



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: 01 – 10 April 2018

Season: 2017/2018

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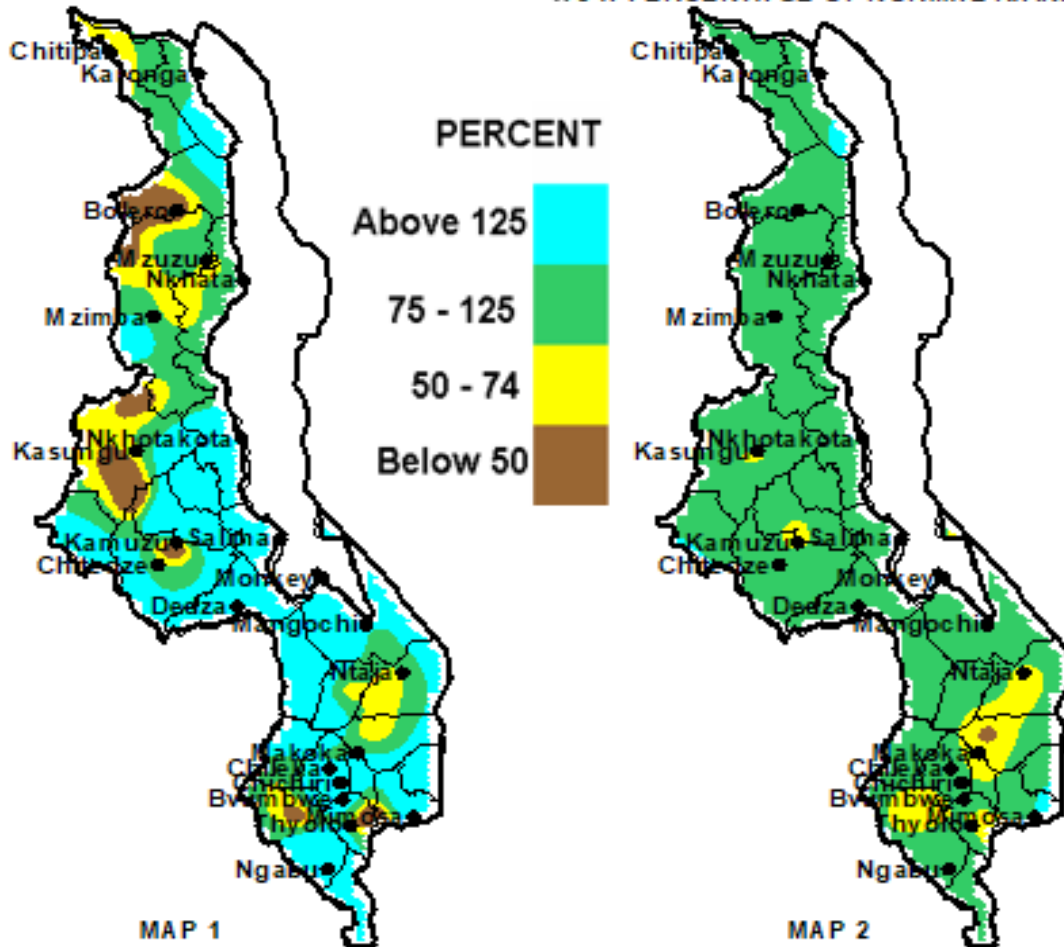
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## HIGHLIGHTS

- Moderate to locally heavy rainfall amounts received over Malawi...
- Maize crop was mostly between drying and harvesting stages ...
- Widespread rainfall expected during the period 11 to 20 April 2018...

10-DAY TOTAL RAINFALL FOR 01 - 10 APRIL 2018  
AS A PERCENTAGE OF NORMAL RAINFALL

CUMULATIVE RAINFALL FROM 1 OCT 2017 TO 10 APRIL 2018  
AS A PERCENTAGE OF NORMAL RAINFALL



Rainfall Maps by 10 April 2018

## 1.0 WEATHER SUMMARY

During the period 01 to 10 April 2018, the Inter Tropical Convergence Zone (ITCZ) was over Tanzania while the Easterly waves were active over most parts of Malawi. Hence scattered moderate to locally heavy rainfall was experienced over most parts of Malawi.

