Government of Malawi
Ministry of Natural Resources, Energy and Mining

Malawi 10-day Weather and Agrometeorological Bulletin

"Produced in support of National Early Warning Systems and Food Security"

Be wise be weather-wise
Department of Climate Change and Meteorological Services

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HIGHLIGHTS

- **Fairly scattered pre-season rainfall experienced over Malawi…**
- **Land preparation remained major on-farm agriculture activity…**
- **Strong Southeasterly winds and sporadic rainfall expected over Malawi…**

1.0 WEATHER SUMMARY

During the period 11 to 20 October 2018, a convergence ahead of pressure rises coupled with mid-level trough brought fairly scattered pre-season rainfall with locally heavy amounts was reported particularly over southern Malawi.

1.1 RAINFALL SITUATION

During the second ten days of October 2018 fairly scattered pre-season rainfall with locally heavy amounts was reported over Malawi particularly over southern Malawi. Stations that reported heavy rainfall amounts include Mulanje Agriculture which had 135mm, Makoka Met 68mm, Lujeri Tea Estate 66mm, Chiradzulu Agric 53mm, Chingale Agric 52mm, Mpemba Agric 50mm, Bvumbwe Agric 49mm, Mimosa Met 32mm, Toleza Farm in Balaka 28mm and Chichiri Met 7mm. Otherwise there were several places that reported light to moderate rainfall including Dzonzi Forest in Ntcheu 24mm, Mangochi Met 22mm, Chileka Aiport 20mm, Namwera and Balaka Agric stations 19mm, Vinthukutu Agric in Karonga 18mm, Satemwa in Thyolo 17mm, Salima Aerodrome Met 16mm, Nkhotakota Met 15mm, Phalula Agric 12mm, Mwanza and Namiasi Agric 11mm, Dedza Met 9mm, Chikweo Agric and Chitipa Met recorded 6mm, Mkanda Agric in Mchinji had 5mm. Nsanje Agric registered 4mm and Nchalo, Lifuwu and Ntchisi Agric reported 3mm each. Several other places recorded less than 3mm.

Sporadic pre-season rainfall (Chidzimalupsya) is likely to persist over Malawi during the month of October 2018 until major rain bearing systems get established over the country.

1.3 AIR TEMPERATURE

Hot to very hot temperatures were reported over Malawi during the period 11 to 20 October 2018. Mean maximum temperatures had ranged from 26°C at Bvumbwe Met in Thyolo to 38°C at Ngabu Met in Chikwawa district while average minimum temperatures had ranged from 15°C at Mzuzu Met to 25°C at Ngabu Meti. Ihe the highest maximum temperature was 42°C and was recorded at Ngabu in Shire Valley while the lowest temperature was 8°C recorded at Dedza Met. 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 2.9Km per hour at Nkhata Bay-Mkondezi Met to 16.1km per hour at Chitipa Met. More details are in Table 1.

1.5 RELATIVE HUMIDITY

During the second ten days of October 2018, air over Malawi was generally still dry. Daily average relative humidity values ranged from 37% at Bolero Met to 61% at Bvumbwe Met. Details are on the Table 1.

1.6 SUNSHINE HOURS

During the period 11 to 20 October 2018 mean durations of bright sunshine hours across Malawi had ranged from 7.5 to 10.6 hours per day and consequently the amount of solar radiation had ranged from 9 to 11 cal/cm-²/day. Details are on the Table 1.

2. AGROMETEOROLOGICAL ASSESSMENT

During the second ten days of October 2018 the main on-farm agricultural activity in Malawi was land preparation in readiness for 2018/2019 main rainfall season.

3. PROSPECTS FOR 2018/19 RAINFALL SEASON

Global models are projecting the development of weak to moderate El Nino conditions between September and November 2018 and these conditions are likely to persist throughout the 2018/2019 rainfall season. Based on these expectations, the rainfall forecast for the 2018/19 season in Malawi is that:

"During the period October 2018 to March 2019, most of the northern areas spilling over into north of central areas of the country are expected to receive normal to above normal rainfall amounts, while most of the southern areas spilling over into south of central areas of the country are expected to receive normal to below normal rainfall amounts."

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Thus at national level, better chances for "**good rainfall amounts"** are over the north and northern part of central Malawi, while higher chances for **erratic and supressed rainfall** amounts are in the south and southern areas of central Malawi.

4. OUTLOOK FOR 21 – 31 OCTOBER 2018

Models for short and medium range forecasts suggest that Malawi is likely to experience strong Southeasterly winds and sporadic rainfall mainly over highlands and along the lakeshore areas during the last ten days of October 2018.

TABLE 1: AGROMETEOROLOGICAL PARAMETERS FOR 11 TO 20 OCTOBER 2018

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	31.9	19.8	34.2	17.5	16.2	41	9.1	9.0	7.4	10.3
Karonga	33.3	21.9	36.0	20.5	6.1	48	10.6	8.6	6.9	11.3
MZUZU ADD										
Bolero	33.5	22.0	33.5	18.6	6.1	37	8.5	8.0	6.4	9.9
Mzimba	30.7	18.7	32.3	17.2	6.8	46	9.0	7.6	6.1	10.3
Mzuzu	28.5	14.9	30.0	12.9	5.8	57	9.0	6.9	5.4	10.2
Nkhata Bay	34.9	18.8	36.4	17.5	2.9	55	10.0	7.9	6.2	10.8
KASUNGU ADD										
Kasungu	30.5	17.6	31.5	16.6	10.4	50	9.4	8.1	6.5	10.5
LILONGWE ADD										
Chitedze	31.3	15.8	33.1	15.2	4.0	47	8.2	6.9	5.4	9.7
Dedza	27.1	15.7	28.3	8.0	5.4	55	8.0	6.5	5.1	9.5
KIA	30.3	18.4	31.6	15.5	7.6	49	8.2	7.4	5.9	9.7
Nkhota kota	33.6	21.5	35.1	20.0	4.0	52	9.6	8.2	6.5	10.6
Salima	33.8	23.7	35.1	21.8	8.6	49	9.1	8.6	7.0	10.2
Makoka	31.0	18.3	33.1	16.0	4.3	59	7.7	6.8	5.4	9.3
Mangochi	33.5	22.8	37.5	20.6	8.6	52	9.0	8.4	6.8	10.2
Monkey Bay	34.0	23.6	35.4	22.5	8.3	38	9.0	8.6	7.0	10.2
Ntaja	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BLANTYRE ADD										
Bvumbwe	25.8	17.0	31.2	13.8	7.6	61	7.8	6.5	5.2	9.3
Chichiri	29.9	18.9	32.0	17.5	6.1	52	7.8	7.0	5.6	9.3
Chileka	32.7	20.4	35.7	18.0	14.0	49	8.2	8.4	7.0	9.6
Mimosa	33.0	18.9	35.0	16.5	4.7	53	7.5	7.1	5.7	9.1
SHIRE VALLEY ADD										
Ngabu	37.5	24.6	41.6	21.5	6.1	59	9.5	8.9	7.2	10.4

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