



Government of Malawi
Ministry of Natural Resources and
Climate Change

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 April 2022

Season: 2021/2022

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HIGHLIGHTS

- Dry conditions experienced over southern and central areas while wet over northern areas...
- Maize crop is between maturity and drying stages...
- Moderate rainfall expected during the dekad 21 to 30 April 2022...

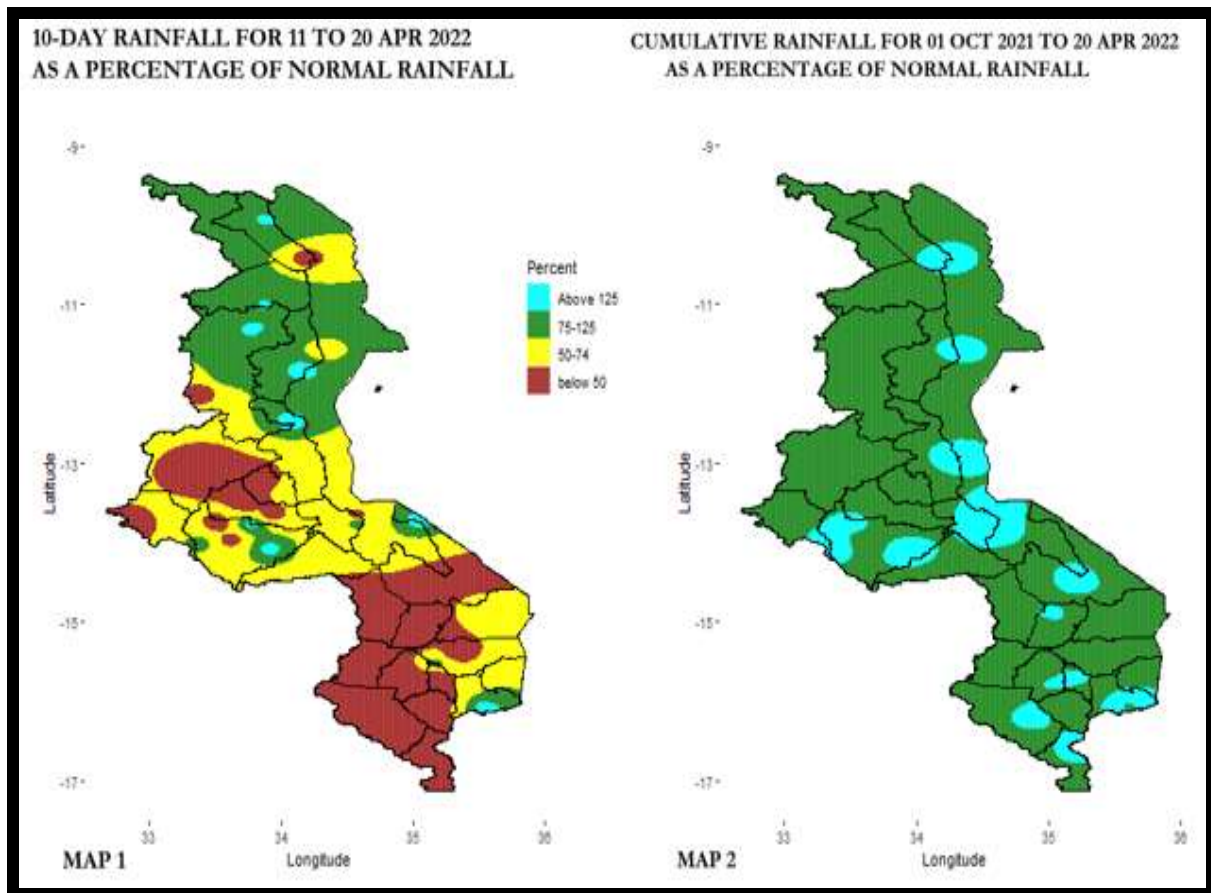


Figure 1: Observed dekadal (MAP 1) and cumulative rainfall as percentage of normal (MAP 2) for Malawi

1.0 WEATHER SUMMARY

During the period 11 to 20 April 2022, the Inter-Tropical Convergence Zone (ITCZ) was active mainly over northern areas of the country. This resulted in wet conditions over majority of northern areas with dry conditions over majority of central and southern areas of the country.

