REPUBLIC OF MALAWI

Ministry of Natural Resources, Energy and Mining
Department of Climate Change and Meteorological Services

10-day Weather and Agrometeorological Bulletin

In support of national early warning systems and food security

Be wise be weather-wise

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HIGHLIGHTS

- **More areas received significant rainfall amounts…**
- **Good rainfall amounts propel farmers to start planting crops…**
- **Brighter rainfall prospects mainly over southern and central Malawi…**

1.0 WEATHER SUMMARY

During the second ten days of November 2016, an interaction between easterly and westerly winds had created local convergence over southern, central and some parts of northern Malawi. As a result more areas in Malawi had recorded locally heavy rainfall amounts.

1.1 RAINFALL SITUATION

During the second ten days of November 2016, most areas in Malawi especially in southern and central Malawi had received significant rainfall amounts. For instance significant rainfall above 25mm in southern Malawi was recorded at Lujeri Tea Estate 108mm, Mimosa and Chichiri Met stations 73mm, Chikweo Agric 41mm, Mulanje and Chiradzulu Agric stations had 39mm, Namwera Agric 30mm and Chancellor College had recorded 28mm while reports from central Malawi indicate that such rainfall amounts were registered at Lifuwu Research station 90mm, Tembwe Agric in Mchinji 65mm, Kasungu Met and Mchinji Agric 62mm each, Kasiya Agric 48mm, Salima Met 41mm, Chileka-Namitete 35mm and finally Dwangwa Illovo Sugar reported 27mm and in the north heavy rain was reported only at Chintheche Agric station 39mm. Sporadic rainfall is likely to persist over Malawi until major rain bearing systems get established.

1.3 AIR TEMPERATURE

During the second ten days of November 2016, Malawi had experienced hot to very hot temperatures. Hot temperatures were mainly experienced over highlands and very hot temperatures were recorded over low altitude areas like along the lakeshore and in valleys. Mean maximum temperatures had ranged from 28°C to 40°C while mean minimum temperatures had ranged from 16°C to around 27°C. The highest maximum temperature was recorded at Ngabu (43°C). while the lowest temperature was around 13°C recorded at Mzuzu Airport and Dedza Met. For more details see Table 1.

1.4 WIND SPEEDS

During the period 11 to 20 November 2016 mean wind speeds measured at a height of two metres above the ground level across Malawi ranged from 3.2Km per hour at Nkhata Bay Met to 13.3km per hour at Chitipa Met and Dedza. More details are in Table 1.

1.5 RELATIVE HUMIDITY

The average relative humidity values during the second ten days of November 2016 had ranged from 41% at Kamuzu International Airport to around 60% at Monkey Bay in Mangochi district. Details are on the Table 1.

1.6 SUNSHINE HOURS

High durations of sunshine hours were observed across Malawi. The mean sunshine hour durations had ranged from between 8 and 11 hours per day. The longest durations of sunshine hours were registered in low altitude areas like in Shire Valley as well as along the lakeshore areas. Details are on the Table 1

2. AGROMETEOROLOGICAL ASSESSMENT

During the second ten days of November 2016 more areas in southern and central Malawi had received significant rainfall amounts to support planting activities. Therefore more farmers who had finalized land preparation and had seed were propelled to start planting of crops. As such the main agricultural activities included land preparation in readiness for the start of the main rainfall season, procurement of farm inputs and planting of crops.

3. PROSPECTS FOR 2016/17 RAINFALL SEASON

The rainfall forecast for the 2016/2017 season in Malawi is that during the first half (October to December 2016), the greater part of southern half of Malawi is likely to receive normal to above normal rainfall amounts while the northern half is likely to receive normal to below normal amounts. During the second half (January to March 2017) the greater part of Malawi is expected to experience normal to above normal rainfall amounts. In view of this forecast farmers are advised to ensure timely planting, plant drought tolerant food crops such as cassava, sweet potatoes, sorghum and millet, in the early days of the rainy season, plant early maturing crop varieties and apply adequate manure to improve soil moisture retention

4. OUTLOOK FOR 21– 30 NOVEMBER 2016

Models show brighter rainfall prospects over most areas in southern and central Malawi. Therefore expect good soil moisture with persistent warm temperatures to support planting, germination and emergence of crops within the last ten days of November 2016.

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TABLE 1: AGROMETEOROLOGICAL PARAMETERS FOR 11 TO 20 NOVEMBER 2016

ADD/ STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED Km/hour	RH %	SUN SHINE HOURS	Eo mm per day	Et mm per day	RAD-TION calcm^{-2} p/day
KARONGA ADD										
Chitipa	31.6	20.0	33.8	16.8	13.3	48	8.9	8.6	7.0	10.3
Karonga	35.1	23.4	37.1	22.0	7.6	48	9.7	9.0	7.2	10.8
MZUZU ADD										
Bolero	33.5	21.5	36.1	19.5	5.8	42	8.6	8.0	6.4	10.1
Mzimba	31.2	19.7	33.6	17.4	6.8	48	9.3	8.0	6.3	10.5
Mzuzu	29.3	16.3	31.3	13.4	7.2	52	9.1	7.5	5.9	10.4
Nkhata Bay	35.4	20.3	37.5	18.2	3.2	58	9.1	8.0	6.4	10.4
KASUNGU ADD										
Kasungu	32.8	20.5	34.5	19.0	11.5	46	9.6	8.9	7.2	10.8
LILONGWE ADD										
Chitedze	32.5	19.1	34.6	18.5	5.0	44	8.4	7.6	6.1	10.0
Dedza	28.2	17.0	30.1	15.6	13.3	52	8.5	7.8	6.3	10.0
KIA	30.9	18.5	32.6	18.0	8.3	41	9.1	8.0	6.4	10.4
SALIMA ADD										
Nkhota kota	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Salima	34.3	23.8	36.5	20.6	9.4	48	10.1	6.0	4.7	11.1
MACHINGA ADD										
Makoka	32.4	19.5	33.9	17.0	5.4	49	8.4	7.7	6.1	10.0
Mangochi	36.9	24.6	40.0	22.0	4.3	43	10.5	9.2	7.4	11.3
Monkey Bay	34.7	24.7	37.0	22.6	9.7	60	10.3	9.5	7.7	11.2
Ntaja	35.3	21.6	37.9	20.4	10.1	48	8.9	8.8	7.2	10.3
BLANTYRE ADD										
Bvumbwe	30.3	18.6	33.4	16.8	7.9	52	8.5	7.7	6.1	10.0
Chichiri	31.9	19.7	34.8	17.2	6.1	49	8.5	7.7	6.2	10.0
Chileka	34.3	22.1	37.2	20.3	13.0	46	8.7	9.1	7.5	10.2
Mimosa	34.2	19.5	37.3	17.7	6.1	45	8.5	8.0	6.4	10.0
SHIRE VALLEY ADD										
Ngabu	40.0	26.6	43.3	24.5	5.8	51	10.8	10.2	8.3	11.5

Glossary of some terms on this table

- Eo = Potential or reference Evapotranspiration, Et = Actual Evapotranspiration and RH = Mean Relative Humidity
- Mean Temperature of the day =(Max of the day + Min of the same day)/2
- ABS Max (Min) = Absolute Maximum (minimum) is the highest (lowest) of maximum (minimum) temperatures observed for a given number of days (calendar month) of a specified period of months (years).
- To convert Meters Per Second (mps) to Kilometers per hour (Km/hr) = mpsx3.6
- N/A – means data was not available at the time of reporting