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: 01 – 10 April 2022 | Season: 2021/2022 | Issue No.19

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HIGHLIGHTS

- **Wet conditions experienced over southern and central areas, relatively dry over northern areas…**
- **Maize crop is between maturity and drying stages…**
- **Moderate rainfall expected during the dekad 11 to 20 April 2022…**

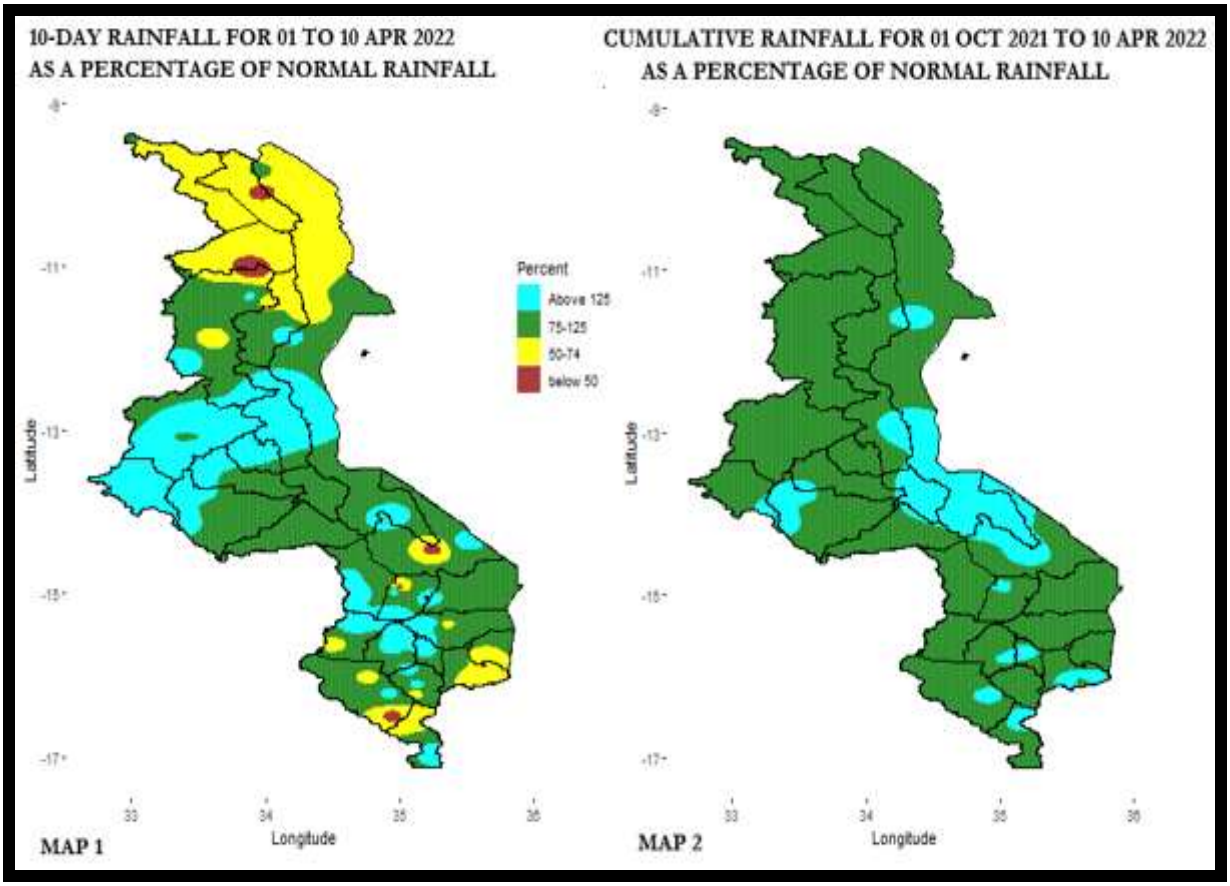

Figure 1: Observed dekadal and cumulative seasonal rainfall as percentage of normal for Malawi

1.0 WEATHER SUMMARY

During the period 01 to 10 April 2022, a weak Inter-Tropical Convergence Zone (ITCZ) was active mainly over southern and central areas of the country. This resulted in wet conditions over southern and central areas with relatively dry conditions over northern areas of the country.

