

# 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 February 2024

Season: 2023/2024

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## HIGHLIGHTS

- Relatively wet northern and central Malawi, dry elsewhere ...
- Maize at tasseling to cobbing stages ...
- Extreme wet conditions for northern half during last dekad of February 2024...

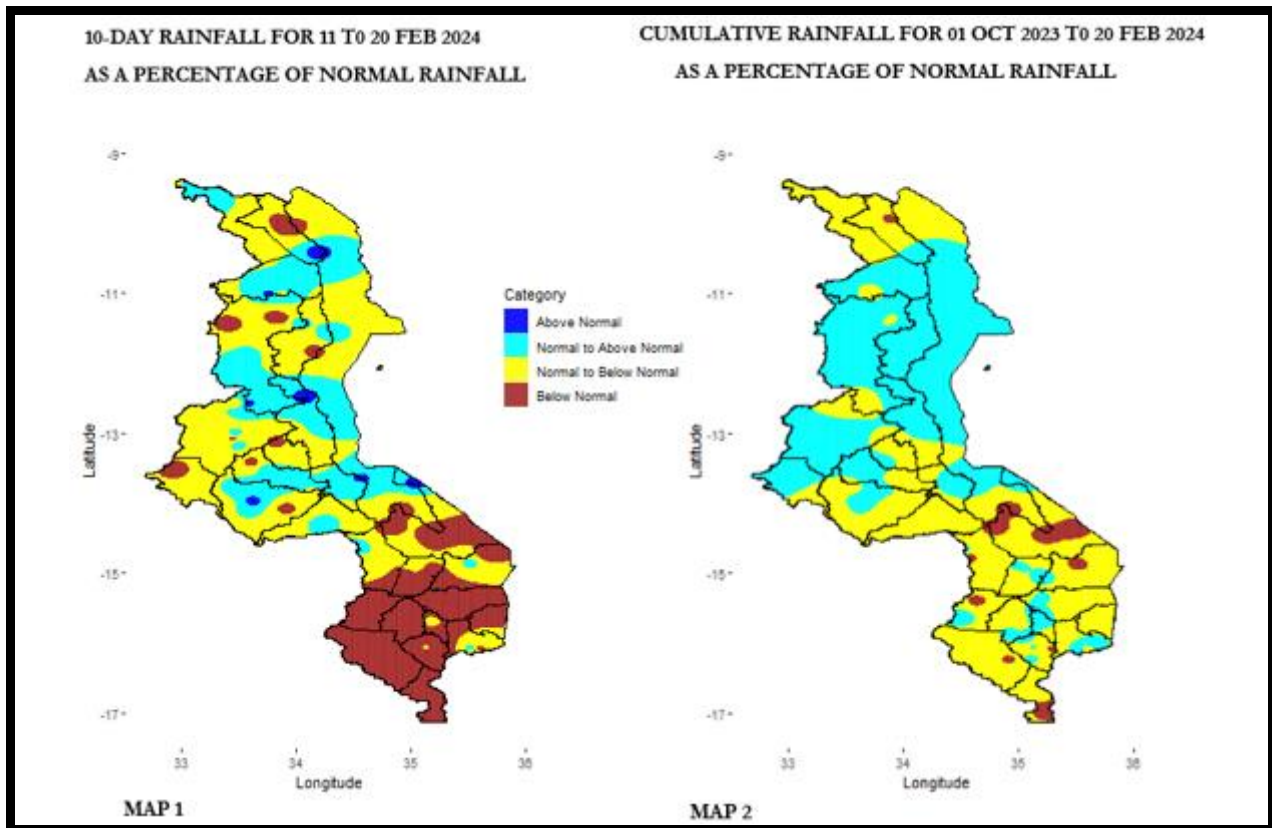


Figure 1: Observed dekadal and cumulative seasonal rainfall as percentage of normal for Malawi

## 1.0 WEATHER SUMMARY

During the period 11 to 20 February 2024, northern areas of the country were under the influence of the Inter-Tropical Convergence Zone resulting in moderate rainfall activities over the region with very isolated rainfall episodes over central and southern areas.

