

HIGHLIGHTS

- Hot and dry conditions were dominant over Malawi...
- Weeding in progress over the south...
- Improved rainfall situation expected towards the end of the month...

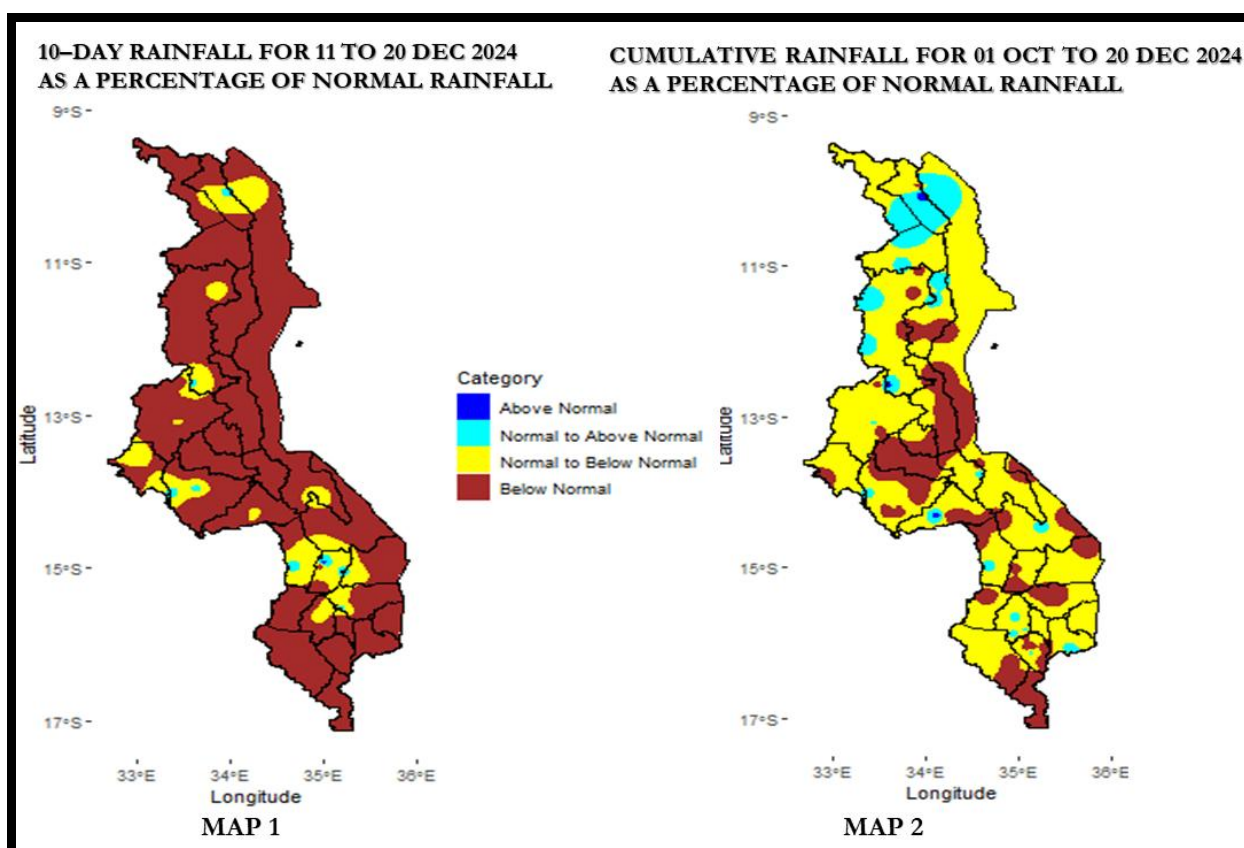


Figure 1: Observed dekadal and cumulative seasonal rainfall as percentage of normal for Malawi

1.0 WEATHER SUMMARY

During the period 11 to 20 December 2024, some southern areas experienced windy conditions with locally heavy rains due to Severe Tropical Cyclone Chido though the greater part of the period mostly hot and dry conditions persisted over Malawi due to predominance of warm and dry northeasterly airmass over Malawi.

1.1 RAINFALL SITUATION

During the second dekade of December 2024, there was persistence of deficiency of rainfall across the country though the impact of Severe Tropical Cyclone Chido were felt over the south but the rainfall intensity was not enough as there was heat wave and prolonged dry spells soon after TC Chido.

