

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 January 2023

Season: 2022/2023

Issue No.12

Release date: 07 February 2023

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 01 – 10 February 2023...

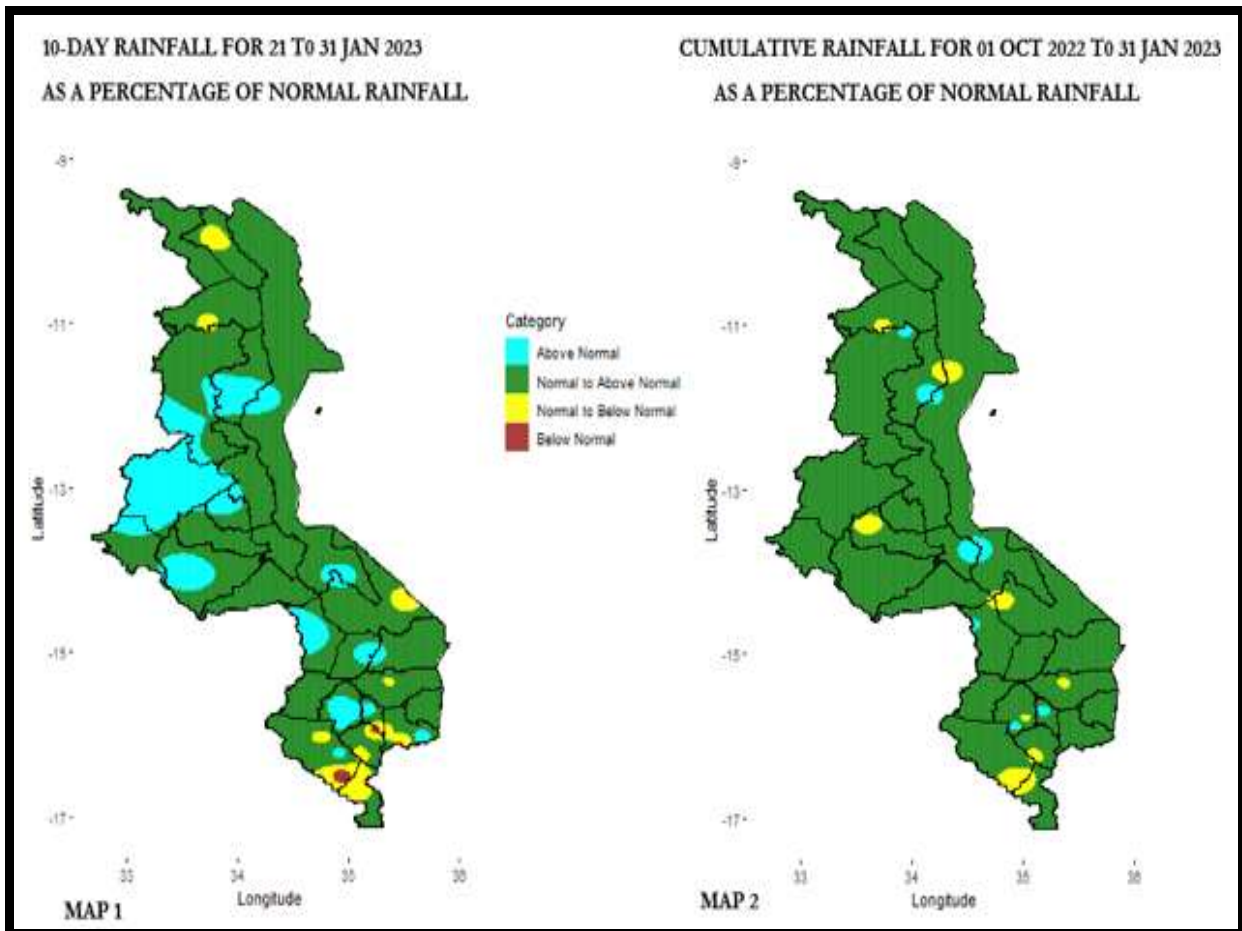


Figure 1: Observed dekadal and seasonal rainfall as percentage of normal for Malawi

1.0 WEATHER SUMMARY

During the period 21 to 31 January 2023, the Inter-Tropical Convergence Zone, ITCZ, influenced weather over Malawi resulting in scattered rainfall activities which were heavy at times with generally warm to hot temperatures experience across the country.

