



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

Period: 21 – 30 November 2016

Season: 2016/2017

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### HIGHLIGHTS

- **Locally heavy rainfall amounts experienced in Southern Malawi...**
- **Major agricultural activities included land preparation and planting of crops...**
- **Increased planting opportunities expected during first ten days of December 2016...**

### 1.0 WEATHER SUMMARY

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

#### 1.1 RAINFALL SITUATION

During the last ten days of November 2016, most areas in southern Malawi particularly Mulanje, Thyolo, Blantyre and Zomba districts had received locally heavy rainfall amounts. For instance Lujeri Tea Estate had accumulated 221mm, Mimosa Met 181mm, Mulanje Agric had 124mm, Masambanjati Agric 105mm, Chizunga Factory 104mm, Makoka Met 94mm, Thuchila Agric 92mm, Mpemba Agric 88mm, Chancellor College 82mm, Nchalo had 76mm, Thyolo Met had reported 71mm, Zomba Agric 69mm, Chichiri Met 63mm, Thyolo Agric 57mm, Chiradzulu Agric 55mm and Nankumba Agric 55mm. Generally most areas in central and northern Malawi had either registered little or no rainfall during the last ten days of November 2016.

#### 1.3 AIR TEMPERATURE

During the last 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 along the lakeshore and in valleys. Mean maximum temperatures had ranged from 27°C to 37°C while mean minimum temperatures had ranged from 17°C to around 26°C. The highest maximum temperature was recorded at Ngabu (41°C) while the lowest temperature was around 13°C recorded at Mzuzu Airport Met. For more details see Table 1.

#### 1.4 WIND SPEEDS

During the period 21 to 30 November 2016 mean wind speeds measured at a height of two metres above the ground level across Malawi ranged from 3.6km per hour at Makoka 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 last ten days of November 2016 had ranged from 41% at Bolero Met in Rumphidistrict to around 79% at Bvumbwe in Thyolo district. Details are on the Table 1.

#### 1.6 SUNSHINE HOURS

The mean sunshine hour durations had ranged from 5.3 hours per day at Makoka Met to 10.4 hours per day at Chitipa. Generally long durations of sunshine hours are registered during

clear skies and short durations during cloudy days. Details are on the Table 1

### 2. AGROMETEOROLOGICAL ASSESSMENT

During the last ten days of November 2016 there was a great improvement in rainfall performance particularly over southern Malawi where most areas had experienced effective onset of the rainfall season. These rains had facilitated planting of crops, replanting and germination of various crops and as well as basal fertilizer application. The rains had also supported growth and development of pasture and regeneration of the natural vegetation. On the other hand, generally light rainfall was experienced over central and northern Malawi. 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 rainfall 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 01– 10 DECEMBER 2016

Models show that moderate to locally heavy rainfall is expected over most areas in Malawi during the first ten days of December 2016. Therefore expect good soil moisture and warm temperatures to increase planting opportunities during the first ten days of December 2016.

**TABLE 1: AGROMETEOROLOGICAL PARAMETERS FOR 21 TO 30 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 <sup>-2</sup> p/day
<b>KARONGA ADD</b>										
Chitipa	32.3	20.1	33.3	18.4	14.4	47	10.4	9.2	7.5	11.2
Karonga	35.3	24.5	36.5	22.3	8.3	44	10.3	9.4	7.6	11.2
<b>MZUZU ADD</b>										
Bolero	33.3	22.4	34.9	20.0	6.1	41	9.6	8.5	6.8	10.8
Mzimba	31.0	20.0	33.1	18.8	6.1	47	8.9	7.8	6.2	10.3
Mzuzu	29.1	17.6	30.9	13.0	6.8	56	9.6	7.7	6.0	10.8
Nkhata Bay	31.4	16.9	32.2	15.7	5.0	42	9.5	7.7	6.1	10.7
<b>KASUNGU ADD</b>										
Kasungu	32.1	20.7	34.1	19.0	10.4	61	7.6	7.8	6.3	9.5
<b>LILONGWE ADD</b>										
Chitedze	31.6	19.4	33.8	18.4	4.7	58	6.8	6.9	5.6	9.0
Dedza	27.0	17.4	28.9	15.4	11.2	67	6.5	6.6	5.3	8.8
KIA	30.2	19.4	32.0	18.1	7.6	55	7.8	7.4	6.0	9.6
<b>SALIMA ADD</b>										
Nkhota kota	33.1	25.1	35.0	23.7	4.3	62	8.6	5.3	4.0	10.2
Salima	33.6	25.6	36.0	25.0	10.1	55	8.8	8.9	7.3	10.3
<b>MACHINGA ADD</b>										
Makoka	28.8	19.4	32.0	18.3	3.6	63	5.3	6.1	4.9	8.0
Mangochi	35.1	23.8	38.0	23.0	4.3	63	7.6	7.9	6.4	9.5
Monkey Bay	34.1	25.2	36.1	22.7	9.4	59	7.6	8.4	6.9	9.5
Ntaja	32.7	21.9	35.2	19.4	9.4	63	6.7	7.5	6.1	8.9
<b>BLANTYRE ADD</b>										
Bvumbwe	26.3	16.8	31.9	15.3	6.8	79	6.5	6.0	4.7	8.8
Chichiri	27.7	18.9	31.0	17.3	5.0	76	6.5	6.2	4.9	8.8
Chileka	30.7	21.3	35.0	19.8	10.4	71	5.7	6.8	5.5	8.3
Mimosa	30.7	20.2	33.6	18.5	4.3	72	6.5	6.6	5.3	8.8
<b>SHIRE VALLEY ADD</b>										
Ngabu	36.5	24.6	40.5	22.3	4.7	58	7.6	8.2	6.7	9.5

**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