### 1.1 RAINFALL SITUATION

During the period 01 to 10 April 2018, moderate to locally heavy rainfall amounts were reported over Malawi. Many places reported cumulative rainfall amounts in excess of 100mm and these had included Lujeri Tea Estate in Mulanje which had accumulated 454mm, Vinthukutu Agric in Karonga had 279mm, Lifuwu Agric in Salima reported 201mm, Chintheche Agric in Nkhata Bay recorded 183mm, Nkhotakota Met received 155mm, Baka Research Station in Karonga had 126mm, Nkhata Bay Met reported 120mm, Mpemba Agric in Blantyre reported 112mm, Mulanje Agric had 109mm and Chichiri Met Office in Blantyre received 108mm. Otherwise several places in Malawi had received significant rainfall amounts. 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 10 April 2018 is 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 Malawi (Yellow colour on Map 2) due to low rainfall and prolonged dry spells that were experienced in January 2018.

### 1.3 AIR TEMPERATURE

Warm to hot temperatures were experienced over Malawi during the period 01 to 10 April 2018. Mean daily maximum temperatures ranged from 24°C at Dedza to 32°C at Mangochi while daily average minimum temperatures were between 15°C and 22°C. During the same period the highest temperature was 34°C reported at Mangochi. On the otherhand the lowest temperature was 14.6°C recorded at Bvumbwe. Details are in Table 2.

### 1.4 WIND SPEEDS

During the first ten days of April 2018 most parts of Malawi continued to experience light to moderate wind speeds. The daily average wind speeds measured at a height of two metres above the ground level across the Malawi had ranged between 1.8km per hour at Makoka to 10.8km per hour at Chitipa. More details are in Table 2.

### 1.5 RELATIVE HUMIDITY

During the period 01 to 10 April 2018, air over Malawi was moist. Daily average relative humidity values recorded from various weather stations in Malawi had ranged from 65% at Monkey Bay to 84% at Nkhata Bay. Details are on the Table 2.

### 1.6 SUNSHINE HOURS

During the period 01 to 10 April 2018, Malawi had experienced an increase in cloud cover. The daily average values of sunshine hours at most places were between 6 and 7 hours per day. Consequently, the amount of solar radiation received over most areas was between 8 and 9 calories per square centimeter per day. More details are in Table 2.

## 2. AGROMETEOROLOGICAL ASSESSMENT

Moderate rainfall amounts continued to falling over Malawi during the period 01 to 10 April 2018. These rains supported growth and development of roots and tubers as well as the late planted crops. These rains had also 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. Field reports had indicated that the household food security had improved because some farming households had started harvesting matured crops. Crops that had reached physiological maturity required more sunshine hours for harvesting and proper drying.

## 3. PROSPECTS FOR 2017/2018 RAINFALL SEASON

The Sea surface temperatures in the east-central tropical Pacific Ocean have remained at weak La Niña levels, while most atmospheric indicators are now consistent with an imminent decay of the La Niña event. Most climate models indicate that between April and June 2018 a transition from La Niña to ENSO-neutral conditions is likely. 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 11 TO 20 APRIL 2018