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1.1 RAINFALL SITUATION

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

For the period under review, areas that recorded a dekadal total of at least 100.0mm included Chintheche Agriculture in Nkhata Bay which recorded 206.7mm, Mchinji Boma recorded 190.4mm, Dwangwa Sugar Estate in Nkhotakota recorded 158.2mm, Nkhotakota Met station recorded 145.9mm, Thyolo Met station recorded 130.7mm, Nkhande in Ntcheu recorded 116.5mm, Dzonzi forest in Ntcheu recorded 114.6mm and Neno Agriculture recorded 101.3mm. Some areas such as Mchinji Boma and Nkhotakota Meteorological station had as high as 8 rainy days during the reporting period. 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 31 March 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 01 to 10 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 15.4°C at Dedza Meteorological station to 24.0°C at Ngabu Meteorological station in Chikwawa. Details in Table 2.

1.3 RELATIVE HUMIDITY

During the period 01 to 10 April 2022, air over Malawi was humid. Daily average Relative Humidity values recorded from various weather stations had ranged from 57% at Makoka Meteorological station in Zomba to 90% at Monkey Bay Meteorological station in Mangochi district. 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 1.1 km per hour at Bolero in Rumphi to 8.6 Km per hour at Chileka Meteorological station in Blantyre. More details in Table 2.

1.5 SUNSHINE HOURS

Generally medium to long hours of bright sunshine were observed over Malawi during the period 01 to 10 April 2022. Daily average values had ranged from 6.6 hours per day at Mzuzu Meteorological station to 9.4 hours per day at Ngabu Meteorological station. Consequently, the amount of Solar Radiation had ranged from 8.0 to 10.4 cal/cm²/day. For details see Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

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

Maize crop is at drying stage in the south, with 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 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 11-20 APRIL 2022