### 1.1 RAINFALL SITUATION

During the second ten days of February 2024, moderate rainfall activities were experienced over northern and parts of central and lakeshore areas of the country. The recorded rainfall amounts were within the normal to above normal of historical dekadal amounts over parts of Mzimba and Rumphi districts with majority of northern and central areas experienced normal to below normal conditions, while below normal scenario dominated southern areas of the country. More in Map 1 from figure 1.

Spatial distribution of the actual recorded rainfall amounts shows that districts from the northern areas and Mulanje district in Shire highlands received higher rainfall amounts. During the reporting period, only two stations recorded at least 100.0mm namely Lifuwu in Salima and Mlangeni in Ntcheu which recorded 128.4mm and 110.6mm in 3 rainy days respectively. More details in figure 2 below.

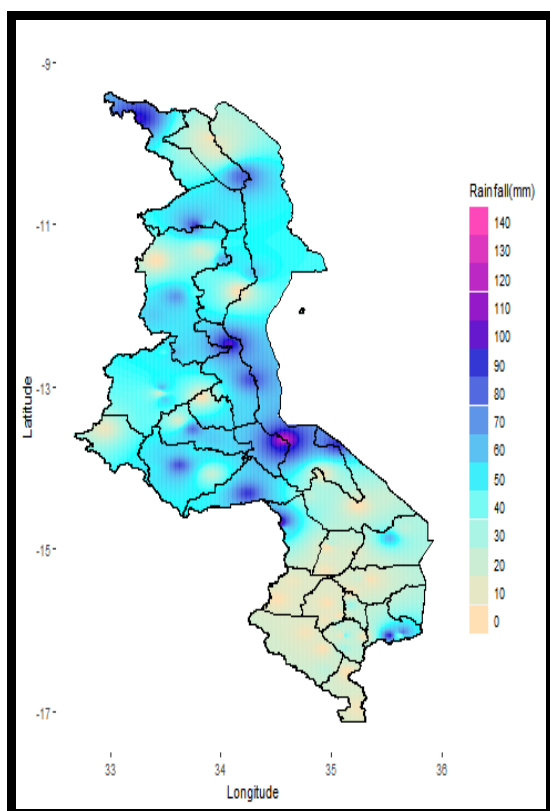


Figure 2: Observed dekadal rainfall for Malawi, 11-20 February 2024

The overall rainy days distribution from 11 to 20 February 2024 is shown in figure 3 below. Higher rainy days were registered in stations mostly from northern areas of the country.

The highest number of 9 rainy days was registered at Bolero Meteorological station. The second highest was 8 rainy days at Chitipa Meteorological station and Rumphi Boma. More details as shown in figure 3 below.

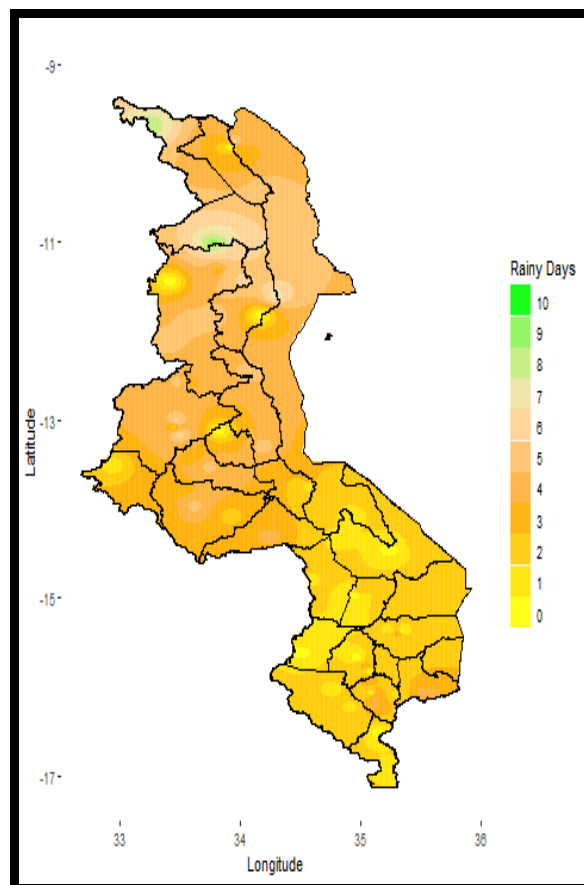


Figure 3: dekadal rainy days for Malawi, 11-20 February 2024

Cumulatively, since the start of monitoring of the rainfall season on 01 October 2023 to 20 February 2024, generally normal to above normal rainfall amounts have been experienced over majority of northern areas of the country with normal to below normal scenarios over majority of central, southern areas and parts of Chitipa and Karonga districts among others as shown in Map 2 in figure 1 above.

