



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: 11 – 20 April 2018

Season: 2017/2018

Issue No.20

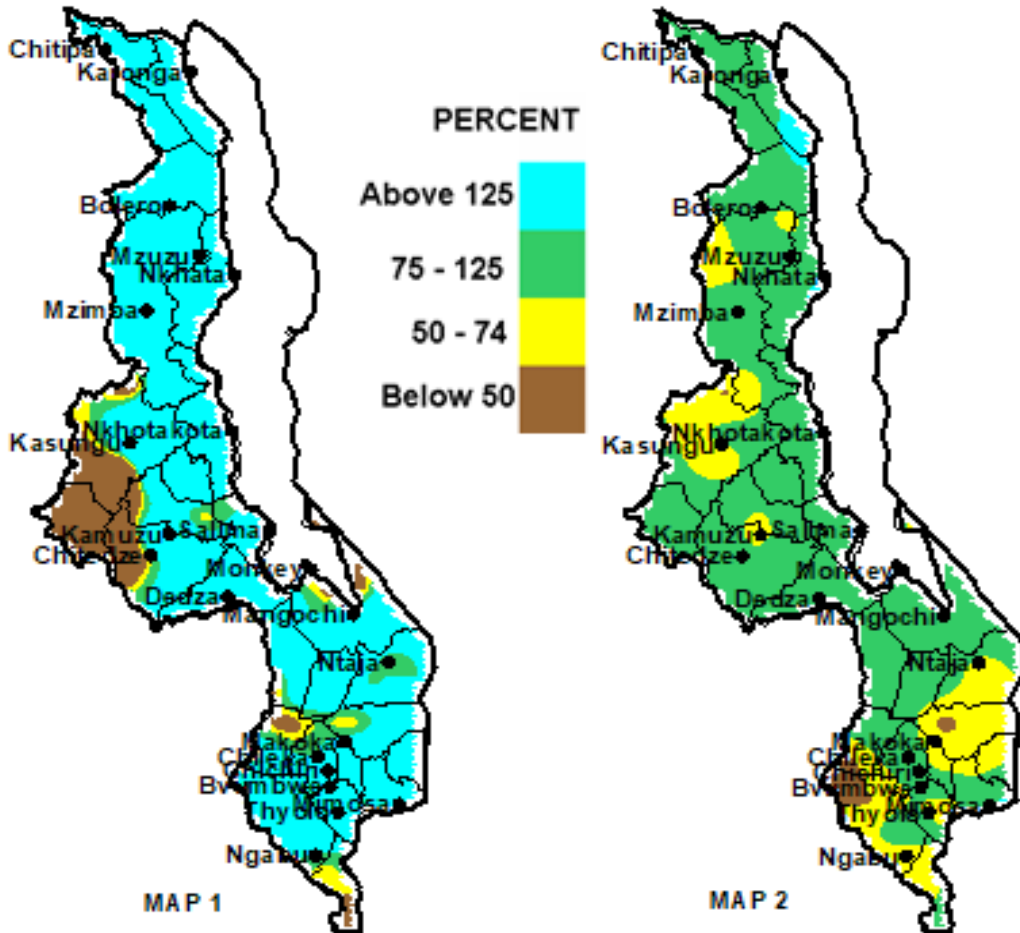
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HIGHLIGHTS

- Above average rainfall amounts received over most areas ...
- Average seasonal rainfall amounts recorded during 2017/18 season ...
- Occasional rainfall to persist over Malawi during 21 to 30 April 2018...

10-DAY TOTAL RAINFALL FOR 11 - 20 APRIL 2018
AS A PERCENTAGE OF NORMAL RAINFALL

CUMULATIVE RAINFALL FROM 1 OCT 2017 TO 20 APRIL 2018
AS A PERCENTAGE OF NORMAL RAINFALL



Rainfall Maps by 20 April 2018

1.0 WEATHER SUMMARY

During the second ten days of April 2018, Easterly waves were very active over most parts of Malawi as the 2017-2018 rainfall season is tailing off. Hence most areas in Malawi particularly over lakeshore and northern Malawi had received moderate to locally heavy and above average rainfall amounts.