1.1 RAINFALL SITUATION

During the last dekad of January 2023, scattered rainfall activities were experienced over the country as shown in Map 1 above. The recorded dekad rainfall amounts were within the normal to above normal ranges of historical dekad rainfall amounts in majority of areas of the country with pockets of normal to below normal rainfall amounts particularly over southern areas. Refer to Map 1 in Figure 1.

Stations that recorded at least 100.0mm of rainfall during the period under review included Njolomole in Ntcheu which recorded 300.6mm in 8 rainy days, Neno Agriculture recorded 203.4mm in 4 rainy days, Lujeri Tea Estate in Mulanje recorded 186.5mm in 7 rainy days, Mwimba Agriculture Research station in Kasungu recorded 170.8mm in 7 rainy days, Kasungu Meteorological station recorded 152.6mm in 8 rainy days, Chikangawa Forest in Mzimba recorded 149.2mm in 7 rainy days, Lisasadzi in Kasungu recorded 145.4mm in 9 rainy days, Mbawa Research station in Mzimba recorded 142.0mm in 6 rainy days, Chitedze Meteorological station in Lilongwe recorded 141.4mm in 7 rainy days, Liwonde in Balaka recorded 129.0mm in 6 rainy days, Chintheche Agriculture in Nkhata Bay recorded 128.4mm in 6 rainy days, Chiradzulu Agriculture recorded 127.9mm in 6 rainy days, Nkhande in Ntcheu recorded 125.7mm in 7 rainy days, Mpemba veterinary in Blantyre recorded 121.1mm in 8 rainy days, Lifuwu Agriculture Research station in Salima recorded 120.7mm, Chileka International Airport in Blantyre recorded 120.3mm in 7 rainy days, Zombwe Agriculture in Mzimba recorded 116.8mm in 10 rainy days, Dedza meteorological station recorded 113.7mm in 11 rainy days, Thyolo Meteorological station recorded 108.6mm in 6 rainy days, Mulanje Boma recorded 104.7 mm in 7 rainy days, Dwangwa in Nkhotakota recorded 103.8mm in 5 rainy days and Bvumbwe Meteorological station in Thyolo recorded 103.3mm in 8 rainy days.

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

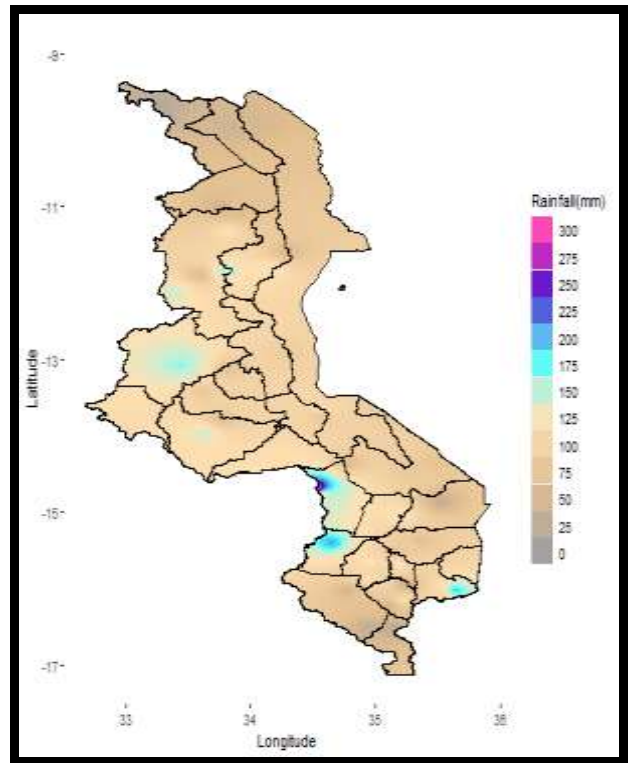


Figure 2: Observed dekad rainfall for Malawi

The overall rainy days dekad distribution is shown in figure 3 below.

