



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: 21 – 31 March 2020

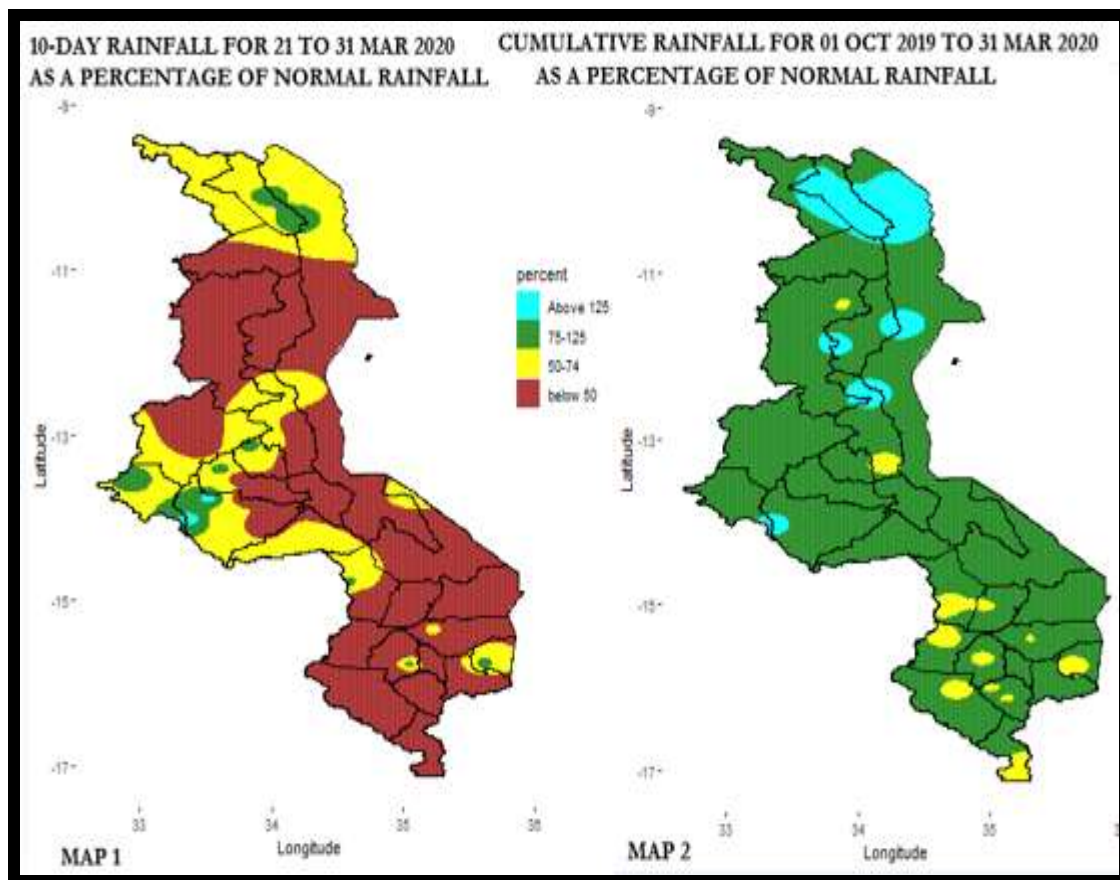
Season: 2019/2020

Issue No.18

Release date: 03 April 2020

HIGHLIGHTS

- Dry conditions experienced almost countrywide...
- Maize crop mostly at drying stage over central and northern...
- Moderate to heavy rainfall amount anticipated mainly over northern Malawi during 01-10 April 2020...



1.0 WEATHER SUMMARY

During the period 21 to 31 March 2020, relatively dry easterly airmass was dominant over Malawi. Hence dry conditions were experienced over most areas of the country with light to moderate rainfall amounts recorded in parts of all the three regions of the country.

1.1 RAINFALL SITUATION

Dry conditions were experienced over most areas of Malawi during the period 21 to 31 March 2020. Cumulative ten-day rainfall amounts were lower than the long-term average rainfall amounts for this period over most areas of Malawi, represented by brown and yellow colours in Map1. However, isolated areas of the country had higher than long-term average rainfall amounts. These are represented by light blue and green colours in Map1.

