



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 March 2024

Season: 2023/2024

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HIGHLIGHTS

- Sporadic rainfall activities across Malawi ...
- Maize at tasseling to cobbing stages, some maturing...
- Normal to above normal dekadal amounts anticipated countrywide...

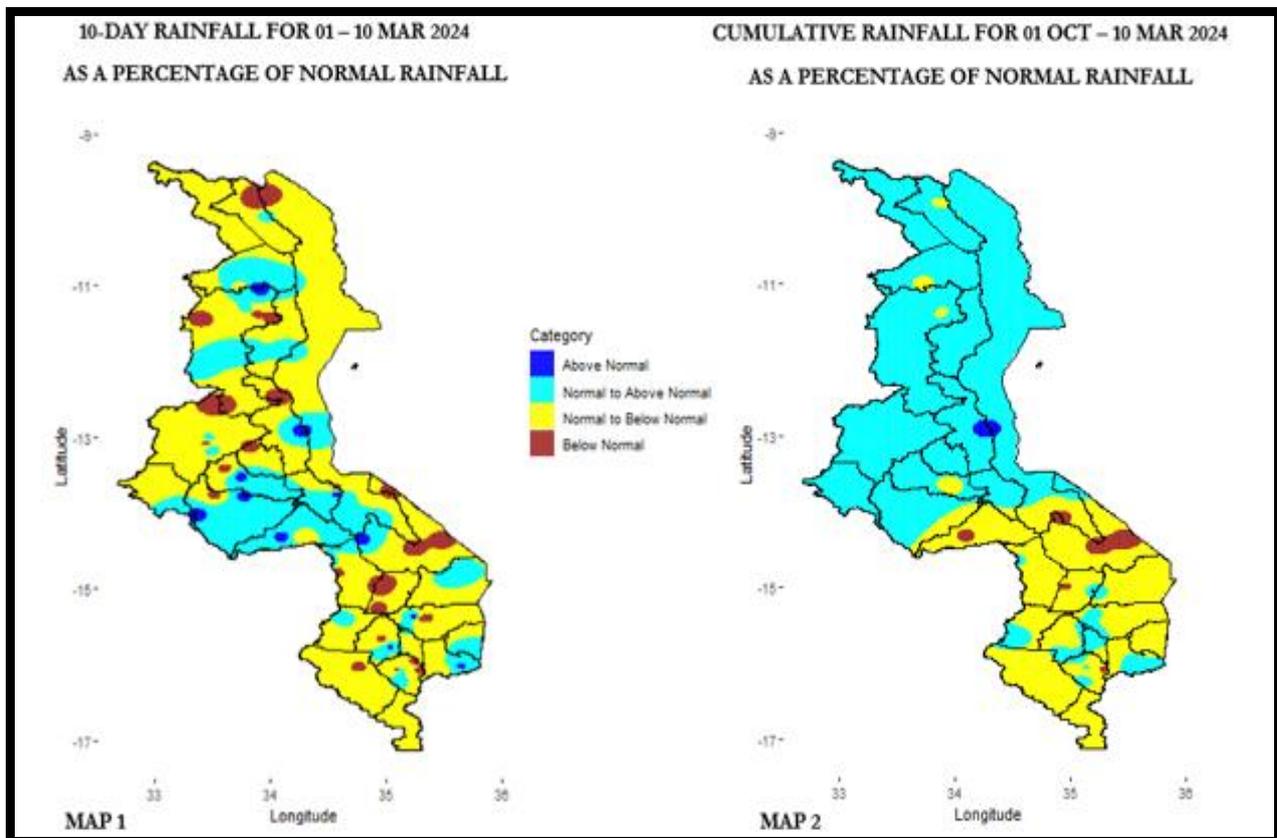


Figure 1: Observed dekadal and cumulative seasonal rainfall as percentage of normal for Malawi

1.0 WEATHER SUMMARY

During the period 01 to 10 March 2024, a weak Inter-Tropical Convergence Zone influenced weather of the country resulting in sporadic rainfall activities over the country.

1.1 RAINFALL SITUATION

During the first dekad of March 2024, sporadic rainfall activities were experienced over the country. The recorded rainfall amounts were within the normal to below normal range of historical dekadal amounts over majority of areas with isolated cases of normal to above normal scenarios in all the three regions of the country. More in Map 1 from figure 1.

