



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 2019

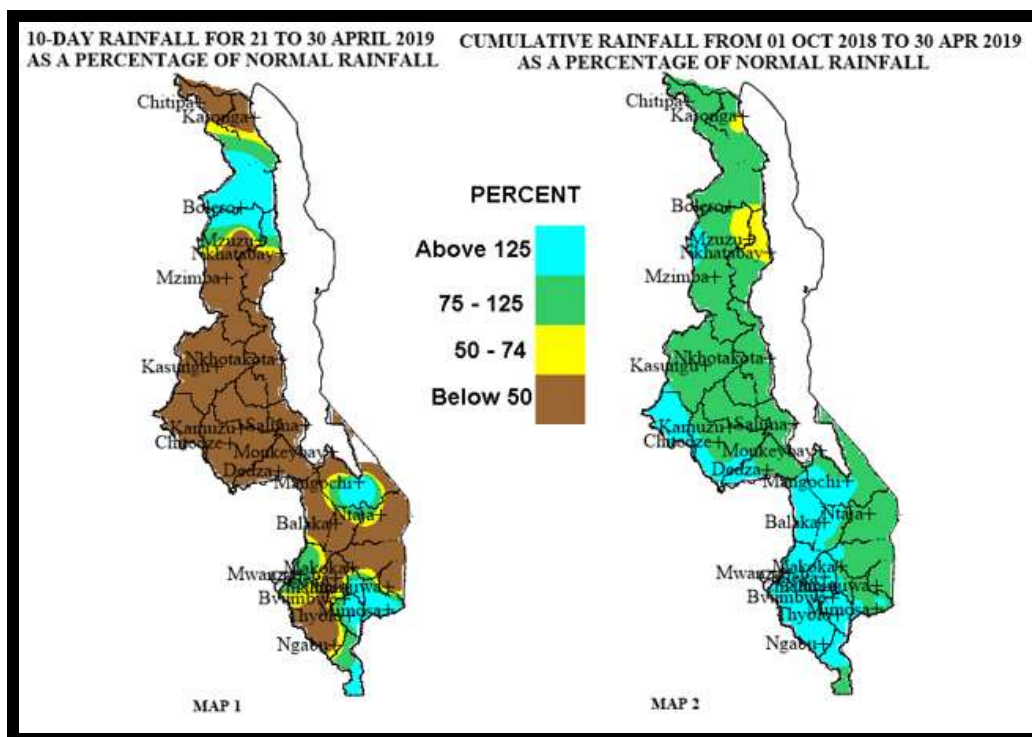
Season: 2018/2019

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## HIGHLIGHTS

- Drier conditions prevailed over most areas during the dekad...
- Average to above average seasonal rainfall amounts experienced over most areas...
- Normal cumulative rainfall amounts expected over winter months...



Rainfall Maps for 21 to 30 April 2019

## 1.0 WEATHER SUMMARY

During the period 21 to 30 April 2019, as the 2018/2019 rainfall season came to an end, relatively moist and unstable Easterly airmass influenced weather over more areas of Malawi while Tropical Cyclone Kenneth enhanced rainfall activities over some areas of northern Malawi. As a result, selected areas like Rumphu, parts of Karonga and parts of Nkhata Bay as well as Nsanje, Mulanje, and parts of Mangochi, received normal to above normal rainfall amounts (green and light blue colours on Map 1) while most areas over Malawi received below normal rainfall amounts, with central areas being driest (brown and yellow colours on Map 1)

