



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 – 30 April 2018

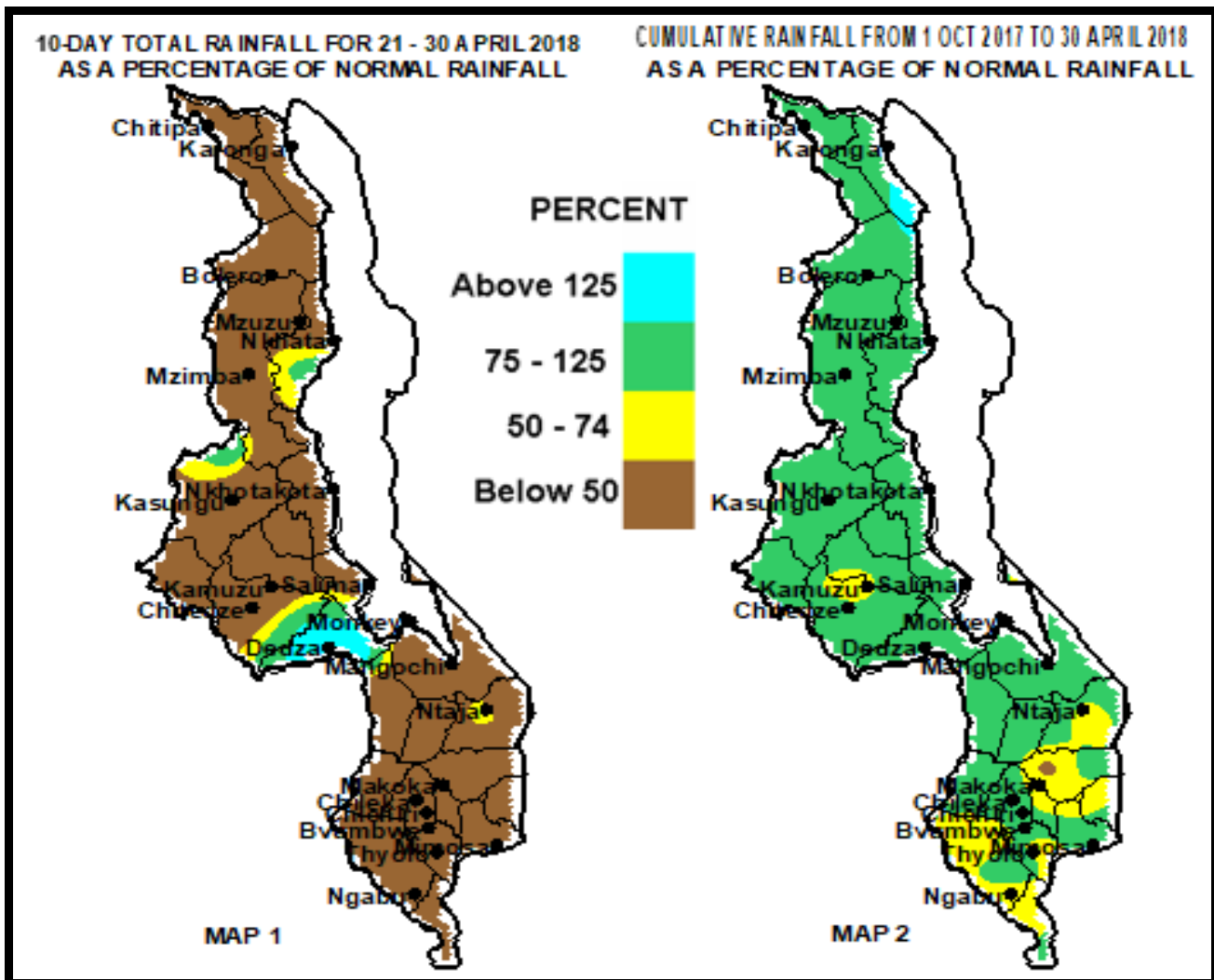
Season: 2017/2018

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## HIGHLIGHTS

- Dry weather prevailed over most parts of Malawi...
- Average seasonal rainfall amounts recorded during 2017/18 season ...
- Occasional light rainfall expected over Malawi during May and June 2018...