Some of the stations that recorded at least 50mm of rainfall during the reporting period included Toleza farm in Balaka recorded 108mm in 2 rainy days, Mbawa Agricultural Research recorded 67.8mm in 4 rainy days, Chitedze Agricultural Research station in Lilongwe recorded 61.9mm in 3 rainy days, Vinthukutu in Karonga recorded 52.5mm in 1 rainy day, Makoka Agricultural Research station recorded 52.1mm in 4 rainy days, Dedza Meteorological station recorded 50.5mm in 3 rainy days and Mwimba Agricultural Research station recorded 50mm in 3 rainy days.

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

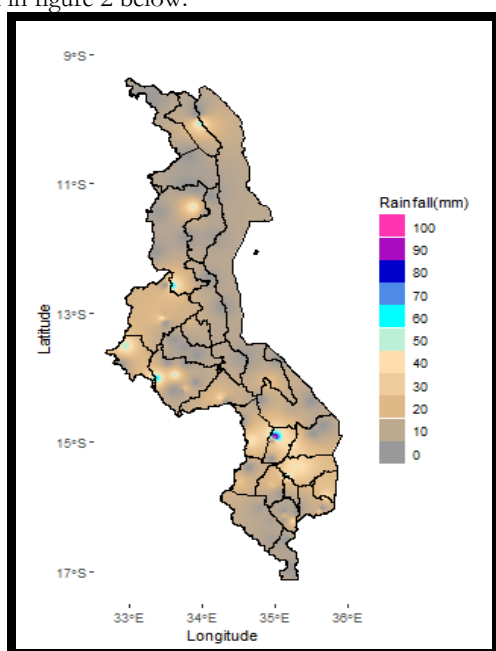


Figure 2: Observed dekadal rainfall for Malawi, 11-20 December 2024

The overall rainy days distribution from 11 to 20 December 2024 is shown in figure 3 below. Fort Lister in Phalombe recorded the highest of 5 rainy days followed by Mbawa, Makoka and Bvumbwe Agricultural Research stations with 4 rainy days each. Most northern and central stations did not record any rainy day.

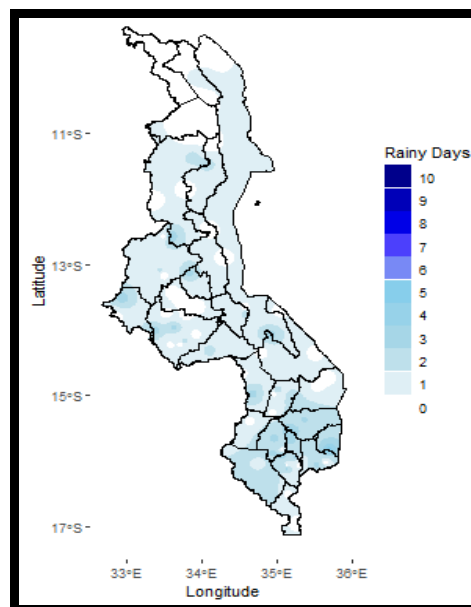


Figure 3: Dekadal rainy days for Malawi, 11-20 December 2024

2024/2025 ONSET STATUS

By December 20th 2024, the onset of the season, as defined by DCCMS, still had not yet been observed in most areas of Malawi due to prolonged dry spells which have been experienced over the country. The definition states that “**the first day or 3 consecutive days receiving 25mm or more and not followed by 9 consecutive dry days within the next 21 days**”. Almost the country remains under monitoring as most areas have received the required amount of rainfall but failing to meet the condition of dry spells as shown on figure below

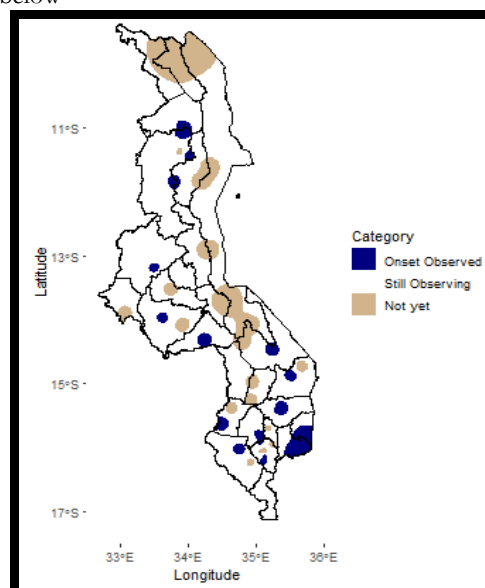


Figure 4: 2024/25 Onset status

1.2 AIR TEMPERATURE

Due to the heat wave, most areas experienced generally very hot conditions during the period 11 to 20 December 2024. The highest average daily maximum temperature reported for the period was 40.7°C from Ngabu Meteorological station in Chikwawa, with the absolute maximum temperature of 43.9°C report at the station on 14th December 2024. On the other hand, average daily minimum temperatures had ranged

from 16.4°C at Mzuzu International Airport in Mzimba to 27.6°C from Ngabu Meteorological station.