### 1.2 AIR TEMPERATURE

Malawi experienced hot conditions during the period 11 to 20 February 2024. Mean daily maximum temperatures had ranged from 26.1°C at Dedza Meteorological station to 36.3°C at Ngabu Meteorological station in Chikwawa, while mean daily minimum temperatures had ranged from 16.6°C at Dedza Meteorological station to 24.9°C at Ngabu Meteorological station.

### 1.3 RELATIVE HUMIDITY

During the period under review, air over Malawi was generally moist. Daily average Relative Humidity values recorded from various meteorological stations had ranged from 60% at Chileka and Monkey Bay Meteorological stations, respectively to 82% at Bolero Meteorological station in Rumphi district.

**1.4 WIND SPEEDS**

Most parts of Malawi experienced light to moderate wind speeds during the period under review. Daily average wind speeds measured at a height of two metres above the ground level across the country had ranged from 1.4 km per hour at Bolero to 11.6 km per hour at Salima Meteorological station.

**1.5 SUNSHINE HOURS/ SOLAR RADIATION**

Generally medium hours of bright sunshine were observed over Malawi during the period 11 to 20 February 2024. Daily values of sunshine hours had ranged from 6.5 hours per day at Mzimba Meteorological station to 10.3 hours per day at Ngabu Meteorological station and consequently the amount of Solar Radiation had ranged from 8.7 to 12.6 cal/cm<sup>2</sup>/day.

**2. AGROMETEOROLOGICAL ASSESSMENT**

During the second dekad of February 2024, the main on-farm activities have been application of top-dressing fertilizer and banking for some farmers over northern half of the country, while majority of farmers over southern Malawi are inactive due to the dry conditions being experienced over the region for close to a month.

The rainfall experienced mainly over northern and central areas during the dekad under review supported vegetative growth and development of crops including maize. The stages of development of the maize crop are varied across the country due to erratic seasonal onset. Maize crop is generally at tasseling to cobbing stages over majority of northern half of the country with maturing maize crop over southern half for early planted and survived the prolonged dry spell experienced in the region. Maize crop stand is encouraging particularly over northern half of the country where fertilizer or manure has been applied as well as good agricultural practices have been adhered to as depicted in figure 4 below. Other cash crops such as tobacco are also reportedly doing well especially over central and northern areas.



Figure 4: Top dressed maize, Dowa

However, due to persistent hot and dry weather conditions particularly over southern half of the country, many crops including the staple crop maize

showed various degrees of water stress conditions, some in acute water stress while others have reached permanent wilting point. This is depicted in figure 5 below.



Figure 5: Water stressed maize crop, Blantyre Agricultural Division, southern Malawi

Furthermore, some farmers have taken heed of advice and have now planted crops that can withstand prolonged dry spells or survive with limited water such as sweet potatoes, sesame, cassava among others.

For livestock, majority of livestock in the country were under severe Temperature Humidity Index heat stress as the country experienced generally warm to hot and dry conditions particularly over southern areas prompting farmers to graze in controlled areas such as shaded areas. The rains over northern half also ensured continued pasture growth and water availability to various stock in the region.

Overall, there are serious concerns of reduced crop production for subsistence and cash crops at both local and national scales due to the impacts of the prolonged dry conditions that are being experienced over southern Malawi as well as reported cases of Fall Army Worm infestation countrywide and crop washaways due to floods over some central areas.

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 2023/2024 SEASON**

The 2023-2024 rainfall season is being influenced by moderate to strong El Niño conditions that are prevalent over eastern-central equatorial Pacific Ocean. Global models project that these conditions are likely to persist throughout the season.

