



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 – 31 March 2018

Season: 2017/2018

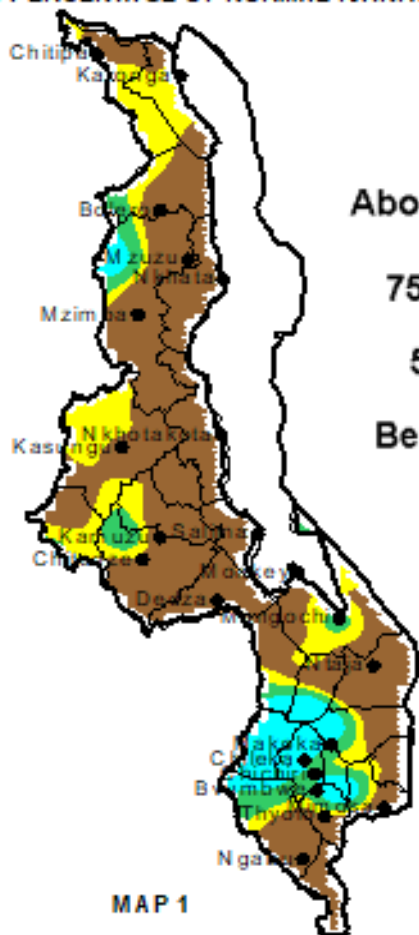
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## HIGHLIGHTS

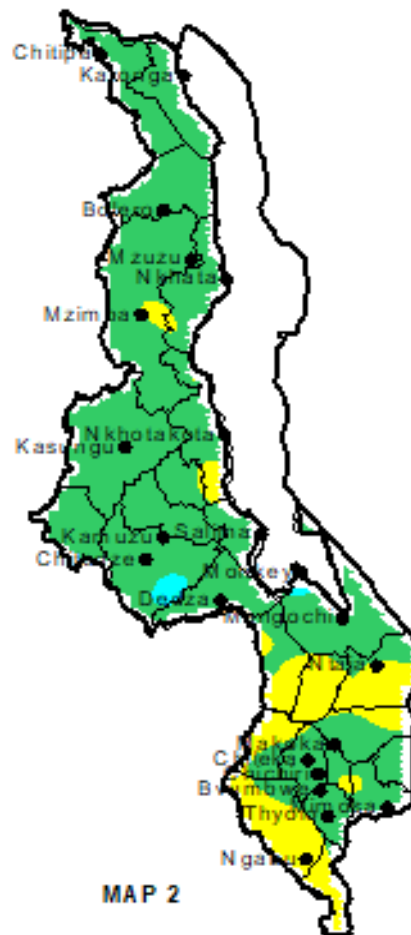
- Light to moderate and below average rainfall amounts received over Malawi...
- Maize crop was mostly between maturity and harvesting stages ...
- More rainfall expected over Malawi during the period 01 to 10 April 2018...

10 - DAY TOTAL RAINFALL FOR 21 - 31 MARCH 2018  
AS A PERCENTAGE OF NORMAL RAINFALL

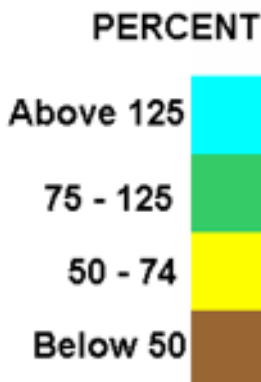


MAP 1

CUMULATIVE RAINFALL FROM 1 OCT 2017 TO 31 MARCH 2018  
AS A PERCENTAGE OF NORMAL RAINFALL



MAP 2



Rainfall Maps by 31 March 2018

## 1.0 WEATHER SUMMARY

During the period 21 to 31 March 2018, the major rain bearing systems for Malawi namely Congo Airmass and the Inter Tropical Convergence Zone (ITCZ) had relaxed and fairly moist Easterly air mass had covered most parts of Malawi. As a result, fairly scattered light to moderate and mostly below average rainfall amounts were reported over Malawi (Yellow and Brown Colours on Map 1).

### 1.1 RAINFALL SITUATION

During the period 21 to 31 March 2018, light to moderate rainfall amounts were experienced over Malawi. Very few rainfall stations had reported cumulative rainfall amounts in excess of 50mm and these included Thuchila Agric in Mulanje which had accumulated 93mm. Euthini Agric in Mzimba had 86mm, Neno Agric reported 83mm, Phalula Agric in Balaka received 81mm, Baka Research Station in Karonga had 79mm, Mpemba Agric in Blantyre reported 72mm, Lupembe Agric in Karonga 70mm, Mwanza Boma 69mm, Karonga Met 65mm, Satemwa Tea Estate in Thyolo had 56mm, Chelinda (Nyika) received 53mm and Dwangwa recorded 51mm. Otherwise several places in Malawi had received below average cumulative rainfall amounts with poor distribution as depicted by less number of rainy days. More details are in Table 1 and Map 1.