1.1 RAINFALL SITUATION

During the second ten days of April 2022, wet conditions were experienced over majority of northern areas and isolated areas over centre and south. The ten-day cumulative rainfall amounts were near or higher than the long-term dekadal average for the period over northern and some central and southern areas (represented by cyan and green colours in Map1) with near or lower than long-term dekadal average over majority of central and southern areas (yellow and brown colours in Map1).

For the period under review, areas that recorded a dekadal total of at least 50.0mm included Chintcheche Agriculture in Nkhata Bay which recorded 167.3mm, Mimoso Meteorological station in Mulanje recorded 146.3mm, Mulanje Boma recorded 140.9mm, Dwangwa in Nkhotakota recorded 136.2mm, Baka Research station in Karonga recorded 98.7mm, Lujeri Tea Estate in Mulanje recorded 85.4mm, Karonga Meteorological station recorded 70.9mm and Nkhata Bay Meteorological station recorded 70.0mm. More details in Table 1.

Map 2 indicates the spatial cumulative rainfall distribution since the start of monitoring of the 2021/2022 rainfall season in October 2021, up to 20 April 2022. The map indicates that Malawi has so far received normal to above normal rainfall amounts (green and cyan colour).

1.2 AIR TEMPERATURE

Malawi experienced warm to hot conditions during the period 11 to 20 April 2022. Mean daily maximum temperatures had ranged from 24.5°C at Dedza Meteorological station to 33.4°C at Ngabu Meteorological station in Chikwawa. Mean daily minimum temperatures had ranged from 14.2°C at Dedza Meteorological station to 23.7°C at Ngabu Meteorological station. Details in Table 2.

1.3 RELATIVE HUMIDITY

During the period 11 to 20 April 2022, air over Malawi was humid. Daily average Relative Humidity values recorded from various weather stations had ranged from 63% at Mangochi Meteorological station to 81% at Dedza Meteorological station. Details as in Table 2.

1.4 WIND SPEEDS

During the period under review, most parts of Malawi experienced light to moderate wind speeds. Daily average wind speeds measured at a height of two metres above the ground level across the country had ranged from 0.6 km per hour at Bvumbwe Meteorological station in Thyolo to 9.4 Km per hour at Salima and Chileka Meteorological stations. More details in Table 2.

1.5 SUNSHINE HOURS

Generally medium to long hours of bright sunshine were observed over Malawi during the period 11 to 20 April 2022. Daily average values had ranged from 6.8 hours per day at Dedza Meteorological station to 9.7 hours per day at Salima Meteorological station. Consequently, the amount of Solar Radiation had ranged from 8.3 to 10.5 cal/cm²/day. For details see Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

The period under review was wet for some southern, central areas and majority of northern areas of the country. The wet conditions provided the required water for continued crop development of staple crop maize as well as rice in rice growing areas over northern areas like Karonga.

Maize crop is at drying stage in the south with some farmers reportedly harvesting, maturity stage reported over central and north. The staple crop is reportedly doing well particularly where certified seeds, manure or both basal and top-dressing fertilizers had been applied as well as good agricultural practices as stipulated by the Ministry of Agriculture were adhered to.

However, in a season where floods affected some areas in the Shire Valley Agriculture Development Division as well as Blantyre Agriculture Division and some districts like Lilongwe, Salima and Mangochi, the good crop stand in such areas has been negatively impacted thereby affecting food security prospects at both district and national levels.

3. PROSPECTS FOR 2021/2022 RAINFALL SEASON

“During the period March to May 2022, most areas in the south, center and the north are expected to receive normal to above-normal rainfall amounts”

4. OUTLOOK FOR 21-30 APRIL 2022

There is a high chance of rainfall activities over Malawi due to influence of the Inter Tropical Convergence Zone (ITCZ). The anticipated dekadal rainfall amounts are likely to be above climatological dekadal values as shown in figure 2 below.