1.3 RELATIVE HUMIDITY

During the period 11 to 20 December 2024, air over Malawi was relatively dry. Daily average Relative Humidity values recorded from various weather stations across the country had ranged from 48% at Ngabu Meteorological Station to 68% at Chitipa Meteorological Station.

1.4 WIND SPEEDS

During the period under review, most parts of Malawi experienced generally light wind speeds with isolated cases gusty winds especially during thundery activities and during TC Chido. 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 Nkhata Bay Meteorological station to 10.1 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 period 11 to 20 December 2024. Daily average values had ranged from 6.4 hours at Bvumbwe Meteorological Station in to 9.3 hours at Karonga Meteorological station and consequently the amount of Solar Radiation had ranged from 8.4 to 12.3 cal/cm²/day.

2. AGROMETEOROLOGICAL ASSESSMENT

Most farmers are still waiting for the rains to plant and others to replant, but the main on-farm activities over southern areas have been weeding for those who planted early and others were applying basal dressing fertilizers. Stocking of various farm inputs is underway across the country under the Malawi Government's Affordable Inputs Program (AIP) initiative.

Though there's scarcity of rains over the country but some crops are still performing well especially those under conservation agriculture (e.g applied with manure). Images below (Figures 5 and 6) show different fields over the south. Nonetheless, the majority of crops are showing signs of serious water stress (Figure 7). This may result in permanent wilting of the crops. Farmers may need to replant when rains start in earnest.



Figure 5: Maize field Kunthembwe EPA, Blantyre a day after TC Chido.



Figure 6: Conservation agriculture practices has helped a farmer to retain some moisture in Likangala EPA Zomba.



Figure 7: A water stressed crop in Chiradzulu.

3. PROSPECTS FOR 2024/2025 SEASON

The 2024-2025 rainfall season is expected to be influenced by weak La Nina conditions that have been established over eastern-central equatorial Pacific Ocean. Global models project that these conditions are likely to persist for a considerable part of the season.

The rainfall forecast for the 2024/2025 season is that:

“During October to December 2024, Rainfall amounts across most areas of the country are anticipated to be normal to below-normal, except for specific areas in central and northern Lakeshore districts, where they may experience normal to above-normal precipitation.

During January to March 2025, expect normal to above-normal total rainfall amounts over most areas with possibility of outright above normal rainfall in January 2025.”

Illustration of the forecast is given in Figure 8 below with map (a) and map (b) showing sub-seasons October

November December (OND) and January February March (JFM), respectively.

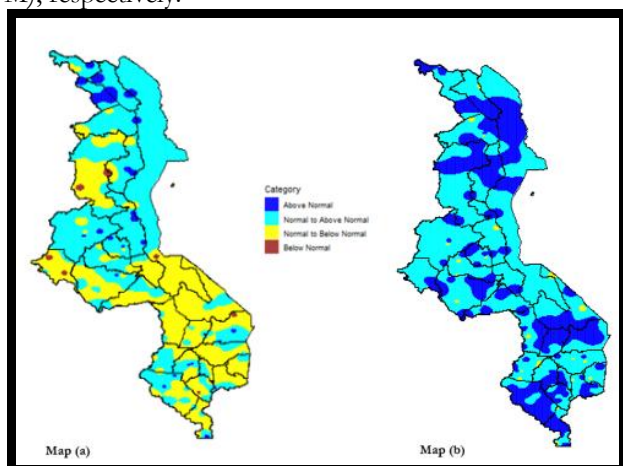


Figure 8: Forecast categories for OND and JFM

At national level, there are higher chances of normal to above normal cumulative seasonal rainfall amounts over most parts of the country.