### 1.1 RAINFALL SITUATION

During the period 21 to 30 April 2019, moderate to locally heavy rainfall amounts were recorded over selected northern and southern areas of Malawi. The ten-day total rainfall amounts were higher than the long-term average rainfall amounts for the period over these few areas while most areas recorded ten-day total rainfall amounts that were below the long-term average rainfall amounts (brown and yellow colours in Map1). Areas that had recorded cumulative rainfall amounts of at least 10mm included Lujeri Tea Estate in Mulanje which recorded 119mm, Mulanje Boma recorded 91.6mm, Chelinda in Rumphi recorded 58.7mm, Nkhata Bay Met station recorded 44.5mm, Vinthukutu Agriculture in Karonga recorded 42.6mm, Mzuzu Met station recorded 37.3mm, Satemwa Tea Estate in Thyolo recorded 29.9mm, Nsanje Boma recorded 29.5mm, Thyolo Met station recorded 29.2mm, Bwengu Agriculture in Rumphi recorded 26.5mm, Mangochi Met station recorded 18.2mm, Chiradzulu and Neno Agriculture recorded 18mm each, while Thuchila Agriculture recorded 16.7mm, Bvumbwe Met station recorded 15.4mm, Bolero Met station recorded 13mm, Euthini Agriculture recorded 11.8mm, Mwanza Boma recorded 11.3mm, Kasinthula Research Station recorded 10.8mm and Chikangawa forest recorded 10mm. More details in Table 1.

Map 2 indicates the spatial cumulative rainfall distribution since the start of the 2018/2019 rainfall season in October 2018, up to 30 April 2019. The map generally indicates that most areas over Malawi have received normal to above normal seasonal rainfall amounts (green and light blue colours) with isolated cases of below normal seasonal rainfall amounts over parts of Karonga, Nkhata Bay and Mzimba Districts in the north as shown by Yellow colour on Map 2.

### 1.3 AIR TEMPERATURE

Generally warm to hot temperatures were experienced over Malawi during the period 21 to 30 April 2019. Mean daily maximum temperatures had ranged from 23.0°C at Bvumbwe in Thyolo district to 31.9°C at Ngabu in Chikwawa district while the mean daily minimum temperatures had ranged from 12.8°C at Dedza to 21.2°C at Ngabu in Chikwawa and Monkey Bay in Mangochi. Details in Table 2.

### 1.4 WIND SPEEDS

During the period 21 to 30 April 2019 most parts of Malawi continued to experience 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 Ngabu in Chikwawa district to 9.4 km per hour at Salima Met station. More details in Table 2.

### 1.5 RELATIVE HUMIDITY

During the period 21 to 30 April 2019, air over Malawi was relatively moist. Daily average relative humidity values recorded from various weather stations in Malawi had ranged from 51% at Ngabu in Chikwawa district to 88% at Mimoso in Mulanje district. Details as in Table 2.

### 1.6 SUNSHINE HOURS

Generally medium to long hours of bright sunshine were observed over Malawi during the period 21 to 30 April 2019. The daily values had ranged from 7.3 hours per day at Dedza Met station to 8.8 hours per day at Salima Met station and consequently the amount of Solar Radiation had ranged from 8.7 to 10.3 cal/cm<sup>2</sup>/day. For details see Table 2.

## 2. AGROMETEOROLOGICAL ASSESSMENT

During the period under review, drier conditions prevailed over most areas of Malawi with wet conditions experienced over few northern and southern areas. Rainfall experienced over northern provided moisture to support growth and development of rice.

Furthermore, the rains supported the growth and development of pastures for livestock production as well as boosting soil moisture reserves for growth and development of root and tuber crops like potatoes, it also provided moisture for winter cropping. In some cases, the rains disrupted the drying of matured crops and harvesting of fully dried crops.

Basing on field reports, good crop yields and production are anticipated this season. However, in some southern areas and northern districts of Karonga and Rumphi crops have been negatively affected by flooding which occurred in early March and mid April, respectively while in some districts reported cases of leaching due to continuous heavy rains are likely to cause localised reduction in the 2018/19 production.

## 3. FORECAST FOR MAY - JULY 2019

A series of high pressure systems are expected to periodically induce cool and moist air from the Indian Ocean into Malawi during the winter season. Therefore, during the months of May and June 2008 occasional winter rains are expected particularly over highlands and along the Lakeshore.

