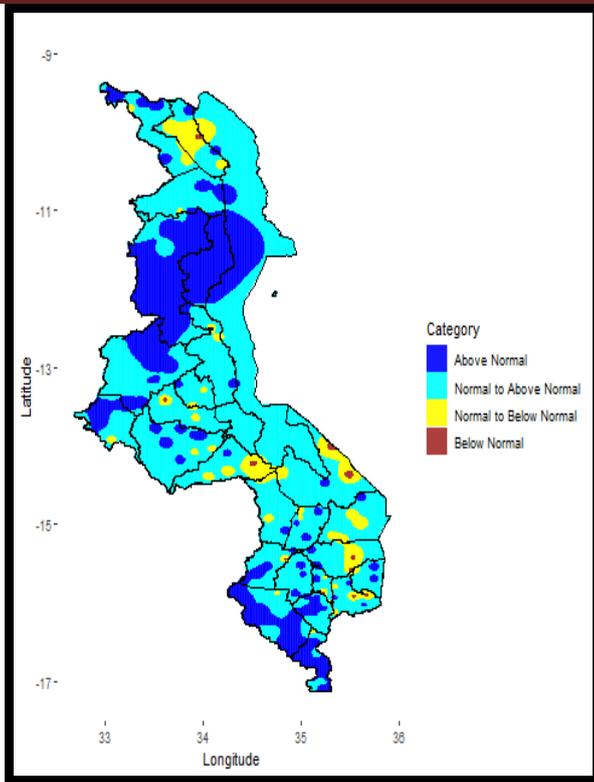


Figure 6: January 2023 rainfall forecast categories

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 parts of Salima district (represented by blue colour). More details as shown in figure 8 below.

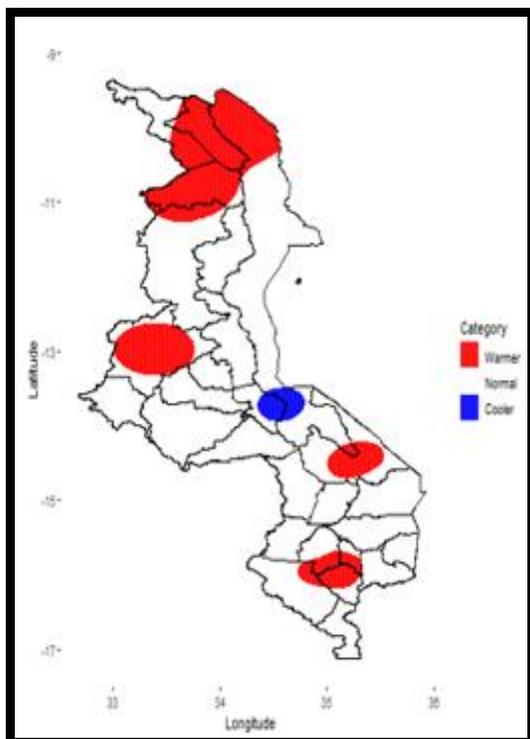


Figure 7: January 2023 temperature forecast categories

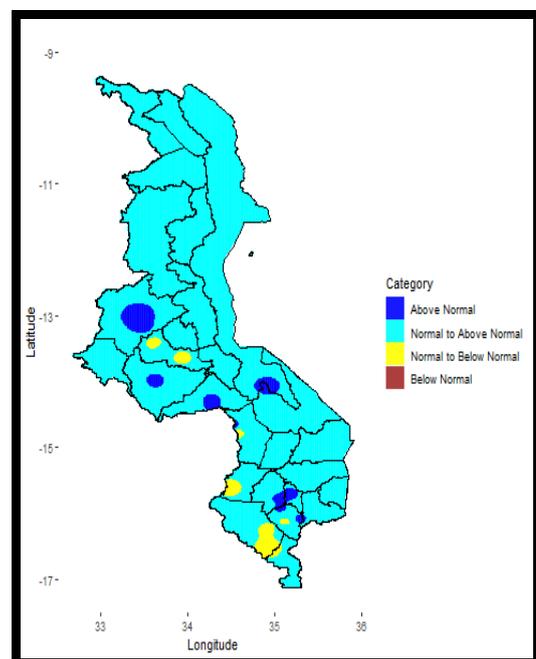


Figure 8: Dekadal rainfall outlook for Malawi for 11-20 January 2023 as percentage of normal rainfall