1.1 RAINFALL SITUATION

During the period 11 to 20 April 2018, locally heavy and above average rainfall amounts were reported over most parts of Malawi especially over highlands, along the lakeshore and over northern Malawi. Many places reported cumulative rainfall amounts in excess of 100mm and these areas included Nkhata Bay Met at Mkondezi which recorded 392mm, Chintheche Agric also in Nkhata Bay District had 353mm, Vinthukutu Agric in Karonga had received 309mm, Dwangwa in Nkhotakota had registered 217mm, Baka Research at Karonga Boma had 192mm, Nkhotakota Met had recorded 140mm, Karonga Met at Karonga Airport received 137mm, Mzuzu Met 136mm, Lujeri Tea Estate in Mulanje had 132mm, Mimosa Met 124mm, Balaka Agric 114mm, Lupembe Agric in Karonga reported 115mm, Chikangawa Forest had 109mm and Mulanje Agric received 108mm. More details are in Table 1 and Map 1.

The spatial distribution of cumulative rainfall amounts since the 2017/2018 rainfall season started in October 2017 up to 20 April 2018 is as shown in Map 2. The map indicates that most parts of Malawi have received average cumulative rainfall amounts (Green colour). However, pockets of below average rainfall amount still existed particularly over southern and central Malawi (Yellow colour on Map 2) due to low rainfall and prolonged dry spells that were experienced in January and February 2018.

1.3 AIR TEMPERATURE

During the period 11 to 20 April 2018, warm to hot temperatures were experienced over Malawi. Mean daily maximum temperatures ranged from 23°C at Dedza Boma to 31°C at Ngabu in Chikwawa district while daily average minimum temperatures were between 14°C and 22°C. During the same period the highest temperature was 34°C reported at Ngabu. On the other hand the lowest temperature was 12°C recorded at Dedza Boma. More details are in Table 2.

1.4 WIND SPEEDS

During the second ten days of April 2018 most areas in Malawi continued to experience light to moderate wind speeds. The daily average wind speeds measured at two metres above the ground level across the Malawi had ranged between 4.4km per hour at Mzuzu to 8.5km per hour at Ntaja and Salima. Find more details are in Table 2.

1.5 RELATIVE HUMIDITY

During the period 11 to 20 April 2018, air over Malawi was still moist. Daily average relative humidity values recorded from various weather stations in Malawi had ranged from 62% at Mangochi Boma to 88% in Mzuzu City. Details are on the Table 2.

1.6 SUNSHINE HOURS

During the period 11 to 20 April 2018, Malawi had experienced high cloud cover. The daily average values of sunshine hours observed over most areas were between 5 and 8 hours per day. Consequently, the amount of solar radiation received over most areas was between 7 and 10 calories per square centimeter per day. More details are in Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

The above average rainfall amounts that fell in most parts of Malawi during the period 11 to 20 April 2018 apart from supporting growth and development of roots and tuber crops have also increased prospects for residual moisture and irrigated farming. Above continued to falling over Malawi. These rains had assisted in replenishing soil moisture reserves, water bodies and improved pasture availability for grazing of livestock. On the other hand, the wet weather had hampered harvesting and drying of matured crops. Maize crop was mostly at drying and harvesting stages. Harvesting of maize which is the staple food for Malawians was in progress throughout the country. This has significantly improved household food security as most farm households had food from their own production.

3. PROSPECTS FOR 2017/2018 RAINFALL SEASON

Most climate models predict that La Niña will decay and return to ENSO-neutral conditions. Therefore, the updated rainfall forecast for April to June 2018 is that most parts of Malawi are likely to experience normal cumulative rainfall amounts.

4. OUTLOOK FOR 21 TO 30 APRIL 2018

During the last ten days of April 2018, Malawi will generally be under the influence of fairly moist easterly air mass and the 2017/2018 rainfall season is tailing off. Therefore, occasional light rainfall particularly over some highlands and along the lakeshore is expected during the period 21 to 30 April 2018. These rains are likely to support growth and development of tuber crops and also to improve prospects for residual moisture and irrigated farming for winter season.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR 11 TO 20 APRIL 2018