**NOTE: THIS IS THE LAST 10—DAY BULLETIN FOR THE 2018/2019 RAINFALL SEASON**

TABLE 1: 10-DAY RAINFALL TOTALS AT SELECTED STATIONS FOR 21 TO 30 APRIL 2019

ADD	STATION NAME	ACTUAL DEKADAL TOTAL RAINFALL (mm)	DEKADAL NORMAL EXPECTED RAINFALL (mm)	ACTUAL TOTAL AS PERCENTAGE OF NORMAL (EXPECTED RAINFALL)	ACTUAL TOTAL RAINFALL TO DATE (mm)	NORMAL (EXPECTED) RAINFALL TO DATE (mm)	ACTUAL TO DATE AS PERCENTAGE OF NORMAL (EXPECTED RAINFALL)	RAINY DAYS ≥.3mm
KARONGA	Baka Res. Stn.	0	41	0	858.7	1317.8	65	0
	Chitipa Met	0.7	4.2	17	995.1	940	106	1
	Karonga Met.	0.3	25.9	1	849.9	980.8	87	1
	Lupembe	6	12.7	47	604.7	822.6	74	2
	Vinthukutu A	42.6	53.3	80	1237.9	1120.5	110	3
MZUZU	Bolero Met	13	4.2	310	479.7	629.1	76	2
	Bwengu Agric	26.5	7.4	358	533.1	758.8	70	1
	Chikangawa	10	22	45	921.4	1090.5	84	2
	Chelinda	58.7	28.7	205	1121	1194.3	94	4
	Chintheche A	0	82.6	0	1464.1	1683.4	87	0
	Emfeni Agric	0	4.4	0	642.3	806	80	0
	Ekwendeni A	4.8	9.4	51	563.7	807.2	70	1
	Euthini Agric.	11.8	14	84	1096.7	775.4	141	2
	Mbawa Res. S	0	7.3	0	906.9	801.2	113	0
	Mzimba Met	0.1	9.1	1	906.2	885.3	102	0
	Mzuzu Met.	37.3	43.6	86	707.3	1074.6	66	5
	NkhataBay M	44.5	81.9	54	867.6	1393.8	62	5
	Rumphi Boma	0	8.3	0	610.8	728.3	84	0
	Zombwe Agri	0	8.5	0	522.9	744.4	70	0
KASUNGU	Dowa Agric	0.5	2.8	18	928.9	872.3	106	1
	Kasungu Met	0	4	0	660.5	770.4	86	0
	Lisasadzi	0	6.4	0	798.4	811.9	98	0
	Malomo Agri	0	14.9	0	984.1	825.8	119	0
	Madisi Agric	2	3.6	56	887.9	827.9	107	1
	Mchinji Boma	0	10.2	0	1479.1	1003.4	147	0
	Mkanda Met	0	7.1	0	1214.5	863.8	141	0
	Mponela Agri	0	2.6	0	776.5	786.9	99	0
	Mwimba Rese	0	2.2	0	831.8	865.2	96	0
	Ntchisi Boma	0	12.1	0	1041.1	1225.9	85	0
	LILONGWE	Chileka Namit	0	13.9	0	1336.3	921.2	145
Chitedze Met.		0	6.5	0	780.8	874.5	89	0
K.I.A Met		0	6.1	0	902	838.1	108	0
Nathenje Agri		0	13.2	0	1106.5	865	128	0
Ntcheu - Nkha		0	7.2	0	1371.8	1035	133	0
Dedza RTC		0.3	5.1	6	1174.2	979	120	1
SALIMA	Dwangwa	0	33.3	0	1108.7	1320.4	84	0
	Lifuwu	0	11.7	0	1153.6	1228.3	94	0
	Nkhotakota M	0.1	34.5	0	1487.5	1432.3	104	0
	Salima Met	0	9.2	0	1093.9	1205	91	0
	Chancellor Co	5	11	45	943.8	1268.8	74	3
	Makoka Met	1.9	10.4	18	1104.1	959.5	115	2
	Mangochi Me	18.2	5	364	936.1	697.9	134	2
	Monkey Bay	0	1.5	0	704.8	562.9	125	0
	Toleza Farm	1.5	9.8	15	1198.5	860.2	139	1
Zomba RTC	2.2	13.6	16	1078.7	1187.1	91	1	
BLANTYRE	Bvumbwe Me	15.4	16.5	93	1469.8	1082.9	136	3
	Chichiri Met.	8.8	16.7	53	1571.8	1095.3	144	3
	Chileka Airpo	1.1	8.8	13	1222.4	872.4	140	1
	Chiradzulu A	18	11.8	153	1230.8	965.6	127	3
	Lujeri Tea E	119	63	189	2586.7	1983.7	130	5
	Mimosa Met.	53.1	36.9	144	1387.6	1412.3	98	4
	Mpemba Vet	6.4	11.3	57	1777.7	1102.4	161	2
	Mulanje Bo	91.6	29.6	309	2032.8	1688.7	120	3
	Mwanza B	11.3	10.6	107	1433.9	999.1	144	2
	Neno Agric	18	14.5	124	1893.7	1083.1	175	3
	Satemwa Tea	29.9	17.9	167	1750.4	1067.2	164	3
	Thuchila Agr	16.7	7.7	217	1070.6	863.9	124	2
	Thyolo Met	29.2	16.5	177	1412.4	1173.9	120	3
SHIRE VALLEY	Kasinthula R	10.8	10.7	101	990.6	708.4	140	4
	Makhanga M	5.8	5.9	98	1301.2	708.8	184	1
	Nchalo Su	1	8.6	12	928.6	643.1	144	1
	Ngabu Met.	5	11.6	43	953.5	747.9	127	1
	Nsanje Boma	29.5	18.3	161	992.2	1066.7	93	2

