Government of Malawi
Ministry of Natural Resources, Energy and Mining

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 November 2017 Season: 2017/2018 Issue No.5

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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 period 11 to 20 November 2017, a local convergence between relatively warm air mass from the north east and cool air mass from the south east had maintained scattered thunderstorms and rain showers over southern Malawi and some parts of central Malawi while another convergence of warm air mass from the north east and moist air mass from the west was responsible for thunderstorms and rain showers over some parts of northern Malawi.

1.1 RAINFALL SITUATION

During the second ten days of November 2017, most areas in southern Malawi and a few in central Malawi had received substantial rainfall amounts. Significant rainfall amounts of at least 30mm were reported in some areas including Mangochi Met 127mm, Chancellor College recorded 118mm, Zomba Agric reported 102mm, Chichiri Met registered 95mm, Lujeri Tea Estate 92mm, Mulanje Agric 86mm, Naminjiwa 77mm, Mchinji Agric 76mm, Phalula Agric 43mm, Bvumbwe Met 41mm, Mimosa Met and Dowa Agric 40mm, Chiradzulu Agric 39mm, Balaka and Neno Agric stations had 35mm, Chileka Airport and Dwangwa received 34mm each while Chingale Agric had 30mm. The rainfall amounts reported at most places were above the long term average. However, by 20th November 2017 below average rainfall was mostly confined to the north and a few areas in the central Malawi. 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 2017, 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 27°C to 36°C while mean minimum temperatures had ranged from 17°C to around 25°C. The highest maximum temperature was recorded at Ngabu (43°C). while the lowest temperature was around 14°C recorded at Mzuzu Airport and Bvumbwe Met. For more details see Table 1.

1.4 WIND SPEEDS

During the period 11 to 20 November 2017 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 14.4km per hour at Chitipa Met. More details are in Table 1.

1.5 RELATIVE HUMIDITY

The average relative humidity values during the second ten days of November 2017 had ranged from 38% at Bolero in Rumphi to around 72% at Bvumbwe in Thyolo 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 6 to 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 2017 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 effective start of the 2017/18 main rainfall season, mobilization of farm inputs and planting of crops.

3. PROSPECTS FOR 2017/18 RAINFALL SEASON

The Sea Surface Temperatures which drive the rainfall patterns of the world including Malawi were in the Neutral El

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Niño Southern Oscillation (ENSO) phase and climate models were indicating that neutral conditions were likely to persist during the 2017/2018 rainfall season. Based on neutral ENSO conditions, the rainfall forecast for the 2017/18 season in Malawi is that during the period October 2017 to March 2018 a greater part of the country will experience normal total rainfall amounts. This meant that priority planning for the 2017/18 season in Malawi should be based on expectations of average rainfall depending on the climate of the area. In view of the 2017/18 climate forecast, farmers in Malawi have been 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 2017

Models for short and medium range forecasts show brighter rainfall prospects for good rainfall amounts over Malawi particularly over southern and some parts of central Malawi during the last ten days of November 2017. Farmers are therefore advised to finalize procurement of farm inputs and land preparations on time to ensure planting with the first effective rainfall.

TABLE 1: AGROMETEOROLOGICAL PARAMETERS FOR 11 TO 20 NOVEMBER 2017

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	32.3	19.4	34.5	17.4	14.4	46	10.5	9.2	7.5	11.3
Karonga	34.9	23.5	36.7	22.2	7.2	46	11.1	9.4	7.5	11.7
MZUZU ADD										
Bolero	34.1	21.2	36.3	18.0	7.2	38	10.2	8.7	7.0	11.2
Mzimba	31.6	19.5	35.8	17.4	6.8	44	11.2	8.6	6.7	11.8
Mzuzu	29.3	16.9	31.3	13.8	7.2	56	10.5	7.9	6.2	11.4
Nkhata Bay	35.4	20.8	38.5	17.7	3.2	55	9.3	8.1	6.5	10.6
KASUNGU ADD										
Kasungu	30.0	19.1	33.0	18.3	10.4	45	9.9	8.4	6.8	11.0
LILONGWE ADD										
Chitedze	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dedza	27.0	17.0	30.2	14.9	8.3	63	8.5	7.1	5.6	10.0
KIA	30.7	19.3	33.4	17.0	7.9	54	8.9	7.8	6.3	10.3
SALIMA ADD										
Nkhota kota	34.1	24.0	36.5	21.2	5.0	55	10.8	9.2	7.4	11.6
Salima	35.5	24.6	38.3	23.0	11.9	49	10.4	9.8	8.0	11.3
Makoka	30.2	19.7	35.2	16.9	4.0	66	5.8	6.3	5.1	8.3
Mangochi	34.1	22.8	36.5	20.0	4.7	62	10.0	8.6	6.9	11.0
Monkey Bay	34.8	24.9	36.5	21.9	10.4	44	10.1	9.6	7.9	11.1
Ntaja	33.4	22.3	37.4	19.4	10.1	62	8.6	8.4	6.8	10.1
BLANTYRE ADD										
Bvumbwe	27.0	16.8	33.4	14.4	8.3	72	6.7	6.3	5.0	8.9
Chichiri	28.5	19.4	34.6	16.7	6.1	69	6.5	6.5	5.2	8.7
Chileka	31.5	20.9	37.1	19.0	11.9	62	6.2	7.3	6.0	8.5
Mimosa	30.5	20.3	37.0	18.6	4.7	63	6.5	6.7	5.4	8.7
SHIRE VALLEY ADD										
Ngabu	35.1	24.1	42.7	22.0	6.5	56	11.0	9.4	7.6	11.7

Glossary of some terms on this table

- Eo = Potential 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