



Government of Malawi
Ministry of Forestry and Natural Resources

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 March 2021

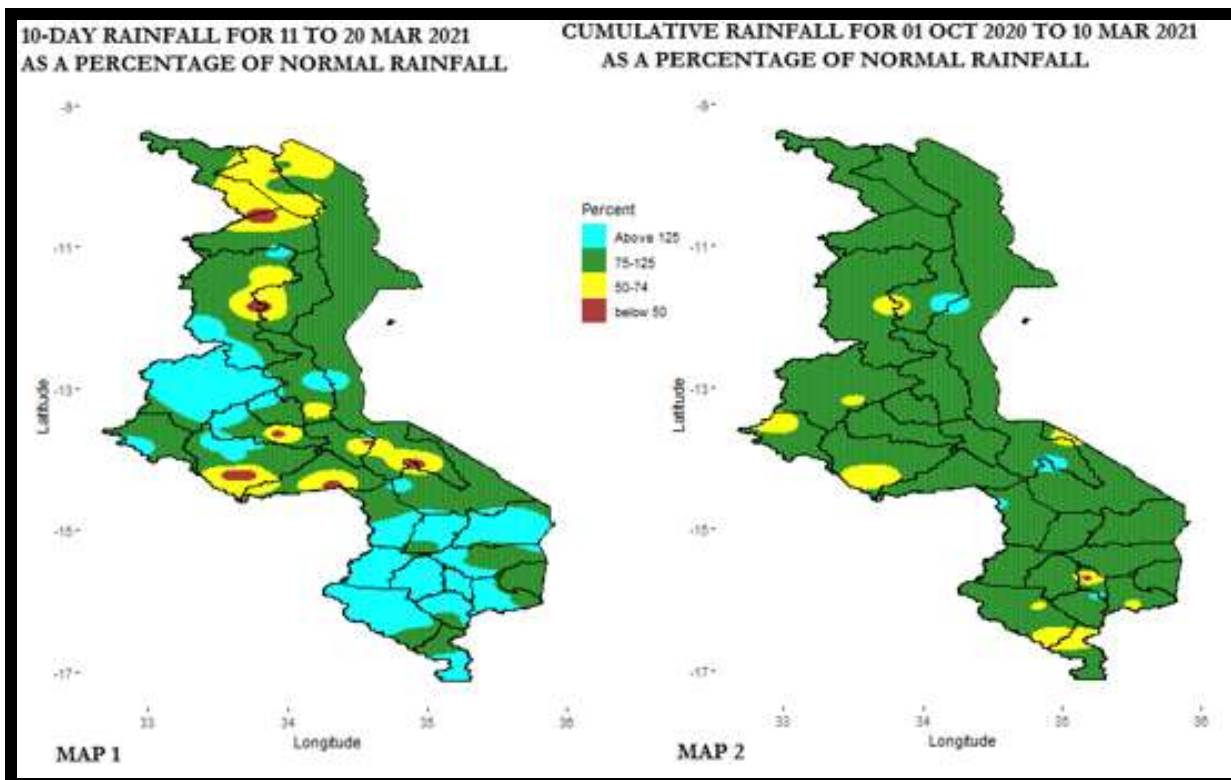
Season: 2020/2021

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HIGHLIGHTS

- Above normal dekadal rains experienced mainly over southern Malawi...
- Maize crop is between maturity and drying stages...
- Moderate to locally heavy rainfall expected during 21 to 30 March 2021 countrywide....



1.0 WEATHER SUMMARY

During the period 11 to 20 March 2021, the Inter-tropical Convergence Zone (ITCZ) influenced weather over Malawi resulting in scattered rainfall activities with moderate to locally heavy rainfall amounts observed mainly over southern and parts of central plain areas of the country.