The rainfall forecast for sub-season-February-March-April (FMA) of the 2023/2024 season is that:

**“normal to below-normal total rainfall amounts are anticipated over most areas of**

the country with a high chance of prolonged dry spells during the month of February.”

The spatial distribution of the FMA forecast is captured in figure 6 below. The map depicts mostly normal to below conditions over the country during the FMA sub-season.

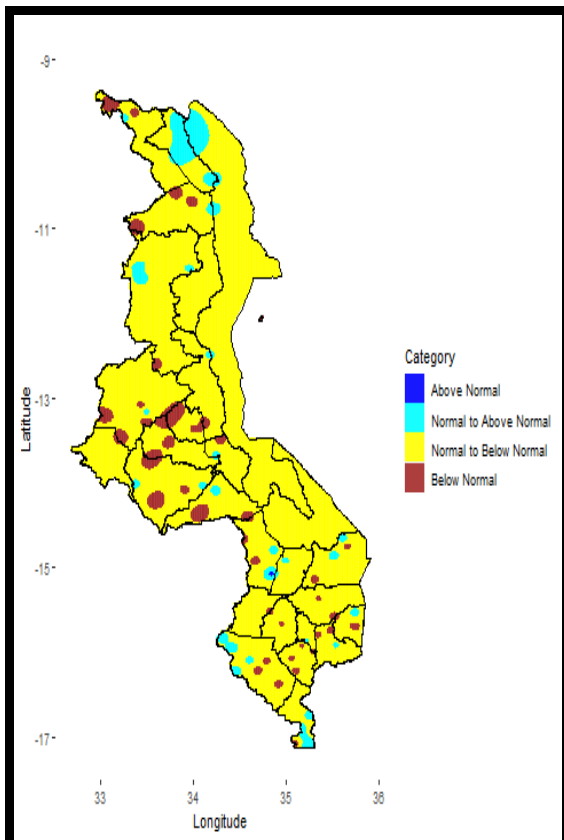


Figure 6: Sub-season February-March-April (FMA) rainfall forecast

For the month of February 2023, normal to below normal rainfall amounts are anticipated over majority of areas of the country. Refer to figure 7 below.

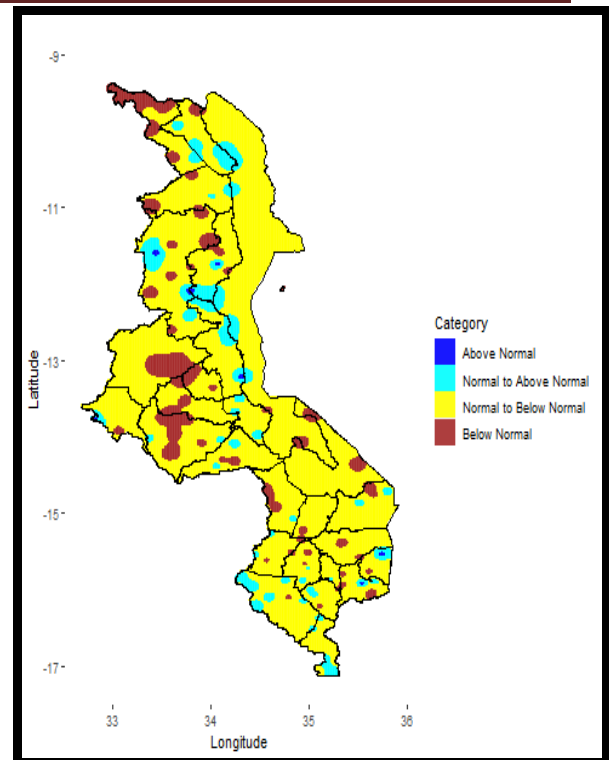


Figure 7: February 2024 rainfall forecast

For temperature, generally normal conditions are anticipated during the month of February 2024 over majority of northern and central areas of the country with warmer than usual conditions over majority of southern areas as shown in figure 8 below.