Models for short and medium range weather forecast suggest that during the period 11 to 20 April 2018 Easterly waves will remain very active over Malawi. Therefore, expect scattered to widespread moderate to locally heavy rainfall during the period. These rains are likely to facilitate planting, growth and development of tuber crops and will also improve irrigable land, replenish soil moisture reserves, water bodies and improve pasture availability for grazing of livestock.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR 01 TO 10 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.	125.6	140.5	89	1132.3	1200.4	94	7
	Chitipa Met	26.2	37.9	69	859.6	918.4	94	6
	Karonga Met.	93.2	88.0	106	882.4	895.7	99	9
	Lupembe Agric	93.5	63.1	148	876.4	773.9	113	3
	Vinthukutu Agric	279.1	112.7	248	1405.8	993.7	141	7
MZUZU	Bolero Met	3.4	18.2	19	535.6	614.1	87	2
	Bwengu Agric.	15.0	21.7	69	350.9	733.9	48	3
	Chikangawa forest	28.4	70.3	40	730.4	1039.0	70	4
	Chintheche Agric	182.6	146.7	124	1752.1	1472.3	119	3
	Ekwendeni Agric.	29.7	42.2	70	508.4	779.8	65	3
	Mbawa Res. Stn	30.0	16.5	182	847.2	781.6	108	3
	Mzimba Met	24.9	23.5	106	819.9	862.3	95	3
	Mzuzu Met.	63.0	89.2	71	892.2	965.4	92	8
	NkhataBay Met.	119.9	133.0	90	1309.7	1215.9	108	7
	Rumpho Boma	9.3	30.0	31	672.1	706.8	95	1
Zombwe Agric	52.6	36.0	146	789.2	716.9	110	4	
KASUNGU	Dowa Agric	55.1	24.5	225	780.8	859.9	91	6
	Kaluluma DTC	4.8	24.6	20	343.6	789.3	44	2
	Kasungu Met	15.8	17.6	90	681.2	760.8	90	5
	Lisasadzi	8.0	15.8	51	442.2	792.1	56	3
	Malomo Agric	46.6	16.3	286	716.2	808.4	89	4
	Madisi Agric	2.0	16.3	12	865.7	812.7	107	1
	Mchinji Boma	60.1	29.3	205	1266.9	977.9	130	6
	Mponela Agric	52.9	11.6	456	559.4	779.0	72	4
	Mwimba Research	5.4	15.8	34	431.6	856.2	50	1
SALIMA	Ntchisi Boma	68.2	47.4	144	919.0	1189.0	77	5
	Dwangwa Illovo.	95.4	92.8	103	986.1	1228.9	80	6
	Lifuwu	201.2	46.3	435	1219.3	1175.2	104	7
	Nkhotakota Met	155.2	97.1	160	1406.0	1341.7	105	5
LILONGWE	Salima Met	74.0	44.8	165	1080.4	1168.2	92	7
	Chileka Namitete	48.1	27.9	172	1068.7	889.5	120	5
	Dzonzi Forest	92.9	20.5	453	801.8	952.3	84	5
	K.I.A Met	5.2	19.6	27	546.9	830.4	66	4
	Mlangeni Njolomole	42.5	24.3	175	693.7	939.5	74	3
	Nathenje Agric	44.4	44.0	101	912.6	840.3	109	4
	Ntcheu - Nkhande	80.5	19.0	424	951.8	1011.0	94	5
	Dedza Met	98.9	22.5	440	778.4	967.5	80	7
	MACHINGA	Balaka Agric	21.8	21.4	102	738.9	830.9	89
Chikweo Agric.		42.0	27.1	155	839.4	1028.2	82	5
Chingale Agric		15.8	25.9	61	398.0	889.1	45	3
Mpilipili (Makanjila)		35.7	18.5	193	546.5	864.0	63	6
Makoka Met		46.6	30.7	152	565.4	935.0	60	7
Mangochi Met.		29.6	20.2	147	791.9	683.5	116	4
Monkey Bay Met.		39.0	6.5	600	728.7	558.1	131	4
Namiasi Agric		12.3	4.6	267	644.3	737.6	87	1
Namwera Agric		55.7	34.5	161	958.1	1006.7	95	4
Ntaja Met.		21.4	31.2	69	578.4	858.4	67	2
Phalula Agric		31.2	14.3	218	707.2	799.1	88	4
Toleza Farm		35.0	27.7	126	988.0	833.8	118	6
Zomba Agric		17.9	42.0	43	770.9	1153.8	67	2
BLANTYRE	Bvumbwe Met.	40.2	30.7	131	943.7	1046.8	90	1
	Chichiri Met.	108.2	29.0	373	881.0	1057.5	83	5
	Chileka Airport	14.5	20.0	73	766.8	846.9	91	3
	Chiradzulu Agric	39.8	22.4	178	561.9	941.9	60	5
	Chizunga Factory	23.4	54.5	43	754.0	1257.8	60	2
	Lujeri Tea Estate	454.2	106.5	426	2771.6	1850.5	150	9
	Masambanjati Agric	39.4	51.7	76	934.6	1240.3	75	5
	Mimosa Met.	96.8	63.8	152	1281.9	1331.8	96	8
	Mpemba Agric	111.9	32.1	349	886.9	1072.6	83	4
	Mulanje Boma	109.1	82.2	133	1737.2	1606.3	108	3
	Mwanza Boma	30.7	34.9	88	405.5	971.8	42	3
	Neno Agric	71.8	36.3	198	1363.0	1047.4	130	3
	Satemwa Tea Est	49.0	46.5	105	759.1	1024.9	74	4
	Thuchila Agric	10.3	25.5	40	801.3	840.6	95	2
	SHIRE VALLEY	Chikwawa Boma	0.0	21.2	0	345.5	735.2	47
Kasinthula Res. Stn.		1.1	18.1	6	316.9	685.3	46	1
Nchalo Sucoma		60.0	18.9	317	752.3	624.3	121	1
Nsanje Boma		44.2	21.7	204	865.0	1022.2	85	2
Chikwawa Boma		0.0	21.2	0	345.5	735.2	47	0
Kasinthula Res. Stn.	1.1	18.1	6	316.9	685.3	46	1	

**TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 01 TO 10 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	26.6	17.1	27.1	15.9	10.8	73	7.4	6.7	5.3	9.4
Karonga	30.0	20.5	30.3	20.0	4.7	74	7.9	7.1	5.6	9.8
<b>MZUZU ADD</b>										
Bolero	28.9	17.2	30.0	17.2	3.2	66	7.7	6.2	4.8	9.0
Mzimba	26.9	17.1	28.3	16.1	4.7	69	7.4	6.0	4.7	8.9
Mzuzu	24.8	16.8	25.7	15.0	5.8	81	7.4	5.7	4.4	8.8
Nkhata Bay	29.4	20.7	31.6	19.7	2.9	84	7.2	6.1	4.8	8.7
<b>KASUNGU ADD</b>										
Kasungu	26.9	17.5	27.0	16.6	5.4	74	7.5	6.1	4.7	9.0
<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	24.0	15.0	25.1	14.9	5.4	70	6.6	5.5	4.3	8.4
KIA	25.9	16.9	27.1	15.5	5.0	76	6.6	5.6	4.4	8.4
<b>SALIMA ADD</b>										
Nkhotakota	28.8	21.0	30.6	20.2	2.5	80	6.9	6.1	4.8	8.6
Salima	30.0	21.2	31.6	20.1	5.0	75	6.8	6.3	5.0	8.6
<b>MACHINGA ADD</b>										
Makoka	27.6	17.7	29.6	16.6	1.8	78	7.3	5.9	4.6	8.9
Mangochi	31.9	21.7	34.0	21.0	2.9	66	8.2	7.1	5.6	9.5
Monkey Bay	30.6	22.3	31.8	21.6	5.4	65	8.2	7.2	5.7	9.5
Ntaja	29.4	19.8	31.3	19.2	4.3	72	5.6	5.9	4.7	8.1
<b>BLANTYRE ADD</b>										
Bvumbwe	25.6	15.3	27.3	14.6	6.1	78	6.7	5.6	4.4	8.6
Chichiri	26.5	18.1	29.1	17.3	4.7	78	6.7	5.8	4.6	8.6
Chileka	29.0	19.7	31.6	18.6	7.9	72	6.6	6.4	5.1	8.5
Mimosa	29.2	19.1	31.2	18.0	2.9	68	6.8	6.2	4.9	8.7
<b>SHIRE VALLEY ADD</b>										
Ngabu	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**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