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: 01 – 10 November 2017 | Season: 2017/2018 | Issue No.4

Release date: 14 November 2017

HIGHLIGHTS

- **Substantial rainfall amounts received in some** parts of Malawi…
- Major agro-activities included land preparation and procurement of farm inputs …
- **Good rainfall prospects over** Malawi during the period 11 to 20 November 2017…

1.0 WEATHER SUMMARY

During the first ten days of November 2017, a local convergence between relatively warm air mass from the north east and cool air mass from the south east had caused 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 period 01 to 10 November 2017, some parts of Malawi had registered an increase in rainfall activities. Significant rainfall amounts of above 25mm were received including in places like in Mulanje District where Lujeri Tea Estate reported 102mm, Mimosa Met 78mm and Mulanje Agric 70mm, in Ntcheu District Mlanjeni-Njolomole had 61mm, in Blantyre Chileka Airport recorded 58mm, Chelinda in Rumphi District received 58mm, in Mangochi District Mangochi Met registered 57mm while Namiasi Agric reported 26mm, in Machinga District Chikweo Agric had 30mm while 28mm was recorded at Ntaja Agric The rainfall amounts in most of the places were significantly above the long term average. However, dry conditions had persisted in some areas up the first ten days of November 2017. Sporadic rainfall is likely to persist over Malawi until major rain bearing systems get established over the country.

1.3 AIR TEMPERATURE

Generally hot to very hot temperatures were reported over Malawi during the first ten days of November 2017. Mean maximum temperatures had ranged from 26°C at Dedza to 37°C at Ngabu while mean minimum temperatures had ranged from 14.5°C at Bvumbwe to 24.2°C at Monkey Bay. The highest maximum temperature was recorded at Ngabu (43.1°C) in Chikwawa while the lowest temperature was 11.4°C recorded at Bvumbwe. For more details see Table 1.

1.4 WIND SPEEDS

Mean wind speeds measured at a height of two metres above the ground level across Malawi had ranged from 2.5Km per hour at Nkhata Bay to 15.1km per hour at Chitipa More details are in Table 1.

1.5 RELATIVE HUMIDITY

During the period 01 to 10 November 2017, air over Malawi was still relatively dry. Daily average relative humidity values ranged from 43% at Monkey Bay in Mangochi to 80% at Kasungu. Details are on the Table 1.

1.6 SUNSHINE HOURS

During the first ten days of November 2017 durations of bright sunshine hours per day showed that locally cloudy conditions were experienced over Malawi. Daily averages values across Malawi had ranged from 6.7 to 9.6 hours per day. This resulted in reduced amounts of solar radiation and evapotranspiration rates. Details are on the Table 1.

2. AGROMETEOROLOGICAL ASSESSMENT

During the first ten days of November 2017 some areas in country particularly in southern and central Malawi had received significant rainfall amounts. These rains had prompted a few farmers to start planting crops. Otherwise other agricultural activities included land preparation in readiness for the start of the main rainfall season and mobilization of farm inputs. The pre-season rainfall experienced so far has encouraged farmers to speed up land preparation in readiness for the effective start of 2017/18 main rainfall season.

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 Niño Southern Oscillation (ENSO) phase and climate models were indicating that these 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

All inquiries should be addressed to: The Director of Climate Change and Meteorological Services, P.O. Box 1808, Blantyre, MALAWI
Tel: (265) 1 822 014/106 Fax: (265) 1 822 215 E-mail: metdept@metmalawi.com Homepage: www.metmalawi.com

March 2018 a greater part of the country will experience normal total rainfall amounts. This meant that there was a high chance for average rainfall than there was for reduced or excess rainfall. Thus 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:

- finish land preparations on time to ensure timely planting, include water harvesting structures where ridging has been done,
- ensure adequate vegetative soil cover where conservation agriculture is practised,
- plant other 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 11 – 20 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 from mid-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. For their areas

TABLE 1: AGROMETEOROLOGICAL PARAMETERS FOR 01 TO 10 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	29.6	19.0	31.9	17.6	15.1	57	8.0	7.9	6.5	9.7
Karonga	32.8	22.8	34.5	22.5	7.9	54	7.6	7.9	6.4	9.4
MZUZU ADD										
Bolero	31.6	20.4	33.9	18.6	7.2	48	9.6	8.2	6.5	10.7
Mzimba	29.3	18.5	31.3	17.7	7.2	55	8.4	7.4	5.9	9.9
Mzuzu	26.7	16.6	30.0	12.6	7.2	66	8.6	6.9	5.4	10.1
Nkhata Bay	32.8	20.5	35.2	19.0	2.5	64	6.7	6.8	5.4	8.8
KASUNGU ADD										
Kasungu	30.5	19.0	33.0	17.0	9.4	80	7.2	6.8	5.4	9.2
LILONGWE ADD										
Chitedze	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dedza	26.0	15.2	28.3	13.6	9.0	61	8.5	6.9	5.4	10.0
KIA	29.2	17.9	31.5	14.4	7.9	49	8.4	7.4	5.9	9.9
SALIMA ADD										
Nkhota kota	32.1	23.4	34.5	22.6	4.0	56	8.2	7.8	6.2	9.8
Salima	33.8	23.8	35.7	23.0	10.4	59	9.0	8.6	7.0	10.3
Makoka	30.3	17.4	34.7	15.0	4.3	58	8.3	7.1	5.6	9.9
Mangochi	34.7	22.7	37.0	21.0	4.3	57	9.0	8.2	6.6	10.3
Monkey Bay	29.5	24.2	35.9	22.3	9.7	43	9.1	8.6	7.0	10.4
Ntaja	33.1	20.5	36.2	18.0	9.4	53	8.1	8.0	6.5	9.7
BLANTYRE ADD										
Bvumbwe	27.4	14.5	32.6	11.4	7.9	57	9.2	7.1	5.6	10.4
Chichiri	29.4	17.6	35.1	14.9	6.1	51	9.2	7.5	5.9	10.4
Chileka	31.9	19.5	37.1	16.4	13.0	48	7.3	8.1	6.7	9.2
Mimosa	31.3	18.2	36.2	15.5	4.3	56	9.0	7.4	5.9	10.3
SHIRE VALLEY ADD										
Ngabu	37.1	22.8	43.1	22.0	6.5	60	9.5	8.9	7.2	10.6

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