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

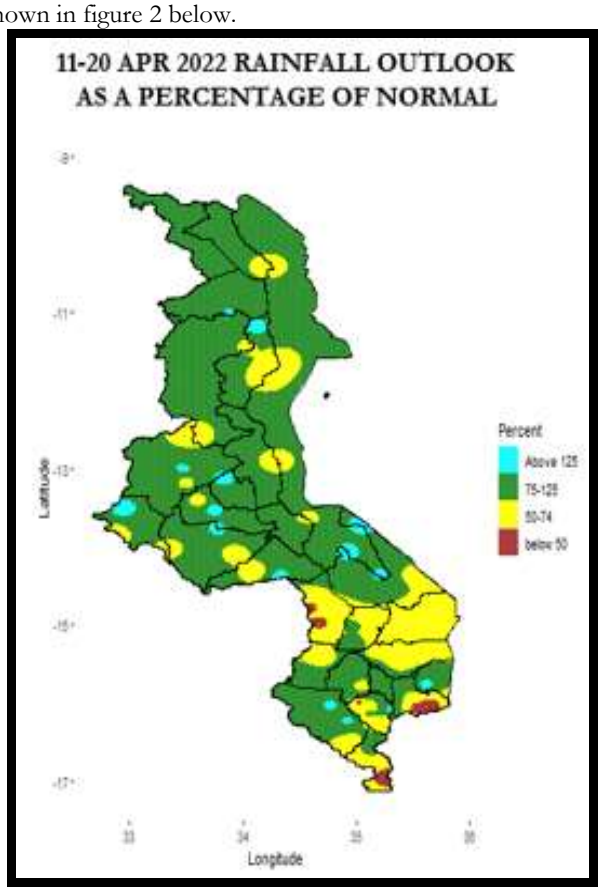

Figure 2: Dekadal rainfall outlook for Malawi as percentage of normal rainfall

TABLE 1: 10-DAY RAINFALL TOTALS AT SELECTED STATIONS FOR 01 TO 10 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.	92.0	140.5	65	5	1220.9	1200.4	102
	Karonga Met.	86.7	88.0	99	6	718.7	895.7	80
	Lupembe	30.9	63.1	49	4	741.8	773.9	96
MZUZU	Bwengu Agric.	7.9	21.7	36	1	734.3	733.9	100
	Chintheche Agric	206.7	146.7	141	5	1778.2	1472.3	121
	Ekwendeni Agric.	65.8	42.2	156	5	626.2	779.8	80
	Euthini Agric.	23.2	22.6	103	2	684.0	748.1	91
	Mbawa Res. Stn	37.9	16.5	230	4	871.4	781.6	111
	Mzimba Met	12.2	23.5	52	3	1039.2	862.3	121
	Mzuzu Met.	60.0	89.2	67	3	863.4	965.4	89
	NkhataBay Met.	92.0	133.0	69	7	1612.6	1215.9	133
	Rumphi Boma	3.5	30.0	12	2	824.5	706.8	117
	Zombwe Agric	27.0	36.0	75	5	725.4	716.9	101
KASUNGU	Kasungu Met	70.5	17.6	401	5	922.1	760.8	121
	Lisasadzi	27.2	15.8	172	2	960.1	792.1	121
	Malomo Agric	73.6	16.3	452	6	902.8	808.4	112
	Mchinji Boma	190.4	29.3	650	8	991.3	977.9	101
	Mwimba Research	19.2	15.8	122	2	828.2	856.2	97
LILONGWE	Chileka Namitete	48.2	27.9	173	2	1425.3	889.5	160
	Chitedze Met.	26.1	29.3	89	0	931.5	859.0	108
	Dzonzi Forest	114.6	20.5	559	5	1052.7	952.3	111
	K.I.A Met	17.3	19.6	88	2	975.2	830.4	117
	Kasiya Agric	90.3	19.0	475	4	1190.1	928.2	128
	Mlangeni Njolomo	28.7	24.3	118	3	1074.5	939.5	114
	Ntcheu - Nkhande	116.5	19.0	613	6	1243.6	1011.0	123
SALIMA	Dwangwa Sugar C	158.2	92.8	170	6	1395.3	1228.9	114
	Lifuwu	45.0	46.3	97	3	1955.4	1175.2	166
	Nkhotakota Met	145.9	97.1	150	8	1729.0	1341.7	129
	Salima Met	36.7	44.8	82	5	1832.5	1168.2	157
MACHINGA	Balaka Township	29.7	21.4	139	2	903.0	830.9	109
	Chancellor College	24.5	36.5	67	3	1168.2	1236.6	94
	Chingale Agric	44.8	25.9	173	5	1027.6	889.1	116
	Liwonde Township	47.0	24.1	195	3	594.9	785.2	76
	Makoka Met	57.9	30.7	189	4	957.3	935.0	102
	Mangochi Met.	6.1	20.2	30	3	883.9	683.5	129
	Monkey Bay Met.	61.7	6.5	949	6	718.2	558.1	129
	Naminjiwa Agric	13.1	18.6	70	1	782.6	928.7	84
	Namwera Agric	44.5	34.5	129	4	1175.0	1006.7	117
	Ntaja Met.	24.6	31.2	79	3	1009.9	858.4	118
	Phalula Agric	20.3	14.3	142	4	935.6	799.1	117
	Toleza Farm	5.7	27.7	21	1	1216.3	833.8	146
BLANTYRE	Bvumbwe Met.	85.5	30.7	279	7	1244.6	1046.8	119
	Chichiri Met.	35.8	29.0	123	5	1391.1	1057.5	132
	Chileka Airport	50.9	20.0	255	7	882.2	846.9	104
	Chiradzulu Agric	63.0	22.4	281	3	1477.1	941.9	157
	Lujeri Tea Estate	70.2	106.5	66	8	2685.9	1850.5	145
	Masambanjati Agr	27.2	51.7	53	2	1361.2	1240.3	110
	Mimosa Met.	47.4	63.8	74	8	1453.8	1331.8	109
	Mulanje Boma	56.7	82.2	69	3	2142.9	1606.3	133
	Mwanza Boma	23.8	34.9	68	7	1174.6	971.8	121
	Neno Agric	101.3	36.3	279	4	999.9	1047.4	95
	Thuchila Agric	20.6	25.5	81	3	1039.8	840.6	124
	Thyolo Met	130.7	30.7	426	6	1211.7	1137.8	106
SHIRE VALLEY	Chikwawa Boma	10.6	21.2	50	2	821.8	735.2	112
	Makhanga Met	9.8	16.4	60	2	1014.9	692.4	147
	Nchalo Sucoma	31.8	18.9	168	2	1057.9	624.3	169
	Ngabu Met.	4.5	17.9	25	2	874.7	722.7	121
	Nsanje Boma	45.6	21.7	210	4	830.5	1022.2	81