Rainfall Maps by 30 April 2018

## 1.0 WEATHER SUMMARY

During the last ten days of April 2018, fairly moist easterly air mass covered most parts of Malawi. As a result, rainfall was confined to very few areas mainly over highlands and along the lakeshore and most areas in Malawi had recorded below average cumulative rainfall and dry weather conditions.

### 1.1 RAINFALL SITUATION

During the period 21 to 30 April 2018, most districts in Malawi had experienced dry conditions and below average rainfall amounts. During the entire period significant rainfall amounts of 15mm and above were reported at very few places including Chintheche Agric where 85mm of rainfall was recorded, 19mm was received at Mimosa Met, 18mm at Lujeri Tea Estate in Mulanje, Nkhata Bay Met had recorded 17mm and Chikangawa Forest had 15mm. Otherwise several stations reported nil rainfall during the period 21 to 30 April 2018. More details are in Table 1 and Map 1.

The spatial distribution of cumulative rainfall amounts since the 2017/2018 rainfall season started on 01 October 2017 up to 30 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 amounts 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 21 to 30 April 2018, warm to hot temperatures were reported over Malawi. Mean daily maximum temperatures ranged from 23°C at Dedza Boma to 32°C at Ngabu in Chikwawa district while daily average minimum temperatures were between 12°C and 21°C. During the same period the highest temperature was 35°C reported at Ngabu while the lowest temperature was 9°C reported at Dedza Boma. More details are in Table 2.

### 1.4 WIND SPEEDS

During the last ten days of April 2018 most areas in Malawi continued to experience light to moderate wind speeds from the Eastern direction. Daily average wind speeds measured at two metres above the ground level across the Malawi had ranged between 1.4km per hour at Ngabu to 12.2km per hour at Chitipa. Find more details are in Table 2.

### 1.5 RELATIVE HUMIDITY

During the period 21 to 30 April 2018, air over Malawi was still moist. Daily average relative humidity values recorded from various weather stations in Malawi had ranged from 60% at Ngabu to 88% at Mkondezi Research Station in Nkhata Bay. Details are on the Table 2.

### 1.6 SUNSHINE HOURS

During the period 21 to 30 April 2018, Malawi had experienced mostly sunny conditions with low cloud cover. Daily average hours of bright sunshine observed over most areas were between 8 and 10 hours per day. Consequently, the amount of solar radiation received over most areas was between 9 and 11 calories per square centimeter per day. More details are in Table 2.

## 2. AGROMETEOROLOGICAL ASSESSMENT

Dry conditions that prevailed over most parts of Malawi during the last ten days of April 2018 continued to facilitate harvesting and drying of matured crops. Harvesting of maize which is the staple food for Malawians was in progress in most parts of the country. This has improved food security at household level as most farming households had food from their own production. On the other hand, persistent wet weather had hindered harvesting and drying of matured crops and this is likely to increase field losses. These rains have also supported growth and development of roots and tuber crops, increased prospects for residual moisture and irrigated farming and had improved pasture availability for grazing of livestock.

Overall agricultural production during 2017/18 growing season for has been negatively affected by prolonged dry spells and drought the January and February 2018 particularly over southern and central Malawi. As such crop yield and production in southern and central Malawi is expected to be generally lower than last season.

## 3. PROSPECTS FOR 2017/2018 RAINFALL SEASON

Most climate models predict that La Niña is decaying and will return to ENSO-neutral conditions. Therefore, the updated rainfall forecast for May to June 2018 is that most parts of Malawi are likely to receive normal cumulative rainfall amounts. This is likely to increase prospects for residual moisture and irrigated farming