ADD	RAINFALL STATION	ACTUAL DEKADAL TOTAL RAINFALL (mm)	DEKADAL NORMAL (EXPECTED) RAINFALL (mm)	ACTUAL TOTAL AS PERCENTAGE OF NORMAL (EXPECTED) RAINFALL	ACTUAL TOTAL RAINFALL TODATE (mm)	NORMAL (EXPECTED) RAINFALL TODATE (mm)	ACTUAL TODATE AS PERCENTAGE OF NORMAL (EXPECTED) RAINFALL	RAINY DAYS ≥ 0.3 mm	
KARONGA	Baka Res. Stn.	191.8	76.4	251	1324.1	1276.8	104	8	
	Chitipa Met	67.1	17.4	386	926.7	935.8	99	7	
	Karonga Met.	137.1	59.2	232	1019.5	954.9	107	9	
	Lupembe	114.5	36.0	318	990.9	809.9	122	8	
MZUZU	Vinthukutu Agric	309.3	73.5	421	1715.1	1067.2	161	8	
	Bolero Met	27.6	10.8	256	563.2	624.9	90	3	
	Bwengu Agric.	46.7	17.5	267	N/A	751.4	N/A	4	
	Chikangawa forest	109.0	29.5	369	839.4	1068.5	79	4	
	Chelinda (Nyika)	80.5	41.6	194	1231.0	1165.6	106	8	
	Chintheche Agric	353.2	128.5	275	2105.3	1600.8	132	6	
	Ekwendeni Agric.	64.8	18.0	360	573.2	797.8	72	5	
	Euthini Agric.	78.0	13.3	586	N/A	761.4	N/A	3	
	Mbawa Res. Stn	29.8	12.3	242	877.0	793.9	110	5	
	Mzimba Met	68.8	13.9	495	888.7	876.2	101	6	
	Mzuzu Met.	136.0	65.6	207	1028.2	1031.0	100	7	
	NkhataBay Met.	392.2	96.0	409	1701.9	1311.9	130	10	
	Rumpho Boma	26.5	13.2	201	698.6	720.0	97	4	
Zombwe Agric	70.1	19.0	369	859.3	735.9	117	4		
KASUNGU	Dowa Agric	0.0	9.6	0	780.8	869.5	90	0	
	Kaluluma Agric	0.0	16.8	0	343.6	806.1	43	0	
	Kasungu Met	29.2	5.6	521	710.4	766.4	93	2	
	Lisasadzi	5.7	13.4	43	447.9	805.5	56	1	
	Malomo Agric	39.4	2.5	1576	755.6	810.9	93	1	
	Madisi Agric	9.0	11.6	78	874.7	824.3	106	1	
	Mchinji Boma	1.5	15.3	10	1268.4	993.2	128	1	
	Mponela Agric	11.8	5.3	223	571.2	784.3	73	4	
	Mwimba Research	9.4	6.8	138	441.0	863.0	51	1	
	Ntchisi Boma	33.3	24.8	134	952.3	1213.8	78	3	
SALIMA	Dwangwa	217.3	58.2	373	1203.4	1287.1	93	6	
	Lifufu	60.3	41.4	146	1279.6	1216.6	105	2	
	Nkhotakota Met	140.4	56.1	250	1546.4	1397.8	111	5	
	Salima Met	50.8	27.6	184	1131.2	1195.8	95	2	
LILONGWE	Chileka Namitete	0.0	17.8	0	1068.7	907.3	118	0	
	Chitedze Met.	0.0	9.0	0	707.4	868.0	81	0	
	Dzonzi Forest	0.0	21.1	0	801.8	973.4	82	0	
	K.I.A Met	7.5	1.6	469	554.4	832.0	67	3	
	Mlangeni Njolomole	24.9	14.0	178	718.6	953.5	75	3	
	Nathenje Agric	35.0	11.5	304	947.6	851.8	111	3	
	Ntcheu - Nkhande	32.5	16.8	193	984.3	1027.8	96	3	
	Balaka Township	117.3	11.8	994	856.2	842.7	102	3	
MACHINGA	Chikweo Agric.	11.3	7.9	143	850.7	1036.1	82	2	
	Chingale Agric	9.5	15.5	61	N/A	904.6	N/A	2	
	Mpilipili (Makanjila)	0.0	8.3	0	546.5	872.3	63	0	
	Makoka Met	26.7	14.1	189	592.1	949.1	62	3	
	Mangochi Met.	27.3	9.4	290	819.2	692.9	118	2	
	Monkey Bay Met.	0.0	3.3	0	728.7	561.4	130	0	
	Namiasi Agric	0.0	3.2	0	644.3	740.8	87	0	
	Namwera Agric	48.7	20.4	239	1006.8	1027.1	98	2	
	Ntaja Met.	12.5	14.0	89	590.9	872.4	68	3	
	Phalula Agric	9.5	12.7	75	716.7	811.8	88	2	
	Toleza Farm	41.0	16.6	247	1029.0	850.4	121	3	
	Zomba RTC	37.0	19.7	188	807.9	1173.5	69	3	
	BLANTYRE	Bvumbwe Met.	36.0	19.6	184	979.7	1066.4	92	4
		Chichiri Met.	22.6	21.1	107	903.6	1078.6	84	5
Chileka Airport		26.3	16.7	157	793.1	863.6	92	2	
Chiradzulu Agric		18.4	11.9	155	580.3	953.8	61	3	
Chizunga Factory		58.8	32.9	179	812.8	1290.7	63	4	
Lujeri Tea Estate		132.1	70.2	188	2903.7	1920.7	151	7	
Mimosa Met.		124.1	43.6	285	1406.0	1375.4	102	5	
Mpemba Vet		25.6	18.5	138	912.5	1091.1	84	3	
Mulanje Boma		108.2	52.8	205	1845.4	1659.1	111	5	
Mwanza Boma		36.2	16.7	217	N/A	988.5	N/A	4	
Naminjiwa Agric		20.4	9.6	213	560.3	938.3	60	2	
Neno Agric		0.0	21.2	0	1363.0	1068.6	128	0	
Satemwa Tea Est		64.6	24.4	265	823.7	1049.3	78	4	
Thuchila Agric		40.3	15.6	258	841.6	856.2	98	3	
SHIRE VALLEY		Chikwawa Boma	24.0	8.1	296	369.5	743.3	50	3
	Kasinthula Res. Stn.	20.0	12.4	161	336.9	697.7	48	3	
	Nchalo	35.9	10.2	352	788.2	634.5	124	3	
	Ngabu Met.	10.4	13.6	76	373.6	736.3	51	2	
	Nsanje Boma	8.9	26.2	34	873.9	1048.4	83	2	