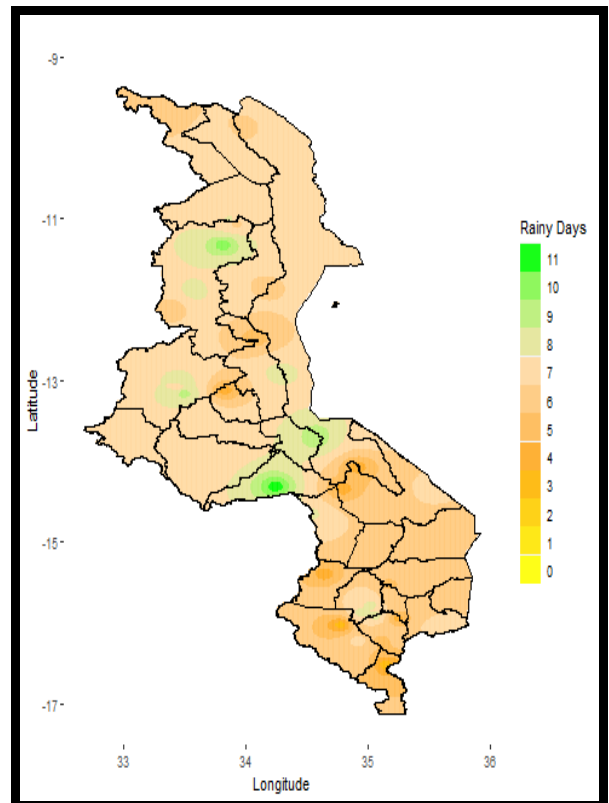


Figure 3: dekad rainy days for Malawi, 21-31 January 2023

Cumulatively, since the start of October 2022 to 31 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 warm to hot conditions during the period 21 to 31 January 2023. Mean daily maximum temperatures ranged from 23.9°C at Dedza Meteorological station to 34.3°C at Ngabu Meteorological station in Chikwawa. Mean daily minimum temperatures had ranged from 15.7°C at Mzimba Meteorological station to 24.1°C at Ngabu Meteorological station.

1.3 RELATIVE HUMIDITY

During the period 21 to 31 January 2023, air over Malawi was moist. Mean daily average Relative Humidity values recorded from various weather stations had ranged from 62% at Ngabu Meteorological station in Chikwawa district to 88% at Nkhotakota 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 13.5 km per hour at Monkey Bay Meteorological station in Mangochi.

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 6.6 hours per day at Mzuzu Meteorological station to 8.6 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, 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 farmers 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 the recently transplanted rice crop to establish itself in rice growing areas over northern and central lakeshore areas of the country. Moreover, the rains enabled availability of water for livestock as well as supported growth and development of livestock grazing grass as captured in figure 4.

Maize crop stand is very encouraging in all the three regions particularly where fertilizer or manure has been applied as well as good agricultural practices, as stipulated by the Ministry of Agriculture, have been adhered to. The crop is reportedly at tasseling and cobbing stages over southern areas while generally vegetative stage over northern and central areas.

However, there have been reports of flooding leading to crop wash aways as well as sporadic cases of Fall Army Worm and snail infestation particularly over central areas of the country. 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 4: Livestock grazing, Chigonthi Extension Planning Area, Central 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 February 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, particularly central region. Refer to figure 5 below.

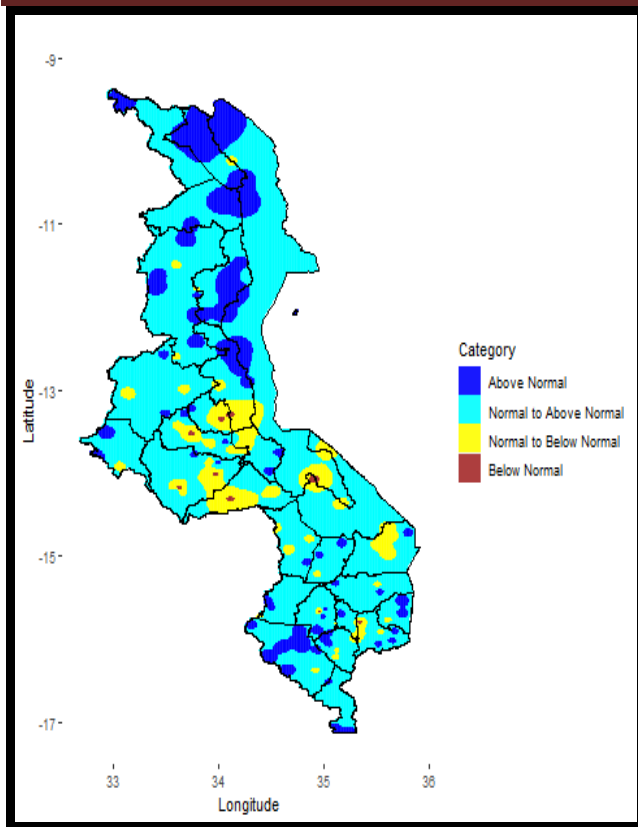


Figure 5: February 2023 rainfall forecast categories

In terms of temperature, normal conditions are anticipated to prevail during the month of February 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 southern areas of the country (represented by blue colour). More details as shown in figure 6 below.