## 4. OUTLOOK FOR MAY AND JUNE 2018

A series of high pressure systems are expected to periodically induce cool and moist air from the Indian Ocean into Malawi. Therefore, occasional and generally light rainfall is expected particularly over highlands and along the Lakeshore during May and July 2018. These rains are likely to support growth and development of tuber crops and also to improve prospects for residual moisture and irrigated farming during the winter season.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR 21 TO 30 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.	0.0	41.0	0	1324.1	1317.8	100	0
	Chitipa Met	1.3	4.2	31	928.0	940.0	99	1
	Karonga Met.	4.2	25.9	16	1023.7	980.8	104	2
	Lupembe	8.5	12.7	67	999.4	822.6	121	1
	Vinthukutu Agric	0.0	53.3	0	1715.1	1120.5	153	0
MZUZU	Bolero Met	0.0	4.2	0	563.2	629.1	90	0
	Chikangawa forest	15.0	22.0	68	854.4	1090.5	78	5
	Chelinda ( Nyika)	1.0	28.7	3	1232.0	1194.3	103	1
	Chintheche Agric	84.6	82.6	102	2189.9	1683.4	130	2
	Ekwendeni Agric.	0.0	9.4	0	573.2	807.2	71	0
	Mbawa Res. Stn	0.0	7.3	0	877.0	801.2	109	0
	Mzimba Met	0.0	9.1	0	888.7	885.3	100	0
	Mzuzu Met.	6.2	43.6	14	1034.4	1074.6	96	2
	NkhataBay Met.	16.8	81.9	21	1718.7	1393.8	123	4
	Rumpho Boma	0.0	8.3	0	698.6	728.3	96	0
	Zombwe Agric	0.0	8.5	0	859.3	744.4	115	0
KASUNGU	Dowa Agric	0.0	2.8	0	780.8	872.3	90	0
	Kaluluma DTC	4.8	3.7	130	N/A	809.8	N/A	1
	Kasungu Met	0.0	4.0	0	710.4	770.4	92	0
	Lisasadzi	0.0	6.4	0	447.9	811.9	55	0
	Malomo Agric	0.0	14.9	0	755.6	825.8	91	0
	Madisi Agric	0.0	3.6	0	874.7	827.9	106	0
	Mchinji Boma	0.0	10.2	0	1268.4	1003.4	126	0
	Mponela Agric	0.0	2.6	0	571.2	786.9	73	0
	Mwimba Research	0.0	2.2	0	441.0	865.2	51	0
	Ntchisi Boma	0.0	12.1	0	952.3	1225.9	78	0
SALIMA	Dwangwa	8.4	33.3	25	1211.8	1320.4	92	2
	Lifuwu	0.0	11.7	0	1279.6	1228.3	104	0
	Nkhotakota Met	2.3	34.5	7	1548.7	1432.3	108	2
	Salima Met	0.0	9.2	0	1131.2	1205.0	94	0
LILONGWE	Chileka Namitete	0.0	13.9	0	1068.7	921.2	116	0
	Chitedze Met.	0.0	6.5	0	707.4	874.5	81	0
	Dzonzi Forest	0.0	5.4	0	801.8	978.8	82	0
	K.I.A Met	0.0	6.1	0	554.4	838.1	66	0
	Kasiya Agric	0.0	12.6	0	566.8	948.1	60	0
	Mlangeni Njolomole	0.0	4.7	0	718.6	958.2	75	0
	Nathenje Agric	12.0	13.2	91	959.6	865.0	111	1
	Ntcheu - Nkhande	1.8	7.2	25	986.1	1035.0	95	1
	Dedza Met	14.2	5.1	278	828.3	979.0	85	2
MACHINGA	Balaka Township	0.0	6.8	0	856.2	849.5	101	0
	Chikweo Agric.	0.0	9.6	0	850.7	1045.7	81	0
	Chingale Agric	0.0	5.7	0	407.5	910.3	45	0
	Mpilipili (Makanjila)	0.0	4.8	0	546.5	877.1	62	0
	Makoka Met	0.6	10.4	6	592.7	959.5	62	1
	Mangochi Met.	6.6	5.0	132	829.1	697.9	119	0
	Monkey Bay Met.	0.0	1.5	0	728.7	562.9	129	2
	Namiasi Agric	0.0	1.7	0	644.3	742.5	87	0
	Namwera Agric	0.0	8.4	0	1006.8	1035.5	97	0
	Ntaja Met.	10.7	15.1	71	601.6	887.5	68	1
	Phalula Agric	0.0	3.5	0	716.7	815.3	88	0
	Toleza Farm	0.0	9.8	0	1029.0	860.2	120	0
	Zomba RTC	0.0	13.6	0	807.9	1187.1	68	0
BLANTYRE	Bvumbwe Met.	5.0	16.5	30	984.7	1082.9	91	2
	Chichiri Met.	1.2	16.7	7	904.8	1095.3	83	1
	Chileka Airport	0.0	8.8	0	793.1	872.4	91	0
	Chiradzulu Agric	0.0	11.8	0	580.3	965.6	60	0
	Chizunga Factory	2.0	18.2	11	814.8	1308.9	62	1
	Lujeri Tea Estate	18.3	63.0	29	2922.0	1983.7	147	2
	Masambanjati Agric	1.5	28.4	5	936.1	1305.1	72	1
	Mimosa Met.	18.8	36.9	51	1424.8	1412.3	101	2
	Mpemba Vet	0.0	11.3	0	912.5	1102.4	83	0
	Mulanje Boma	7.7	29.6	26	1853.1	1688.7	110	2
	Neno Agric	0.0	14.5	0	1363.0	1083.1	126	0
	Satemwa Tea Est. No.1	0.0	17.9	0	823.7	1067.2	77	0
	Thuchila Agric	0.0	7.7	0	841.6	863.9	97	0
	SHIRE VALLEY	Chikwawa Boma	0.0	6.9	0	369.5	750.2	49
Kasinthula Res. Stn.		0.0	10.7	0	336.9	708.4	48	0
Makhanga Met		0.0	5.9	0	452.6	708.8	64	0
Nchalo Sucoma		0.0	8.6	0	788.2	643.1	123	0
Ngabu Met.		0.1	11.6	1	373.7	747.9	50	0
Nsanje Boma		0.8	18.3	4	874.7	1066.7	82	1

**TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 21 TO 30 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 <sup>-2</sup> p/day
<b>KARONGA ADD</b>										
Chitipa	25.3	15.8	26.7	13.5	12.2	69	7.5	6.7	5.3	9.6
Karonga	29.5	19.7	30.2	19.0	4.3	71	8.2	7.1	5.6	10.1
<b>MZUZU ADD</b>										
Bolero	28.1	13.9	29.3	12.5	2.5	62	10.0	6.1	4.6	9.9
Mzimba	26.2	15.2	27.8	13.3	6.1	65	9.6	6.2	4.8	9.8
Mzuzu	23.0	14.4	24.6	11.2	5.8	79	8.7	5.4	4.1	9.2
Nkhata Bay	28.4	18.2	29.2	15.5	3.2	80	7.5	5.7	4.4	8.5
<b>KASUNGU ADD</b>										
Kasungu	26.5	13.5	27.5	10.0	4.0	66	7.9	5.6	4.3	8.9
<b>LILONGWE ADD</b>										
Chitedze	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dedza	22.8	12.4	25.2	8.9	5.8	71	8.5	5.5	4.2	9.3
KIA	26.1	13.4	27.9	10.7	5.8	64	9.4	6.1	4.7	9.8
<b>SALIMA ADD</b>										
Nkhotakota	28.4	19.9	29.8	18.1	1.8	68	10.0	6.7	5.2	10.2
Salima	29.1	20.1	30.5	18.5	7.2	63	9.5	7.0	5.6	9.9
<b>MACHINGA ADD</b>										
Makoka	26.2	14.6	27.7	12.0	2.5	73	9.0	5.9	4.5	9.8
Mangochi	30.4	17.5	31.5	16.5	4.3	64	N/A	N/A	N/A	N/A
Monkey Bay	29.5	21.4	30.5	18.1	6.5	61	9.2	7.2	5.7	9.8
Ntaja	28.4	17.7	30.1	15.4	6.1	70	9.1	6.8	5.3	10.1
<b>BLANTYRE ADD</b>										
Bvumbwe	23.7	13.0	25.9	10.9	6.8	74	9.0	5.8	4.5	9.8
Chichiri	25.0	15.8	26.8	13.8	6.5	70	9.0	6.2	4.8	9.8
Chileka	27.7	17.5	29.8	16.4	10.1	61	9.3	7.1	5.6	10.0
Mimosa	27.4	16.8	28.6	15.5	3.2	68	9.0	6.3	4.9	9.8
<b>SHIRE VALLEY ADD</b>										
Ngabu	32.7	20.9	34.5	19.3	1.4	60	10.0	7.5	5.9	10.5

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