1.1 RAINFALL SITUATION

During the period 11 to 20 March 2021, most of southern and parts of central plain areas of the country experienced wetter than normal conditions with cases of moderate to locally heavy rainfall amounts reported over these areas of the country. The cumulative ten-day rainfall amounts were generally higher than the long-term average rainfall amounts for the period mainly over parts of central plain and southern areas of the country (green and light blue colours on Map1) with cases of lower than long-term average rainfall amounts for the dekad mainly over northern and parts of central areas (yellow and brown colours on Map1). Areas that recorded at least 100.0 mm of rainfall included Nakumba Agriculture in Mangochi which recorded 175.0mm, Baka Research station in Karonga recorded 165.5mm, Nchalo in Chikwawa recorded 164.0mm, Ntaja Meteorological station in Machinga recorded 159.4mm, Njolomole in Ntcheu recorded 150.0mm, Mimosa Meteorological station in Mulanje recorded 148.0mm, Bvumbwe Meteorological station in Thyolo recorded 143.6mm, Lifuwu Research station in Salima recorded 138.7mm, Chileka Meteorological station in Blantyre recorded 133.9mm, Kasinthula Research station in Chikwawa recorded 132.7mm, Chintheche Agriculture in Nkhata Bay recorded 125.7mm, Chizunga in Thyolo recorded 124.7mm, Kasiya Agriculture in Lilongwe recorded 122.7mm, Makoka Meteorological station in Zomba recorded 120.1mm, Lujeri Tea estate in Mulanje recorded 118.5mm, Nkhande in Ntcheu recorded 118.4mm, Mulanje Boma Agriculture recorded 116.1mm, Chikwawa Boma recorded 113.1mm, Nkhotakota Meteorological station recorded 111.0mm, Mkanda Agriculture in Mchinji recorded 110.5mm, Dwangwa in Nkhotakota recorded 111.0mm, Toleza Farm in Balaka recorded 107.4mm, Zombwe Agriculture in Mzimba recorded 106.1mm, Phalula Agriculture in Balaka recorded 105.7mm, Balaka Town recorded 103.0mm and Salima Meteorological station recorded 100.1mm. More details in Table1.

Map 2 is a display of the spatial distribution of cumulative rainfall since the start of monitoring of the 2020/2021 rainfall season in October 2020, up to 20 March 2021. The map generally indicates that most areas over the country have received normal rainfall amounts (green and light blue colours) with spots of below normal rainfall amounts spread across all the regions of the country. The above normal rains during the dekad under review have improved the situation, especially in the Lower Shire Valley.

1.3 AIR TEMPERATURE

Malawi generally experienced hot temperatures during the period 11 to 20 March 2021. Mean daily maximum temperatures had ranged from 21.2°C at Ntaja and Dedza Meteorological stations to 33.7°C at Ngabu Meteorological station in Chikwawa district. On the other hand, mean daily minimum temperatures had ranged from 13.5°C at Dedza Meteorological station to 23.9°C at Ngabu Meteorological station. Details in Table 2.

1.4 WIND SPEED

During the period 11 to 20 March 2021 most parts of Malawi experienced light to moderate winds. Daily average wind speeds measured at a height of two metres above the ground

level across the country had ranged from 0.7 km per hour at Bolero and Ntaja Meteorological stations in Rumphu and Machinga, respectively to 9.0 km per hour at Chileka International Airport in Blantyre. Details in Table 2.

1.5 RELATIVE HUMIDITY

During the period under review, air over Malawi was generally humid. Daily average relative humidity values recorded from various Meteorological stations in Malawi had ranged from 66% at Ngabu Meteorological station to 83% at Nkhata Bay and Chitedze Meteorological stations. Details are shown in Table 2.

1.6 SUNSHINE HOURS

Generally medium hours of bright sunshine were observed over Malawi during the period 11 to 20 March 2021. The daily average values had ranged from 4.0 hours per day at Makoka Meteorological station in Zomba to 6.7 hours per day at Ngabu Meteorological station and consequently the amount of Solar Radiation had ranged from 6.9 to 8.7 cal/cm²/day. For details see Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

During the period under review, there was good spatial and temporal rainfall distribution over parts of central and Southern areas of the country. This necessitated pasture availability as well as growth and development of crops such as Potato, Cassava and Rice over Rice growing districts.