Areas that had reported ten-day cumulative rainfall amounts of at least 30mm included Baka Research station which recorded 112.5mm, Vinthukutu Agriculture recorded 108.2mm, Kasiya Agriculture recorded 108.0mm, Lupembe recorded 88.5mm, Karonga Meteorological station recorded 83.9mm, Dwangwa Sugar recorded 72.5mm, Nkhanda in Ntcheu recorded 52.9mm, Nkhata Bay recorded 49.2mm, Chileka in Lilongwe recorded 47.9mm, Mkanda Meteorological station recorded 38.2mm, Mzuzu Meteorological station recorded 37.5mm, Malomo Agriculture recorded 37.5mm, Nkhotakota Meteorological station recorded 33.7mm, Naminjiwa Agriculture recorded 32.4mm, Dedza Meteorological station recorded 32.4mm and Chikangawa Forest recorded 32.0mm. More details in table 1

Map 2 indicates the cumulative spatial rainfall distribution over Malawi since the start of the 2019/20 rainfall seasonal monitoring on 01 October 2019 up to 31 March 2020. The map indicates that Malawi has this far received normal to above normal rainfall amounts (depicted by green and light blue colours) with isolated cases of below normal rainfall in all the three regions of the country (as shown by the yellow colour). Extra details in Table 1.

1.3 AIR TEMPERATURE

Generally hot temperatures were experienced over Malawi during the period 21 to 31 March 2020. Mean daily maximum temperatures had ranged from 25.5°C at Mzuzu Meteorological station to 34.7°C at Ngabu Meteorological station. On the other hand, mean daily minimum temperatures had ranged from 15.3°C at Dedza Meteorological station to 23.6°C at Mangochi Meteorological station. Details in Table 2.

1.4 WIND SPEED

Light to moderate wind speeds were experienced in most parts of the country during the period under review. Daily average wind speed measured at a height of two metres above the ground level across the country had ranged from 0.7 km per hour at Bolero Meteorological station in Rumphidistrict, to 10.1 km per hour at Chileka Meteorological station in Blantyre district. More details in Table 2.

1.5 RELATIVE HUMIDITY

During the last ten days of March 2020, air over Malawi was relatively humid. Daily average relative humidity values

recorded from various weather stations in Malawi had ranged from 51% at Ngabu Meteorological station to 83% at Nkhata Bay Meteorological station. Details as shown in Table 2.

1.6 SUNSHINE HOURS

Generally medium to high hours of bright sunshine were observed over Malawi during the period under review. Mean daily values had ranged from 6.3 hours per day at Nkhata Bay Meteorological station to 9.8 hours per day at Chileka Meteorological station. As a result, calculated amount of Solar Radiation had ranged from 8.3 to 10.9 cal/cm²/day. For details refer to Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

During the period under review, dry conditions prevailed over Malawi. These conditions necessitated the drying of already matured crops in the northern parts of Malawi, as well as harvesting of already dry crops mostly over southern and parts of central Malawi.

Maize crop is reported at maturity to drying stages over northern and parts of central areas while farmers are harvesting over southern areas.

Basing on the current crop stand, good crop yields and production are anticipated this agricultural season provided the rains continue through mid-April 2020 over northern areas for proper maturing of late planted crops.

However, prolonged dry conditions over Malawi has the potential to negatively impact the good crop stand, especially rice and late planted maize in rice growing districts and northern areas respectively. This may affect overall national production outlook for both crops.

3. PROSPECTS FOR 2019/2020 RAINFALL SEASON

ENSO-neutral conditions are prevailing over central Tropical Pacific Ocean with a neutral Indian Ocean Dipole present. Therefore, as the 2019/2020 rainfall season comes to an end, Malawi is likely to experience favourable rainfall amounts for agricultural purposes through April.

4. OUTLOOK FOR 01-10 APRIL 2020

Short to medium range forecasts indicate that rains are expected to continue and may be heavy at times mainly over central and northern areas of Malawi. Isolated rain showers are anticipated over southern areas. These rain shower conditions are due to the periodic influx of cool and moist southeasterly airmass from a series of Indian Ocean high pressure systems.