For the month of December 2024, normal to above normal rainfall amounts are anticipated over majority of areas of the country with above normal episodes over Lakeshore and northern areas. Pockets of below normal conditions are expected in some southern, central and southern areas. Refer Figure 9 below map (a). The actual anticipated rainfall amounts are generally in the range 100-250 mm as shown in map (b) of Figure 9 below.

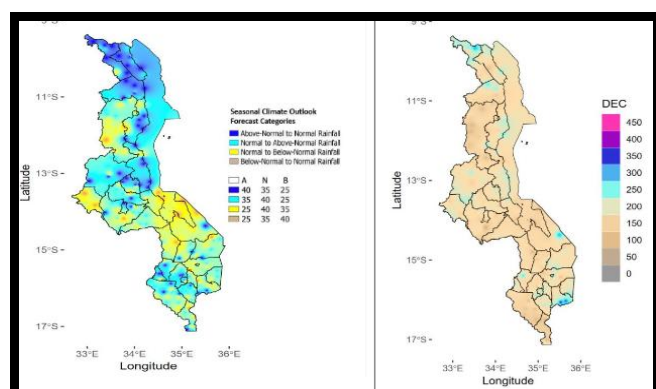


Figure 9: December 2024 rainfall forecast (a) categories and (b) values

In terms of temperature, generally normal conditions are anticipated during the month of December 2024 over most areas of the country as shown in map (a) in Figure 10 below. This generally entails temperatures of around 36 Degrees Celsius for lower Shire River Valley areas while temperatures of 30 to 32 Degree Celsius elsewhere as captured in map (b) in Figure 10 below.

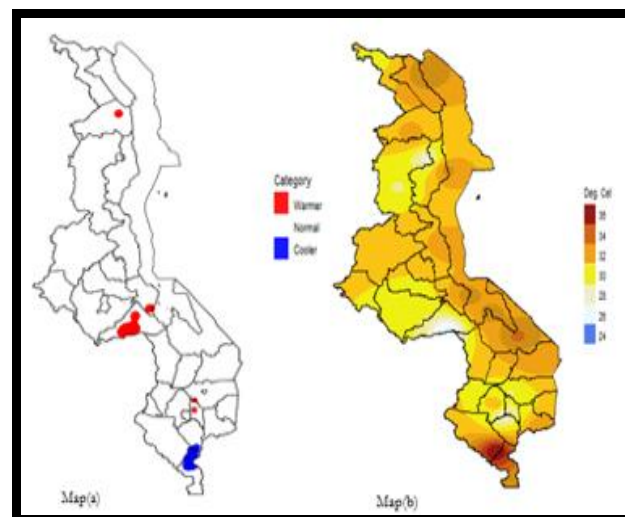


Figure 10: December 2024 temperature forecast

4. OUTLOOK FOR 21 - 31 DECEMBER 2024

Hot and dry conditions are expected to continue over more areas due to warm northeasterly airmass (Figure 11), but rainfall activities are anticipated to pick across the country towards the end of the month. Furthermore, livestock farmers are advised to provide water to their stock at regular times to avoid stress to their stock.

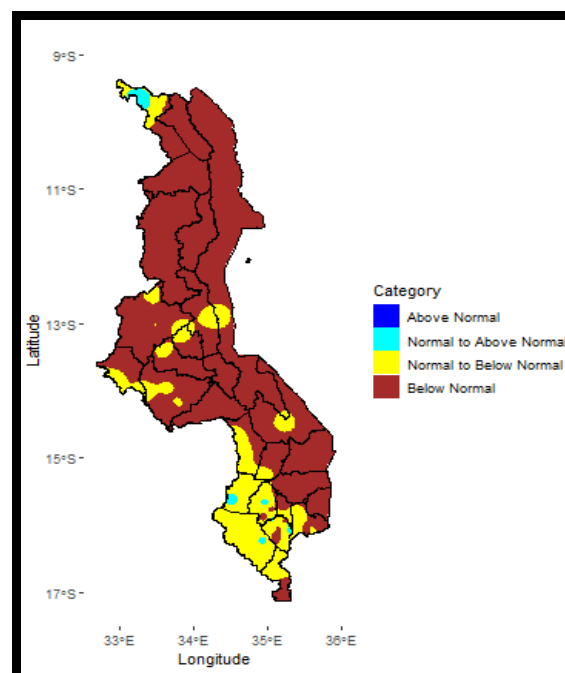


Figure 11: Dekadal rainfall outlook for Malawi for 21-31 December 2024