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 01 TO 10 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)	RADIA-TION (cal cm^{-2} p/day)
KARONGA ADD										
KARONGA	30.7	20.4	31.6	19.7	3.2	78	7.8	7.5	6.0	9.7
MZUZU ADD										
BOLERO	28.0	17.5	30.2	16.3	1.1	78	7.3	6.3	5.1	8.5
MZIMBA	27.7	16.6	29.5	15.8	2.9	75	6.8	6.4	5.2	8.4
MZUZU	26.1	17.4	28.5	16.4	4.3	87	6.6	6.3	5.1	8.0
NKHATA BAY	29.4	21.1	31.5	20.5	1.8	74	7.2	6.9	5.5	9.0
KASUNGU ADD										
KASUNGU	27.5	19.2	30.0	17.0	4.7	76	7.8	6.8	5.4	8.9
LILONGWE ADD										
CHITEDZE	27.6	18.0	30.1	16.5	1.8	78	7.1	6.1	4.7	9.2
DEDZA	24.5	15.4	26.0	14.7	2.2	73	6.7	6.0	4.7	8.7
K I A	26.5	17.8	28.9	16.5	4.7	77	7.5	6.4	5.1	8.9
SALIMA ADD										
NKHOTAKOTA	29.1	20.3	30.4	18.7	1.8	78	8.3	7.1	5.7	9.3
SALIMA	29.8	22.1	31.0	20.4	6.5	78	8.6	7.8	6.3	9.5
MACHINGA ADD										
NTAJA	29.5	20.7	30.6	19.6	4.0	77	7.2	8.7	7.4	9.2
MAKOKA	27.1	29.5	20.2	17.4	2.9	57	7.6	6.4	5.1	8.6
MANGOCHI	31.4	22.7	32.5	21.2	2.5	75	8.1	8.1	6.7	9.1
MONKEY BAY	30.4	22.3	32.0	21.6	4.7	90	8.3	8.2	6.9	8.9
BLANTYRE ADD										
BVUMBWE	26.1	18.2	27.8	16.8	4.7	80	6.9	7.0	5.6	9.4
CHICHIRI	26.8	18.7	28.9	17.1	2.5	79	6.9	7.3	5.9	9.2
CHILEKA	28.5	20.2	31.5	18.6	8.6	75	7.7	8.2	8.7	9.7
MIMOSA	29.1	18.8	31.8	16.5	3.2	79	7.4	6.9	5.7	8.4
SHIRE VALLEY ADD										
NGABU	33.4	24.0	35.5	23.0	1.4	73	9.4	8.3	6.8	10.4

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