TABLE 1: 10-DAY RAINFALL TOTALS AT SELECTED STATIONS FOR 21 TO 31 MARCH 2020

ADD	STATION NAME	ACTUAL DEKADAL TOTAL RAINFALL (mm)	DEKADAL NORMAL EXPECTED RAINFALL (mm)	ACTUAL TOTAL AS PERCENTAGE OF NORMAL (EXPECTED RAINFALL)	DEKADAL RAINY DAYS ≥3mm	ACTUAL TOTAL RAINFALL TO DATE (mm)	NORMAL (EXPECTED) RAINFALL TO DATE (mm)	ACTUAL TO DATE AS PERCENTAGE OF NORMAL (EXPECTED RAINFALL)
KARONGA	Baka Res. Stn.	112.5	188.6	60	7	1454.1	1059.9	137
	Karonga Met.	83.9	114.0	74	6	968.8	807.7	120
	Lupembe	88.5	89.4	99	5	932.6	710.8	131
	Vinthukutu Agric	108.2	122.5	88	4	1784.0	881.0	202
MZUZU	Bwengu Agric.	21.6	49.3	44	3	786.0	712.2	110
	Chikangawa forest	32.0	95.2	34	6	1253.0	968.7	129
	Ekwendeni Agric.	7.9	45.3	17	1	526.2	737.6	71
	Euthini Agric.	1.8	44.6	4	1	880.7	725.5	121
	Mbawa Res. Stn	15.3	35.8	43	3	726.2	765.1	95
	Mzimba Met	20.6	48.2	43	4	986.3	838.8	118
	Mzuzu Met.	37.5	100.9	37	7	927.7	876.2	106
	NkhataBay Met.	49.2	167.0	29	5	1474.6	1082.9	136
	Rumpho Boma	7.2	38.4	19	2	804.6	676.8	119
	Zombwe Agric	9.8	56.7	17	3	727.0	680.9	107
KASUNGU	Dowa Agric	9.7	41.3	23	1	900.2	835.4	108
	Kasungu Met	2.0	31.1	6	1	762.1	743.2	103
	Lisasadzi	4.3	23.5	18	2	677.5	776.3	87
	Malomo Agric	37.5	30.8	122	1	689.3	792.1	87
	Madisi Agric	27.3	27.5	99	2	671.2	796.4	84
	Mkanda Met	38.2	43.7	87	2	858.8	827.4	104
LILONGWE	Mwimba Research	12.2	30.3	40	1	668.8	840.4	80
	Chileka Namitete	47.9	34.6	138	3	1178.9	861.6	137
	Chitedze Met.	21.1	41.6	51	3	804.7	829.7	97
	Dzonzi Forest	6.0	38.5	16	1	583.3	931.8	63
	K.I.A Met	0.0	47.3	0	0	891.5	810.8	110
	Kasiya Agric	108.0	36.2	298	4	1112.8	909.2	122
	Mlangeni Njolomole	28.5	44.3	64	2	738.8	915.2	81
	Nathenje Agric	2.5	38.5	6	1	891.5	796.3	112
	Ntcheu - Nkhanda	52.9	45.0	118	3	1096.6	992.0	111
	Dedza RTC	32.4	44.3	73	3	806.4	945.0	85
SALIMA	Dwangwa Sugar Corp.	72.5	143.8	50	4	1556.9	1136.1	137
	Lifuwu	24.5	71.7	34	3	1258.4	1128.9	111
	Nkhotakota Met	33.7	142.5	24	4	1461.5	1244.6	117
	Ntchisi Boma	3.5	67.5	5	1	734.6	1141.6	64
	Salima Met	26.1	71.6	36	3	1022.3	1123.4	91
MACHINGA	Balaka Township	1.3	32.8	4	1	594.7	809.5	73
	Chancellor College	0.0	75.3	0	0	962.0	1200.1	80
	Chingale Agric	17.1	30.1	57	1	894.1	863.2	104
	Mpilipili (Makanjila)	17.7	35.0	51	2	788.0	845.5	93
	Makoka Met	0.0	32.5	0	0	927.6	904.3	103
	Mangochi Met.	6.6	33.2	20	1	758.4	663.3	114
	Monkey Bay Met.	1.0	13.4	7	1	586.4	551.6	106
	Namwera Agric	23.2	51.7	45	2	980.4	972.2	101
	Phalula Agric	1.4	27.2	5	1	822.0	784.8	105
	Toleza Farm	6.3	29.3	22	3	934.9	806.1	116
BLANTYRE	Zomba RTC	0.0	58.2	0	0	810.4	1111.8	73
	Bvumbwe Met.	4.4	57.9	8	1	1208.4	1016.1	119
	Chichiri Met.	14.1	15.3	92	1	980.3	1028.5	95
	Chileka Airport	8.8	44.5	20	2	618.0	826.9	75
	Chiradzulu Agric	0.0	44.5	0	0	909.2	919.5	99
	Chizunga Factory	0.0	71.5	0	0	822.5	1203.3	68
	Lujeri Tea Estate	0.0	131.2	0	0	1716.9	1744.0	98
	Masambanjati Agric	0.0	64.9	0	0	983.9	1188.6	83
	Mimosa Met.	0.0	81.3	0	0	1099.9	1268.0	87
	Mpemba Vet	0.0	52.1	0	0	1263.3	1040.5	121
	Mulanje Boma	0.0	125.0	0	0	1338.7	1524.1	88
	Mwanza Boma	0.0	35.2	0	0	966.1	936.9	103
	Naminjiwa Agric	32.6	36.5	89	2	656.6	910.1	72
	Neno Agric	0.0	42.6	0	0	614.7	1011.1	61
	Satemwa Tea Est. No.1	0.0	61.2	0	0	1186.8	978.4	121
	Thuchila Agric	0.0	40.2	0	0	960.3	815.1	118
Thyolo Met	0.0	56.3	0	0	829.9	1107.1	75	
SHIRE VALLEY	Chikwawa Boma	0.0	33.9	0	0	480.3	714.0	67
	Kasinthula Res. Stn.	0.0	21.2	0	0	618.6	667.2	93
	Makhanga Met	0.0	25.5	0	0	659.7	676.0	98
	Nchalo Sucoma	0.0	26.6	0	0	582.9	605.4	96
	Ngabu Met.	0.0	35.1	0	0	572.0	704.8	81
Nsanje Boma	0.0	57.7	0	0	555.1	1000.5	55	