Spatial distribution of the actual recorded rainfall amounts shows that parts of central lakeshore districts of Nkhonkhotakota and Salima, and Mulanje district in the Shire highlands received higher rainfall amounts. During the reporting period, stations that recorded at least 100.0mm of rainfall included Salima Meteorological station which recorded 251.6mm in 6 rainy days, Nkhonkhotakota Meteorological station recorded 191.4mm in 4 rainy days, Namitete in Lilongwe recorded 171.0mm in 5 rainy days, Chintcheche Agriculture in Nkhonkhotakota Bay recorded 150.8mm in 4rainy days, Lujeri Tea estate in Mulanje recorded 146.0mm in 7 rainy days, Kamuzu International Airport Meteorological station recorded 130.0mm in 8 rainy days, Thiwi Agriculture in Mchinji recorded 125.4mm in 5 rainy days, Fortlister in Phalombe recorded 109.6mm in 6 rainy days and Nankumba Agriculture in Mangochi recorded 100.0mm in 3 rainy days. More details in figure 2 below.

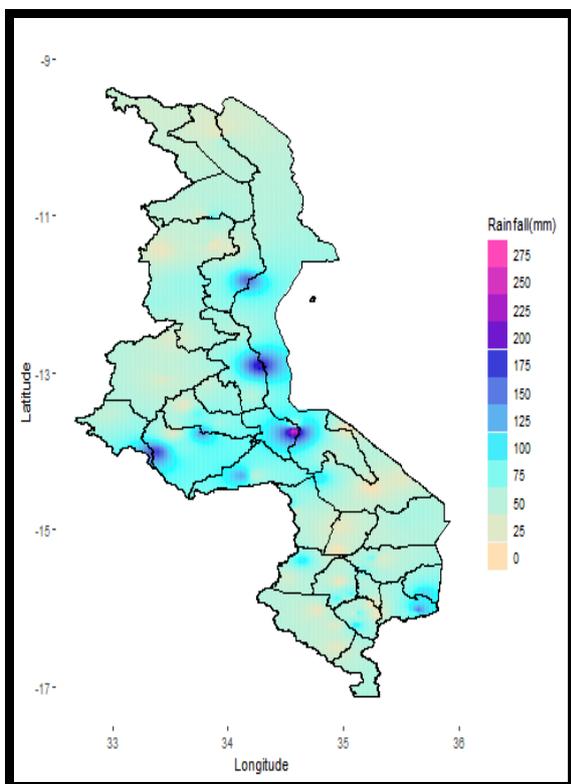


Figure 2: Observed dekadal rainfall for Malawi, 01-10 March 2024

The overall rainy days distribution from 01 to 10 March 2024 is shown in figure 3 below. Highest

number of 8 rainy days was registered at Kamuzu International Airport with second highest of 7 rainy days registered at 4 stations namely Lujeri Tea estate, Mimosa Meteorological station in Mulanje, Zomba Agriculture and Chancellor college. Other stations mostly had rainy days ranging from 3 to 6.

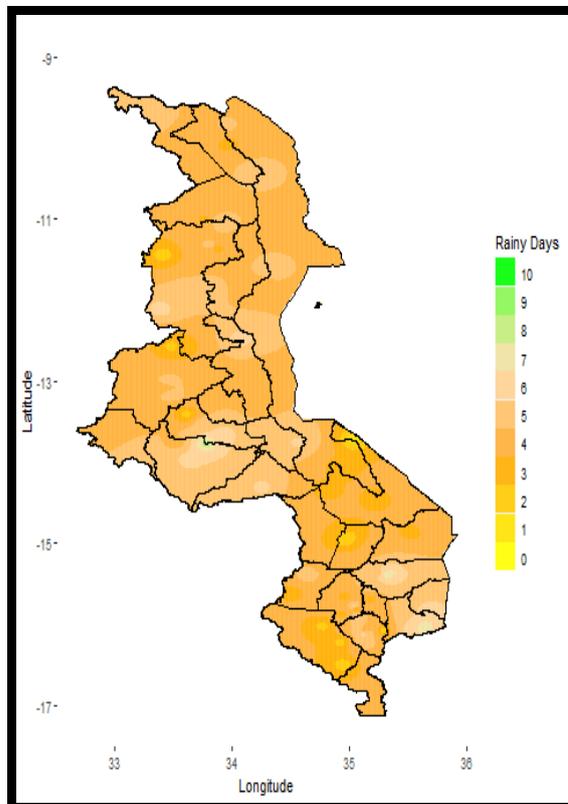


Figure 3: dekadal rainy days for Malawi, 01-10 March 2024

Cumulatively, since the start of monitoring of the rainfall season on 01 October 2023 to 10 March 2024, generally normal to above normal rainfall amounts have been experienced over majority of northern and central areas of the country with normal to below normal scenarios over majority of southern areas, where prolonged dry spells had been experienced from last dekad of January to last dekad of February. More details in Map 2 in figure 1 above.

1.2 AIR TEMPERATURE

Malawi experienced warm to hot conditions during the period 01 to 10 March 2024. Mean daily maximum temperatures had ranged from 23.0°C at Chitedze Meteorological station in Lilongwe to 34.7°C at Ngabu Meteorological station in Chikwawa, while mean daily minimum temperatures had ranged from 17.0°C at Dedza Meteorological station to 25.2°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 Mzimba Meteorological station to 82% at Karonga Meteorological station.