Maize crop is drying over southern Malawi with those that planted early as well as early maturing varieties reportedly harvesting while the crop is at maturity stage over central and northern Malawi. The staple crop is reportedly doing well in most parts of the country.

However, combined incidences of Fall Army Worm infestation as well as reported water stress for maize at its critical cobbing to maturity stages mostly over districts in the Blantyre, Machinga and Shire Valley Agriculture Development Divisions. This has the potential to negatively impact on the good crop stand in such areas thereby affecting food security in the aforesaid ADDs.

3. 2020/2021 RAINFALL SEASON

The 2020/2021 Rainfall season has this far been influenced by La Nina conditions with generally normal rainfall amounts experienced over more areas of the country. Most areas over southern Malawi had a slightly delayed onset with normal onset to the season over central and northern areas of the country. Some areas mainly over the south of Malawi had experienced prolonged dry spells from third dekad of January 2021 to second dekad of February 2021 with Blantyre, Shire Valley and Machinga Agriculture Development Divisions (ADDs) being the worst affected. The rainfall amounts cumulatively over the monitoring period have been normal over more areas of the country. Climatologically, the season is expected to start tailing off in the last dekad of March 2021 into April starting from the southern areas progressing northwards.

4. OUTLOOK FOR 21-31 MARCH 2021

Models for short and medium range forecasts indicate high chance of rainfall activities mainly over northern half of the country during third dekad of March 2021.