ADD/STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED Km/Hr	RH (%)	SUN SHINE HOURS	Eo mm per day	Et mm per day	RADIATION cal cm ⁻² p/day
KARONGA ADD										
CHITIPA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
KARONGA	30.5	20.7	31.9	19.5	3.2	77	7.5	7.1	5.7	9.2
MZUZU ADD										
BOLERO	28.6	17.9	29.7	16.3	0.7	76	6.8	5.9	4.6	8.6
MZIMBA	27.1	16.1	29.6	14.0	1.4	77	7.0	5.9	4.6	8.7
MZUZU	25.5	17.2	27.2	16.1	3.6	83	6.6	5.8	4.6	8.5
NKHATA BAY	30.4	21.2	32.2	20.2	2.2	80	6.3	6.3	5.0	8.3
KASUNGU ADD										
KASUNGU	29.1	16.2	31.0	15.2	4.0	68	7.4	6.8	5.5	9.0
LILONGWE ADD										
CHITEDZE	29.2	17.9	31.2	15.0	1.4	71	7.2	6.4	5.0	8.9
DEDZA	25.6	15.3	27.5	11.6	3.6	73	6.7	6.1	4.8	8.6
K I A	28.1	18.7	29.2	13.7	5.4	75	7.2	7.0	5.6	8.9
SALIMA ADD										
NKHOTAKOTA	32.7	21.4	31.0	20.5	2.2	72	8.1	7.2	5.7	9.5
SALIMA	31.0	23.1	31.9	22.2	6.8	68	9.2	9.3	7.7	10.2
MACHINGA ADD										
NTAJA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MAKOKA	29.1	17.0	31.2	14.0	1.1	76	6.7	6.0	4.7	8.6
MANGOCHI	33.8	23.6	34.7	21.6	2.9	68	7.7	7.9	6.4	9.3
MONKEY BAY	32.5	23.2	33.0	21.1	5.8	61	7.5	8.7	7.3	9.1
BLANTYRE ADD										
BVUMBWE	26.5	17.0	29.5	14.9	6.1	66	6.5	7.0	5.8	8.5
CHICHIRI	28.7	16.6	30.0	14.0	3.2	71	6.8	6.5	5.2	8.7
CHILEKA	30.2	19.4	32.8	16.7	10.1	60	9.8	10.3	8.6	10.9
MIMOSA	28.0	18.0	33.9	15.0	2.2	60	6.8	6.5	5.2	8.7
SHIRE VALLEY ADD										
NGABU	34.7	22.1	38.1	20.1	2.5	51	7.9	8.2	6.7	9.5

Glossary of some terms on this table

- Eo = Potential Evaporation, Et = Potential Evapotranspiration and RH = 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 Kilometres per hour (Km/hr) to Meters Per Second (mps) = Km/hr ÷3.6