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 0.7 km per hour at Bolero to 10.6km per hour at Chileka Meteorological station in Blantyre

1.5 SUNSHINE HOURS/ SOLAR RADIATION

Generally medium hours of bright sunshine were observed over Malawi during the period 01 to 10 March 2024. Daily values of sunshine hours had ranged from 6.6 hours per day at Nkhata Bay Meteorological station to 9.7 hours per day at Ngabu Meteorological station and consequently the amount of Solar Radiation had ranged from 8.7 to 12.3 cal/cm²/day.

2. AGROMETEOROLOGICAL ASSESSMENT

During the period under review, good temporal and spatial distribution of rainfall continued over some areas in all the three regions of the country.

Maize crop stand is encouraging over northern and some central areas particularly where fertilizer or manure was applied as well as good agricultural practices as stipulated by the Ministry of Agriculture, were adhered to.

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 crop that survived prolonged dry spells that were experienced in the region. Some farmers over southern areas are reportedly harvesting for those that planted early maturing varieties and their crop survived the prolonged dry spells spanning almost a month in some areas as captured in figure 4 below.



Figure 4: Harvested maize field, Milonde Extension Planning Area, Mulanje, southern Malawi

Other crops such as soya beans, tobacco, are also reportedly doing well with soya beans generally at flowering to podding stages over most of soya bean growing districts and majority of tobacco farmers are harvesting in readiness for the 2024/2025 Tobacco marketing season as captured in figure 5 below



Figure 5: Harvested tobacco crop air-curing, Chivamba Extension Planning Area, Chivamba, Lilongwe East

However, due to persistent hot and dry weather conditions experienced particularly over southern half of the country, many crops including the staple crop maize which showed various degrees of water stress conditions, have failed to improve despite the rains experienced during the period under review. This is depicted in figure 6 below.



Figure 6: Maize crop affected by prolonged dry spell, Blantyre Agricultural Development Division

Furthermore, some farmers have taken heed of advice and have now planted crops that can mature

within the remaining part of the season or utilize residual moisture during winter months with limited water such as sweet potatoes, sesame, cassava among others. More in figure 7 below.



Figure 7: Promising sweet potato Kunthembwe Extension Planning Area, Blantyre Agricultural Development Division

For livestock, majority of livestock in the country were under normal Temperature Humidity Index as the country experienced generally warm to hot and fairly humid conditions. The rains over the country ensured improved and continued pasture growth and water availability to various stock over northern and southern half of the country respectively. For fish farmers, the rains ensured there was water in their ponds as captured in figure 8 below.



Figure 8: Tengula fish pond, Njuli, Mombezi Extension Planning Area, Chiradzulu, Blantyre Agricultural Development Division

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 were experienced over southern half of Malawi as well as reported cases of Fall Army Worm infestation countrywide and crop washaways due to floods over parts of Nkhotakota, Dowa and Karonga districts as assessment of impacts of these events is still ongoing.

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.

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 9 below. The map depicts mostly normal to below conditions over the country during the FMA sub-season.

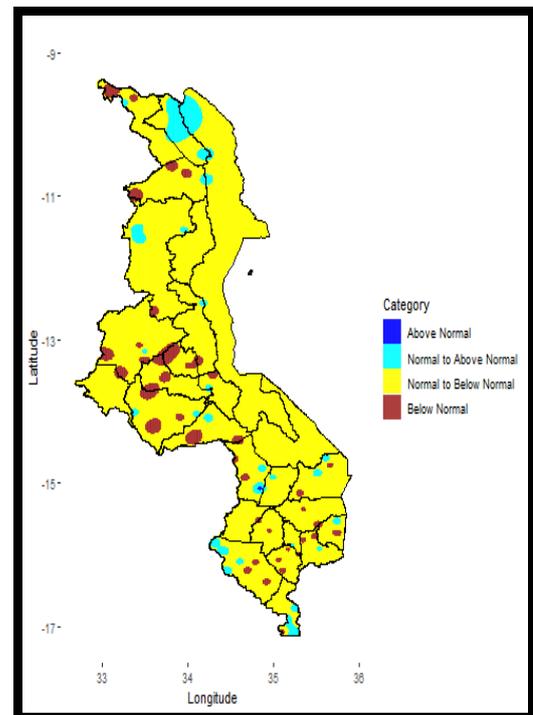


Figure 9: Sub-season February-March-April (FMA) rainfall forecast categories

For the month of March 2024, normal to below normal rainfall amounts are also anticipated over majority of areas of the country, with very isolated cases of normal to above normal rainfall amounts across the country. Refer to figure10 below.