TABLE 1: 10-DAY RAINFALL TOTALS AT SELECTED STATIONS FOR 11 TO 20 MARCH 2021

ADD	STATION NAME	ACTUAL DEKADAL TOTAL RAINFALL (mm)	NORMAL (EXPECTED) DEKADAL TOTAL RAINFALL (mm)	ACTUAL TOTAL AS PERCENTAGE OF NORMAL (EXPECTED RAINFALL)	RAINY DAYS ≥.3mm	ACTUAL TOTAL RAINFALL TO DATE (mm)	NORMAL (EXPECTED) RAINFALL TO DATE (mm)	ACTUAL TO DATE AS PERCENTAGE OF NORMAL (EXPECTED RAINFALL)
KARONG	Baka Res. Stn.	165.5	140.0	118.2	7	860.6	871.3	98.8
	Chitipa Met	26.0	66.1	39.3	2	745.0	827.7	90.0
	Karonga Met.	84.3	78.9	106.8	7	625.1	693.7	90.1
	Lupembe	22.5	62.8	35.8	3	538.6	621.4	86.7
	Vinthukutu Agric	90.6	79.5	114.0	5	969.8	758.5	127.9
MZUZU	Bolero Met	15.7	27.9	56.3	3	529.9	566.3	93.6
	Bwengu Agric.	18.4	47.5	38.7	1	611.6	662.9	92.3
	Chikangawa forest	20.3	63.1	32.2	2	992.7	873.5	113.6
	Chintheche Agric	125.7	124.2	101.2	3	1085.5	1135.6	95.6
	Ekwendeni Agric.	45.4	31.9	142.3	2	694.7	692.3	100.3
	Euthini Agric.	10.9	41.2	26.5	2	495.7	680.9	72.8
	Mbawa Res. Stn	42.2	40.4	104.5	4	930.8	729.3	127.6
	Mzimba Met	81.1	41.7	194.5	6	882.7	790.6	111.6
	Mzuzu Met.	38.2	58.2	65.6	4	675.3	775.3	87.1
	NkhataBay Met.	98.6	96.7	102.0	5	696.7	915.9	76.1
	Rumphu Boma	38.8	37.7	102.9	2	784.2	638.4	122.8
Zombwe Agric	106.1	35.5	298.9	4	648.0	624.2	103.8	
KASUNGU	Dowa Agric	21.4	45.4	47.1	3	802.9	794.1	101.1
	Kaluluma DTC	14.0	50.3	27.8	1	450.0	736.9	61.1
	Kasungu Met	62.7	38.7	162.0	5	583.4	712.1	81.9
	Madisi Agric	54.5	33.6	162.2	4	630.5	768.9	82.0
	Mchinji Boma	91.2	46.7	195.3	7	642.2	898.0	71.5
	Mkanda Met	110.5	41.3	267.6	6	817.0	783.7	104.2
	Mponela Agric	64.7	35.1	184.3	4	605.5	739.5	81.9
	Mwimba Research	46.2	38.9	118.8	3	598.7	810.1	73.9
	Ntchisi Boma	32.4	82.4	39.3	3	660.2	1074.1	61.5
LILONGWE	Chitedze Met.	94.6	51.1	185.1	9	766.1	788.1	97.2
	K.I.A Met	68.2	41.8	163.2	6	739.5	763.5	96.9
	Kasiya Agric	122.7	38.9	315.4	7	968.8	873.0	111.0
	Mlangeni Njolomole	150.0	54.0	277.8	5	1027.7	870.9	118.0
	Ntcheu - Nkhande	118.4	50.4	234.9	7	905.7	947.0	95.6
SALIMA	Dedza RTC	68.9	49.2	140.0	10	972.2	900.7	107.9
	Dwangwa Sugar Corp.	110.0	91.8	119.8	7	1043.4	992.3	105.1
	Lifuwu	138.7	78.7	176.2	6	995.7	1057.2	94.2
	Nkhotakota Met	111.0	113.7	97.6	7	898.8	1102.1	81.6
	Salima Met	100.1	85.6	116.9	7	913.7	1051.8	86.9
MACHINGA	Balaka Township	103.0	40.2	256.2	6	842.6	776.7	108.5
	Chancellor College	89.5	82.6	108.4	8	878.1	1124.8	78.1
	Chingale Agric	86.8	52.0	166.9	8	769.3	833.1	92.3
	Mpilipili (Makanjila)	34.8	39.6	87.9	3	518.0	810.5	63.9
	Makoka Met	120.1	46.7	257.2	7	985.9	871.8	113.1
	Mangochi Met.	53.3	44.1	120.9	4	650.8	630.1	103.3
	Monkey Bay Met.	7.3	16.3	44.8	5	759.8	538.2	141.2
	Namwera Agric	71.6	69.3	103.3	4	847.7	920.5	92.1
	Nankumba Agric	175.0	40.3	434.2	8	191.0	768.2	24.9
	Ntaja Met.	159.4	44.6	357.4	7	680.7	778.6	87.4
	Phalula Agric	105.7	37.0	285.7	7	645.0	757.6	85.1
BLANTYRE	Toleza Farm	107.4	45.4	236.6	8	1033.1	776.8	133.0
	Zomba R.T.C	76.7	73.9	103.8	7	1127.4	1053.6	107.0
	Bvumbwe Met.	143.6	54.2	264.9	6	1038.7	958.2	108.4
	Chichiri Met.	47.0	16.1	291.9	6	821.1	1013.2	81.0
	Chileka Airport	133.9	45.8	292.4	8	838.1	782.4	107.1
	Chiradzulu Agric	62.2	38.1	163.3	7	387.0	875.0	44.2
	Chizunga Factory	124.7	84.5	147.6	6	994.4	1131.8	87.9
	Lujeri Tea Estate	118.5	146.5	80.9	6	1241.0	1612.8	76.9
	Masambanjati Agric	72.9	74.7	97.6	5	1027.3	1123.7	91.4
	Mimosa Met.	148.0	89.0	166.3	4	913.5	1186.7	77.0
	Mpemba Vet	99.6	61.9	160.9	6	912.9	988.4	92.4
	Mulanje Boma	116.1	70.2	165.4	3	869.6	1399.1	62.2
	Mwanza Boma	85.7	55.4	154.7	3	794.8	901.7	88.1
	Neno Agric	67.2	46.9	143.3	7	1038.8	968.5	107.3
Satemwa Tea Est. No.1	68.0	63.1	107.8	6	1030.0	917.2	112.3	
SHIRE VALLEY	Thuchila Agric	80.1	37.9	211.3	5	696.5	774.9	89.9
	Thyolo Met	87.4	58.6	149.1	5	1019.9	1050.8	97.1
	Chikwawa Boma	113.1	32.9	343.8	2	533.4	680.1	78.4
	Kasinthula Res. Stn.	132.7	29.6	448.3	2	375.8	646.0	58.2
	Makhanga Met	30.0	38.0	78.9	2	468.4	650.5	72.0
SHIRE VALLEY	Nchalo Sucoma	164.0	19.3	849.7	2	541.1	578.8	93.5
	Ngabu Met.	36.3	37.3	97.3	2	484.1	669.7	72.3