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 TO 20 APRIL 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	25.5	16.7	26.9	16.0	8.6	79	5.0	5.5	4.4	7.9
Karonga	29.0	20.1	30.0	18.5	3.2	81	5.2	5.8	4.6	8.0
MZUZU ADD										
Bolero	27.5	17.3	30.5	15.6	2.2	73	6.4	5.4	4.2	8.0
Mzimba	26.0	16.3	27.9	14.1	4.0	76	5.1	4.9	3.9	7.2
Mzuzu	22.9	16.6	26.4	14.3	6.1	88	4.4	4.3	3.4	6.7
Nkhata Bay	27.8	20.4	30.1	18.6	3.2	87	4.9	4.9	3.9	7.1
KASUNGU ADD										
Kasungu	26.0	16.7	27.5	13.5	3.6	74	6.8	5.5	4.3	8.4
LILONGWE ADD										
Chitedze	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dedza	22.6	14.5	25.1	11.9	5.4	80	6.4	5.0	3.9	8.2
KIA	25.3	15.7	27.2	13.9	5.4	77	6.4	5.3	4.1	8.2
SALIMA ADD										
Nkhotakota	27.8	18.9	29.9	20.5	2.5	77	7.6	6.0	4.7	8.9
Salima	29.0	21.7	31.0	20.5	9.4	71	8.5	7.0	5.6	9.5
MACHINGA ADD										
Makoka	25.4	16.8	29.2	15.4	3.2	80	7.0	5.5	4.3	8.6
Mangochi	30.5	21.0	33.0	19.5	2.2	62	7.9	6.6	5.2	9.1
Monkey Bay	29.7	21.9	31.4	20.3	7.6	63	8.0	7.1	5.7	9.2
Ntaja	28.1	19.2	30.7	17.4	6.5	76	8.5	6.8	5.3	10.0
BLANTYRE ADD										
Bvumbwe	23.1	13.8	25.4	12.4	7.6	81	6.5	5.1	4.0	8.4
Chichiri	24.5	17.0	28.2	15.6	7.2	78	6.5	5.5	4.3	8.4
Chileka	27.3	18.7	30.7	15.9	10.4	70	6.9	6.3	5.1	8.6
Mimosa	26.9	18.5	30.0	16.5	3.2	73	6.5	5.7	4.5	8.4
SHIRE VALLEY ADD										
Ngabu	31.3	21.7	34.4	20.2	1.4	66	7.9	6.8	5.4	9.3

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