4. OUTLOOK FOR 11-20 MARCH 2024

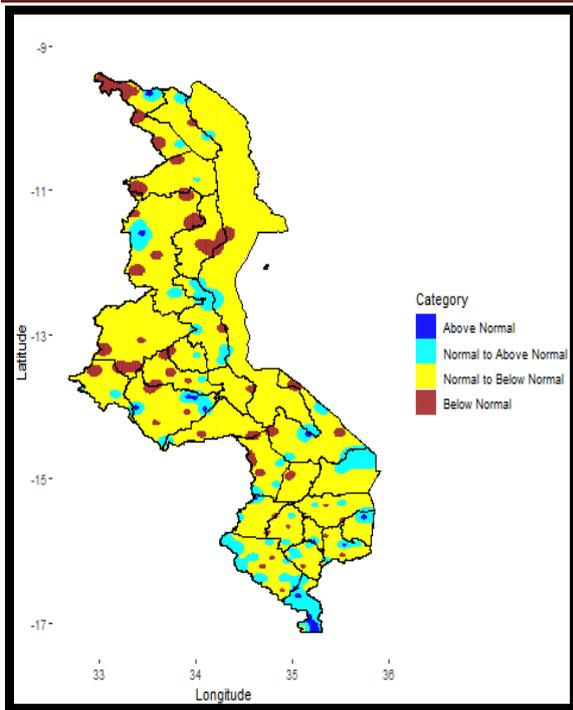


Figure 10: March 2024 rainfall forecast categories

During the period 11- 20 March 2024, a broad equatorial trough is expected to influence weather over Malawi. Therefore, generally normal to above normal rainfall amounts are anticipated over the country. This is represented by the map in Figure 12.

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 as the anticipated amounts are normal to above normal of their dekadal historical amounts.

For temperature, generally warmer than normal conditions are anticipated during the month of March 2024 over majority of central and southern areas of the country with normal conditions over majority of northern areas as shown in figure 11 below.

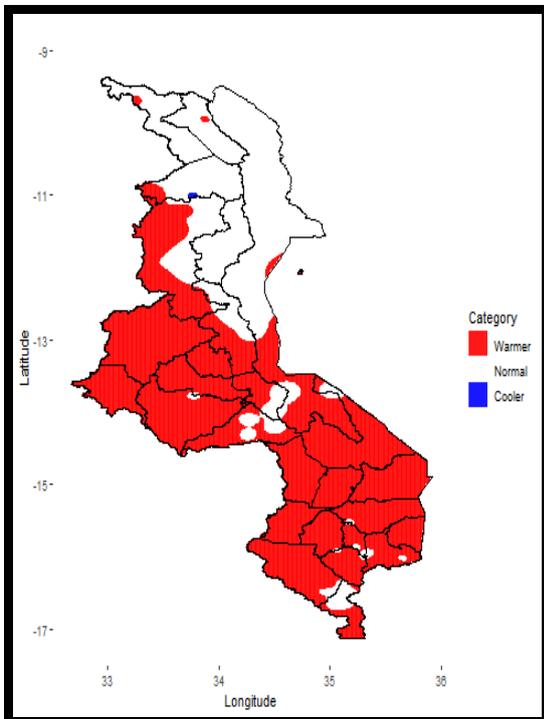


Figure 11: Temperature forecast categories for March 2024

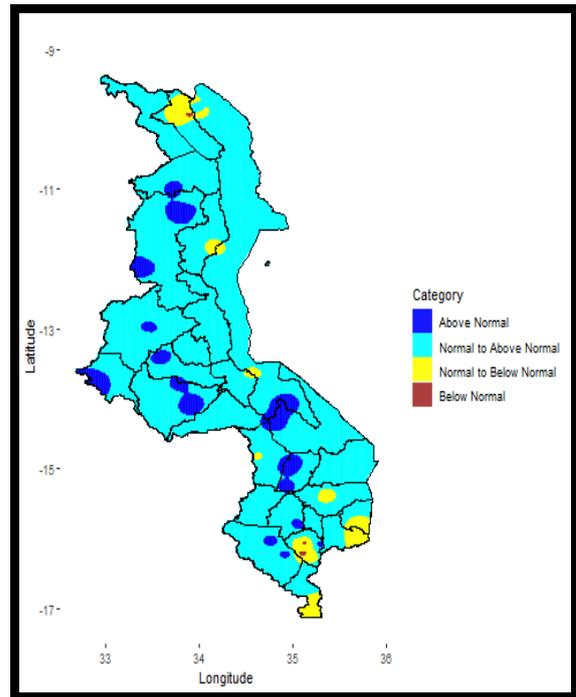


Figure 12: Dekadal rainfall outlook for Malawi for 11-20 March 2024 as percentage of normal rainfall