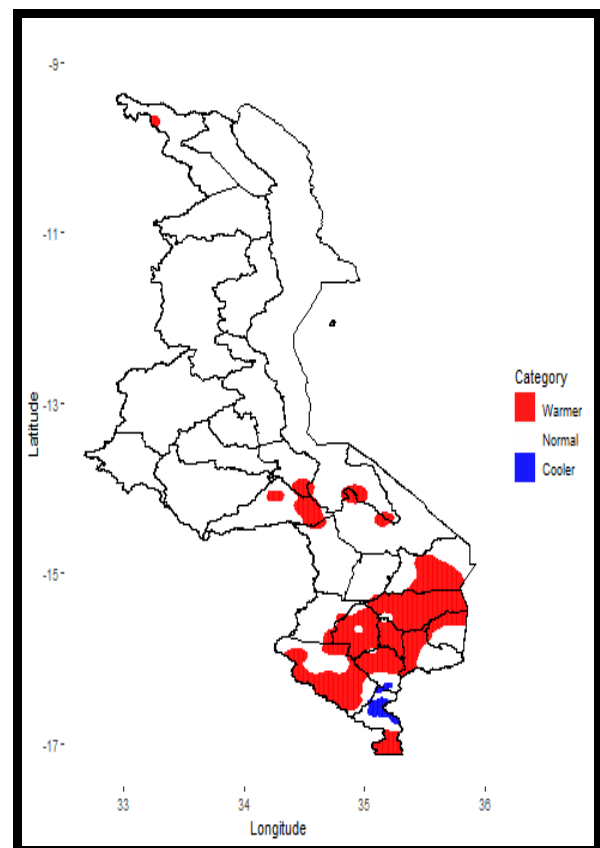


Figure 8: February 2024 temperature forecast categories

**4. OUTLOOK FOR 21-29 FEBRUARY 2024**

During the period 21 - 29 February 2024, a broad equatorial trough is expected to influence weather over Malawi. Therefore, generally above normal rainfall amounts are anticipated over northern areas of the country with generally normal to above normal amounts over central and some southern areas of the country, majority of southern areas are anticipated to get normal to below normal amounts. This is represented by the map in Figure 9.

Farmers are advised to employ some water harvesting techniques wherever possible. For farmers whose crop reached permanent wilting point are advised to consider planting other crops that can survive in the prevailing weather conditions like sweet potatoes, as well as start making plans for winter cropping.

Livestock farmers, are encouraged to take proactive measures in ensuring their stock is guarded against worms, parasites as the seasonal conditions may provide suitable environment for breeding of the same. Furthermore, farmers are advised to provide proper housing for their stock as the anticipated rains might lead to flash flooding.

Fish farmers, are advised to guard against pond overflows particularly over northern areas as the anticipated amounts are above their dekadal historical amounts.

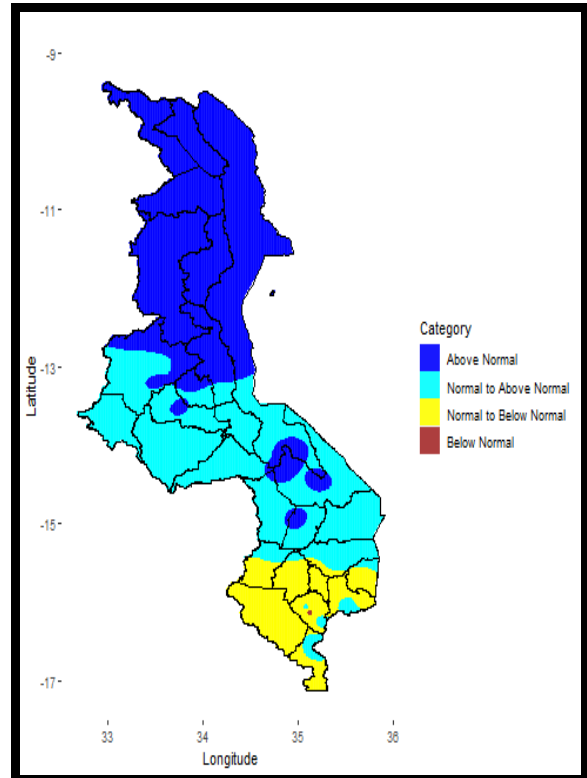


Figure 9: Dekadal rainfall outlook for Malawi for 21-29 February 2024 as percentage of normal rainfall