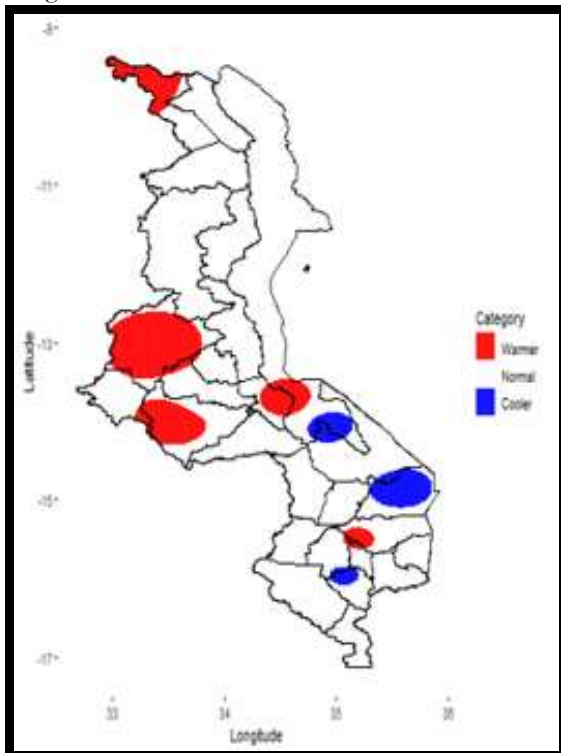


Figure 6: February 2023 temperature forecast categories

4. OUTLOOK FOR 01- 10 FEBRUARY 2023

Wet conditions are anticipated over Malawi during the first dekad of February 2023. The anticipated dekad rainfall amounts are generally within the normal to above normal categories of the historical dekad amount with isolated cases of normal to below normal projections over central and southern areas of the country (represented by yellow and brown colours in Figure 7).

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 very critical.

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.

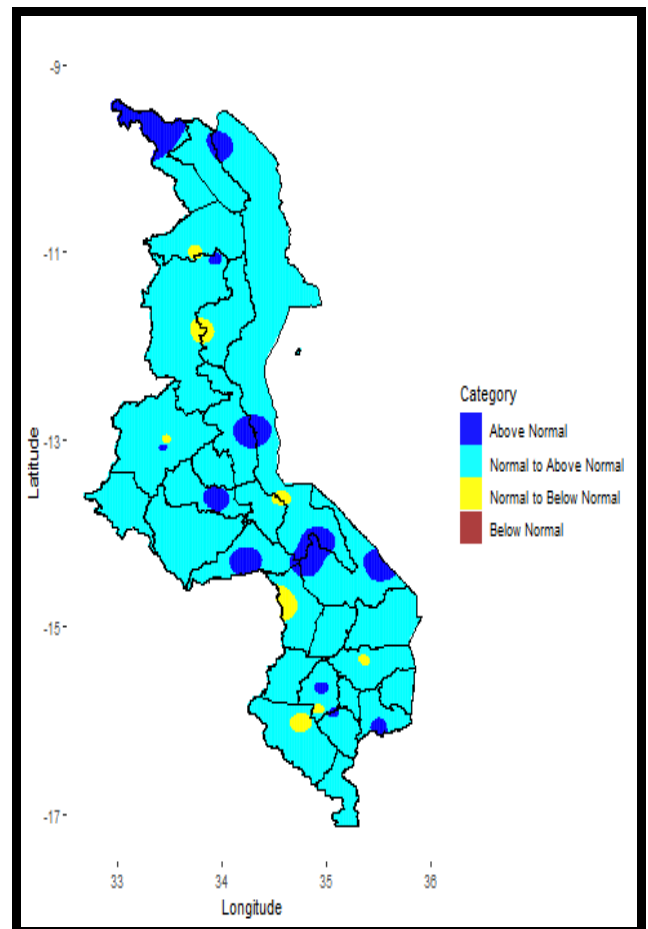


Figure 7: Dekadal rainfall outlook for Malawi for 01-10 February 2023 as percentage of normal rainfall