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 TO 20 MARCH 2021

ADD/STATION NAME	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED (Km/Hr)	RH (%)	SUN SHINE (Hrs)	Eo mm per day	Et mm per day	RADIATION cal cm ⁻² p/day
KARONGA ADD										
CHITIPA	27.6	17.9	29.0	17.0	7.9	77	5.5	5.8	4.6	7.9
KARONGA	30.3	19.6	31.4	18.1	2.9	78	6.1	6.5	5.2	8.3
MZUZU ADD										
BOLERO	29.0	17.2	29.9	16.0	0.7	74	6.5	5.8	4.6	8.5
MZIMBA	27.8	17.1	29.0	14.8	2.5	77	5.4	5.7	4.5	7.8
MZUZU	26.5	17.1	27.6	14.9	3.2	80	4.6	5.5	4.3	7.3
NKHATA BAY	29.8	20.9	31.1	19.0	2.5	83	4.5	5.6	4.4	7.2
KASUNGU ADD										
KASUNGU	27.5	18.0	29.0	17.4	4.0	77	6.3	5.5	4.4	8.4
LILONGWE ADD										
CHITEDZE	26.9	18.0	28.5	17.1	1.1	83	5.2	5.6	4.4	7.7
DEDZA	21.2	13.5	25.1	13.8	4.3	82	5.0	5.3	4.1	7.6
K I A	25.8	17.3	27.6	15.5	4.7	81	5.8	5.6	4.4	8.1
SALIMA ADD										
NKHOTAKOTA	28.5	20.5	30.1	19.5	1.1	78	5.8	6.4	5.2	8.1
SALIMA	29.0	21.1	31.1	19.7	5.0	81	4.6	6.2	5.0	7.3
MACHINGA ADD										
NTAJA	21.2	20.4	30.7	19.6	0.7	82	4.6	6.1	4.9	7.3
MAKOKA	27.1	17.8	28.0	16.5	2.5	82	4.0	5.8	4.5	6.9
MANGOCHI	30.6	22.4	31.9	21.5	1.4	81	6.0	2.7	2.4	8.2
MONKEY BAY	29.9	22.3	31.1	21.1	4.3	73	6.6	7.0	5.7	8.6
BLANTYRE ADD										
BVUMBWE	25.2	17.7	26.6	16.2	4.7	82	4.2	5.0	4.0	7.1
CHICHIRI	26.1	18.2	27.3	17.0	1.8	78	4.5	5.3	4.2	7.3
CHILEKA	28.9	20.0	33.3	18.8	9.0	73	5.2	6.3	5.1	7.7
MIMOSA	29.2	19.7	30.5	17.4	3.6	79	5.6	5.7	4.5	8.0
SHIRE VALLEY ADD										
NGABU	33.7	23.9	25.2	22.8	1.4	66	6.7	7.7	6.2	8.7

Glossary of some terms on this table

- Eo = Potential Evaporation, Et = Potential Evapotranspiration and RH = Relative Humidity
- 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 Kilometres per hour (Km/hr) = mpsx3.6