The spatial distribution of cumulative rainfall amounts since the 2017/18 rainfall season started in October 2017 up to 31 March 2018 is shown in Map 2. The map shows that average cumulative rainfall amounts (Green colour) have been received over most part of Malawi. 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 continued to prevail over Malawi during the period 21 to 31 March 2018. Mean daily maximum temperatures ranged from 25°C at Dedza to 33°C at Mangochi while daily average minimum temperatures had ranged from 15°C to 23°C. During the same period the highest temperature was 34°C reported at Mangochi. On the otherhand the lowest temperature was 12°C recorded at Bvumbwe. Details are in Table 2.

### 1.4 WIND SPEEDS

During the last ten days of March 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 from 1.8km per hour at Makoka to 9.4km per hour at Chitipa. More details are in Table 2.

### 1.5 RELATIVE HUMIDITY

During the period 21 to 31 March 2018, air over Malawi was generally moist. Daily average relative humidity values recorded from various weather stations in Malawi had ranged from 63% at Monkey Bay to 84% at Makoka. Details are on the Table 2.

### 1.6 SUNSHINE HOURS

During the last ten days of March 2018, Malawi had experienced more sunshine hours. The daily average values of sunshine hours had ranged between 6 and 9 hours per day. Consequently, the amount of solar radiation received over most areas was between 8 and 10 calories per square centimeter per day. More details are in Table 2.

## 2. AGROMETEOROLOGICAL ASSESSMENT

Light to moderate rainfall that continued to falling in some parts of Malawi during the period 21 to 31 March 2018 were supportive to 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 communal grazing of livestock. On the other hand, the wet weather had hampered harvesting and drying of matured crops.

Maize crop had ranged from maturity to drying and harvesting stages. Field reports have indicated that the household food security situation has improved because some farm families have 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 01 TO 10 APRIL 2018

Models for short and medium range weather forecast suggest that during the period 01 to 10 April 2018 Easterly waves will remain active over most parts of Malawi. Therefore, expect fairly scattered 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 communal grazing of livestock.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR 21 TO 31 MARCH 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.	79.4	188.6	42	1006.7	1059.9	95	5	
	Chitipa Met	24.1	52.8	46	795.3	880.5	90	6	
	Karonga Met.	65.1	114.0	57	789.2	807.7	98	4	
	Lupembe	70.0	89.4	78	782.9	710.8	110	1	
	Vinthukutu Agric	13.6	122.5	11	1126.7	881.0	128	3	
MZUZU	Bolero Met	1.6	29.6	5	532.2	595.9	89	1	
	Chikangawa forest	28.4	95.2	30	702.0	968.7	72	4	
	Chelinda ( Nyika)	53.0	89.1	59	1013.5	1071.7	95	2	
	Chintheche Agric	49.4	190.0	26	1569.5	1325.6	118	2	
	Ekwendeni Agric.	1.1	45.3	2	443.9	737.6	60	1	
	Euthini Agric.	86.0	44.6	193	196.5	725.5	27	3	
	Mbawa Res. Stn	7.6	35.8	21	817.2	765.1	107	2	
	Mzimba Met	7.7	48.2	16	795.0	838.8	95	3	
	Mzuzu Met.	5.8	100.9	6	829.2	876.2	95	5	
	NkhataBay Met.	21.1	167.0	13	1189.8	1082.9	110	4	
	Rumpho Boma	5.4	38.4	14	662.8	676.8	98	1	
	Zombwe Agric	0.0	56.7	0	580.9	680.9	85	0	
	KASUNGU	Dowa Agric	0.0	41.3	0	725.7	835.4	87	0
		Kaluluma DTC	21.4	27.8	77	338.8	764.7	44	3
Kasungu Met		22.3	31.1	72	665.4	743.2	90	1	
Lisasadzi		0.0	23.5	0	434.2	776.3	56	0	
Malomo Agric		9.8	30.8	32	669.5	792.1	85	3	
Madisi Agric		20.4	27.5	74	863.7	796.4	108	2	
Mchinji Boma		48.1	50.6	95	1069.9	948.6	113	5	
Mponela Agric		2.7	27.9	10	506.5	767.4	66	1	
Ntchisi Boma		10.5	67.5	16	850.8	1141.6	75	2	
SALIMA	Dwangwa	51.0	143.8	35	890.7	1136.1	78	5	
	Lifuwu	1.0	71.7	1	1018.1	1128.9	90	1	
	Nkhotakota Met	21.2	142.5	15	1250.8	1244.6	100	5	
	Salima Met	21.9	71.6	31	1006.4	1123.4	90	3	
LILONGWE	Chileka Namitete	8.5	34.6	25	1020.6	861.6	118	1	
	Dzonzi Forest	21.2	38.5	55	708.9	931.8	76	3	
	K.I.A Met	7.4	47.3	16	541.7	810.8	67	2	
	Kasiya Agric	40.0	36.2	110	566.8	909.2	62	1	
	Nathenje Agric	5.2	38.5	14	868.2	796.3	109	1	
	Ntcheu - Nkhande	22.0	45.0	49	871.3	992.0	88	3	
	Dedza Met	3.7	44.3	8	679.5	945.0	72	2	
MACHINGA	Balaka Township	4.3	32.8	13	571.7	809.5	71	1	
	Chikweo Agric.	7.6	55.8	14	612.4	1001.1	61	1	
	Chingale Agric	44.4	30.1	148	382.2	863.2	44	4	
	Mpilipili (Makanjila)	44.0	35.0	126	510.8	845.5	60	2	
	Makoka Met	39.5	32.5	122	518.8	904.3	57	4	
	Mangochi Met.	30.0	33.2	90	762.3	663.3	115	3	
	Monkey Bay Met.	6.2	13.4	46	689.7	551.6	125	1	
	Namiasi Agric	12.8	23.5	54	632.0	733.0	86	2	
	Namwera Agric	17.0	51.7	33	902.4	972.2	93	2	
	Ntaja Met.	11.2	48.6	23	557.0	827.2	67	3	
	Phalula Agric	80.5	27.2	296	676.0	784.8	86	2	
	Toleza Farm	20.0	29.3	68	953.0	806.1	118	1	
	Zomba Agric	34.8	58.2	60	753.0	1111.8	68	1	
BLANTYRE	Bvumbwe Met.	32.9	57.9	57	903.5	1016.1	89	5	
	Chichiri Met.	20.1	15.3	131	772.8	1028.5	75	4	
	Chileka Airport	50.8	44.5	114	752.3	826.9	91	6	
	Chiradzulu Agric	24.4	44.5	55	522.1	919.5	57	3	
	Chizunga Factory	30.6	71.5	43	730.6	1203.3	61	3	
	Mimosa Met.	9.2	81.3	11	1185.1	1268.0	93	4	
	Mpemba Vet	71.6	52.1	137	775.0	1040.5	74	6	
	Mulanje Boma	33.1	125.0	26	1628.1	1524.1	107	2	
	Mwanza Boma	69.1	35.2	196	286.0	936.9	31	3	
	Neno Agric	83.0	42.6	195	1291.2	1011.1	128	5	
	Satemwa Tea Est.	56.0	61.2	92	511.4	978.4	52	6	
	Thuchila Agric	92.9	40.2	231	791.0	815.1	97	5	
	SHIRE VALLEY	Chikwawa Boma	22.9	33.9	68	345.5	714.0	48	1
		Kasinthula Res. Stn.	9.6	21.2	45	315.8	667.2	47	1
Makhanga Met		0.0	25.5	0	411.8	676.0	61	0	
Nchalo Sucoma		0.0	26.6	0	622.3	605.4	103	0	
Ngabu Met.		0.0	35.1	0	362.1	704.8	51	0	
Nsanje Boma		0.0	57.7	0	820.8	1000.5	82	0	

**TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 21 TO 31 MARCH 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	27.2	17.2	28.2	16.2	9.4	73	7.6	6.5	5.2	9.3
Karonga	31.0	21.2	31.8	20.0	4.3	69	8.8	7.4	5.9	10.1
<b>MZUZU ADD</b>										
Bolero	29.2	15.4	30.0	16.0	2.9	64	8.5	6.4	5.0	9.7
Mzimba	27.9	16.9	29.3	15.7	3.6	71	7.4	6.1	4.8	9.0
Mzuzu	26.3	19.0	27.1	15.1	5.8	83	9.4	6.8	5.2	10.3
Nkhata Bay	31.6	21.1	32.7	20.4	2.5	80	8.6	7.1	5.6	9.7
<b>KASUNGU ADD</b>										
Kasungu	27.5	18.0	28.0	17.2	5.0	72	8.5	6.6	5.2	9.7
<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	25.1	15.7	25.9	13.9	7.2	73	8.0	6.2	4.8	9.5
KIA	27.2	16.6	28.2	14.8	4.3	73	8.1	6.3	4.9	9.5
<b>SALIMA ADD</b>										
Nkhotakota	30.2	22.2	31.6	20.6	2.2	74	7.2	6.7	5.3	8.9
Salima	31.3	20.2	32.5	20.0	4.3	72	7.5	6.6	5.3	9.1
<b>MACHINGA ADD</b>										
Makoka	31.9	20.0	30.6	15.6	1.8	84	7.5	6.6	5.2	9.2
Mangochi	32.9	22.1	34.0	20.0	2.5	64	8.8	7.5	6.0	10.0
Monkey Bay	31.4	22.9	32.1	20.8	4.7	63	8.9	7.6	6.1	10.0
Ntaja	30.5	20.5	31.8	17.9	4.7	74	8.6	7.2	5.7	9.9
<b>BLANTYRE ADD</b>										
Bvumbwe	26.3	15.8	29.1	12.4	5.8	79	6.0	5.5	4.3	8.2
Chichiri	27.9	18.9	30.0	18.1	4.3	75	6.5	6.0	4.7	8.5
Chileka	30.0	20.2	32.0	18.6	8.3	70	7.0	6.8	5.4	8.8
Mimosa	30.2	19.9	32.2	18.0	2.9	64	6.5	6.3	5.0	8.5
<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