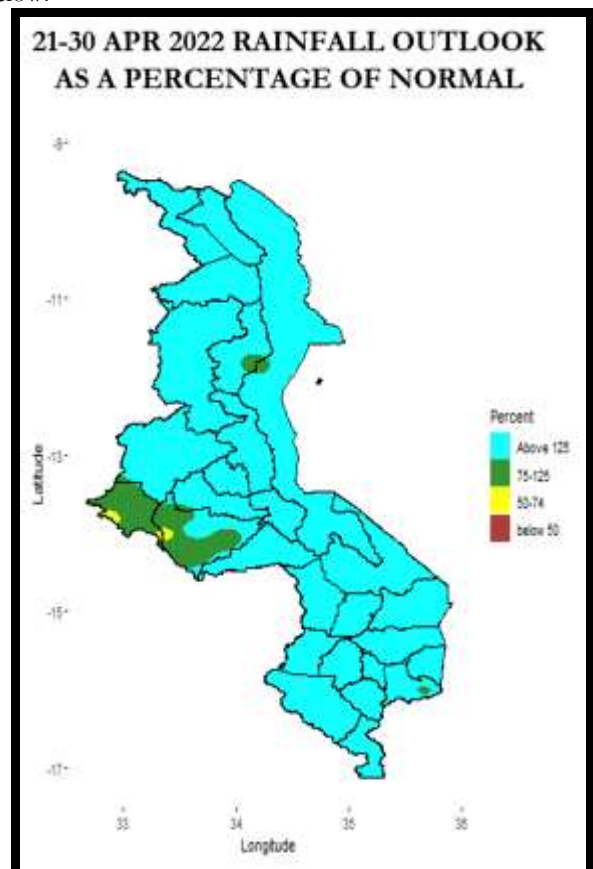


Figure 2: Dekadal rainfall outlook for Malawi as percentage of normal rainfall

TABLE 1: 10-DAY RAINFALL TOTALS AT SELECTED STATIONS FOR 11 TO 20 APRIL 2022

ADD	STATION NAME	ACTUAL DEKADAL TOTAL RAINFALL (mm)	DEKADAL NORMAL EXPECTED 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)
KARONGA	Baka Res. Stn.	98.7	76.4	129	5	1319.6	1276.8	103
	Karonga Met.	70.9	59.2	120	7	789.6	954.9	83
	Lupembe	29.4	36.0	82	2	771.2	809.9	95
	Vinthukutu Agr	0.0	73.5	0	0	1753.0	1067.2	164
MZUZU	Bolero Met	10.3	10.8	95	3	519.8	624.9	83
	Bwengu Agric.	16.0	17.5	91	2	750.3	751.4	100
	Chintheche Agr	167.3	128.5	130	6	1945.5	1600.8	122
	Ekwendeni Agr	19.2	18.0	107	3	645.4	797.8	81
	Mbawa Res. Stn	0.0	12.3	0	0	871.4	793.9	110
	Mzimba Met	11.2	13.9	81	4	1050.4	876.2	120
	NkhataBay Met	70.0	96.0	73	5	1682.6	1311.9	128
	Rumphi Boma	24.9	13.2	189	4	849.4	720.0	118
	Zombwe Agric	31.3	19.0	165	4	756.7	735.9	103
KASUNGU	Dowa Agric	0.0	9.6	0	0	1005.7	869.5	116
	Kasungu Met	0.0	5.6	0	0	922.1	766.4	120
	Lisasadzi	0.0	13.4	0	0	960.1	805.5	119
	Malomo Agric	0.0	2.5	0	0	902.8	810.9	111
	Madisi Agric	0.0	11.6	0	0	511.6	824.3	62
	Mchinji Boma	0.0	15.3	0	0	991.3	993.2	100
	Mponela Agric	2.1	5.3	40	1	755.1	784.3	96
	Mwimba Res	0.0	6.8	0	0	828.2	863.0	96
LILONGWE	Namitete	16.4	17.8	92	2	1441.7	907.3	159
	Chitedze Met.	0.0	9.0	0	0	905.4	868.0	104
	Dzonzi Forest	0.0	21.1	0	0	1052.7	973.4	108
	K.I.A Met	6.7	1.6	419	1	981.9	832.0	118
	Kasiya Agric	0.0	7.3	0	0	1190.1	935.5	127
	Mlangeni Njolo	0.0	14.0	0	0	1074.5	953.5	113
	Nathenje Agric	15.2	11.5	132	2	1099.6	851.8	129
	Nkhande	8.0	16.8	48	1	1251.6	1027.8	122
SALIMA	Dwangwa Sugar	136.2	58.2	234	5	1531.5	1287.1	119
	Lifuwu	0.0	41.4	0	0	1955.4	1216.6	161
	Nkhotakota Me	31.0	56.1	55	3	1760.0	1397.8	126
	Salima Met	21.4	27.6	78	1	1853.9	1195.8	155
MACHINGA	Balaka Town	0.0	11.8	0	0	903.0	842.7	107
	Mpilipili	18.2	8.3	219	1	863.4	872.3	99
	Makoka Met	12.4	14.1	88	2	969.7	949.1	102
	Mangochi Met.	4.2	9.4	45	1	888.1	692.9	128
	Namwera Agric	0.0	20.4	0	0	1175.0	1027.1	114
	Ntaja Met.	10.2	14.0	73	2	1020.1	872.4	117
	Phalula Agric	0.0	12.7	0	0	935.6	811.8	115
	Toleza Farm	0.0	16.6	0	0	1216.3	850.4	143
Zomba RTC	0.0	19.7	0	0	1026.3	1173.5	87	
BLANTYRE	Bvumbwe Met.	2.4	19.6	12	3	1247.0	1066.4	117
	Chichiri Met.	5.5	21.1	26	2	1396.6	1078.6	129
	Chileka Airport	0.0	16.7	0	0	882.2	863.6	102
	Chiradzulu Agri	0.0	11.9	0	0	1477.1	953.8	155
	Lujeri Tea E	85.4	70.2	122	4	2771.3	1920.7	144
	Masambanjati A	4.6	36.4	13	2	1365.8	1276.7	107
	Mimosa Met.	146.3	43.6	336	4	1600.1	1375.4	116
	Mulanje Boma	140.9	52.8	267	5	2283.8	1659.1	138
	Mwanza Boma	1.1	16.7	7	1	1175.7	988.5	119
	Neno Agric	0.0	21.2	0	0	999.9	1068.6	94
	Thuchila Agric	0.0	15.6	0	0	1039.8	856.2	121
	Thyolo Met	0.0	19.6	0	0	1211.7	1157.4	105
SHIRE VALLEY	Chikwawa	0.0	8.1	0	0	821.8	743.3	111
	Kasinthula Res.	1.0	12.4	8	1	935.4	697.7	134
	Makhanga Met	0.0	10.5	0	0	1014.9	702.9	144
	Nchalo Sucoma	1.2	10.2	12	1	1059.1	634.5	167
	Ngabu Met.	0.0	13.6	0	0	874.7	736.3	119

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 TO 20 APRIL 2022

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										
KARONGA	31.2	20.8	31.8	20.5	5.0	75	7.2	7.5	6.0	8.7
MZUZU ADD										
BOLERO	27.9	17.9	28.8	16.8	1.1	79	7.6	7.3	5.1	8.6
MZIMBA	26.6	16.1	28.3	14.2	4.7	73	7.1	6.4	5.2	8.5
NKHATA BAY	29.6	20.9	30.2	19.9	2.5	79	6.9	6.9	5.5	9.0
KASUNGU ADD										
KASUNGU	27.6	18.0	27.6	18.5	5.8	71	7.3	6.8	5.4	8.9
LILONGWE ADD										
CHITEDZE	27.9	17.2	29.0	15.9	2.5	65	7.3	6.1	4.7	9.2
DEDZA	24.5	14.2	26.1	14.2	2.9	81	6.8	6.0	4.7	8.3
K I A	26.6	17.0	27.5	16.3	6.5	73	7.7	6.4	5.1	8.9
SALIMA ADD										
NKHOTAKOTA	29.5	21.2	30.5	20.5	2.5	72	9.2	8.1	5.7	9.3
SALIMA	30.1	23.1	30.9	21.6	9.4	72	9.7	8.4	6.3	10.5
MACHINGA ADD										
NTAJA	29.3	20.3	30.9	19.3	5.4	74	7.4	8.7	7.4	9.2
MAKOKA	26.6	17.7	28.5	16.0	4.0	76	7.6	6.4	5.1	8.6
MANGOCHI	30.1	20.1	32.3	19.7	4.3	63	8.9	8.1	6.7	9.1
BLANTYRE ADD										
BVUMBWE	25.2	14.8	27.9	14.8	0.6	80	7.4	7.0	5.6	9.4
CHICHIRI	25.7	18.2	28.3	15.5	3.2	69	7.3	7.3	5.9	9.2
CHILEKA	28.0	19.5	30.5	18.9	9.4	72	8.6	8.2	8.7	9.5
MIMOSA	28.6	18.7	30.7	16.6	3.6	79	7.1	6.9	5.7	8.8
SHIRE VALLEY ADD										
NGABU	33.4	23.7	36.3	21.1	1.4	66	9.4	8.3	6.8	9.8

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 Meters Per Second (mps) to Kilometres per hour (Km/hr) = mpsx3.6