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 21 TO 30 APRIL 2019

STATION/ADD	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED Km/hr	RH %	SUN SHINE HOURS	Eo mm per day	Et mm per day	RADIATION cal cm <sup>-2</sup> p/day
KARONGA										
CHITIPA	27.1	17.1	29.7	13.6	8.3	78	8.2	6.8	5.3	10.1
KARONGA	30.4	20.8	30.8	20.1	4.7	73	8.5	7.5	5.9	10.3
MZUZU										
BOLERO	29.6	16.7	31.1	14.2	2.2	66	8.7	6.1	4.7	9.1
MZIMBA	27.7	15.0	29.8	12.3	4.7	65	8.2	5.9	4.6	8.9
MZUZU	24.2	15.6	26.4	11.6	5.3	85	7.5	5.2	4.0	8.4
NKHATA BAY	28.6	19.6	30.0	17.7	4.3	76	8.1	6.1	4.8	8.8
KASUNGU										
KASUNGU	28.5	15.6	31.0	14.2	3.2	67	8.2	5.9	4.6	9.0
LILONGWE										
CHITEDZE	27.6	15.7	29.0	14.0	1.8	68	8.0	5.8	4.5	9.0
DEDZA	23.3	12.8	25.2	11.0	5.4	78	7.3	5.2	4.0	8.7
K I A	26.9	14.5	28.5	12.3	5.0	70	7.9	5.7	4.5	8.9
SALIMA										
NKHOTAKOTA	28.5	20.8	29.4	19.7	4.3	67	8.3	6.5	5.1	9.1
SALIMA	28.9	21.1	30.4	18.5	9.4	66	8.8	7.1	5.6	9.5
MACHINGA										
NTAJA	28.0	18.7	29.9	16.9	5.4	69	8.5	6.6	5.2	9.7
MAKOKA	25.4	15.7	28.3	13.8	5.0	72	7.6	5.7	4.4	8.9
MANGOCHI	29.6	20.5	32.1	19.0	2.9	62	8.2	6.5	5.1	9.2
MONKEY BAY	29.5	21.2	30.8	19.5	7.6	60	7.9	6.9	5.5	8.9
BLANTYRE										
BVUMBWE	23.0	14.9	25.1	13.1	5.4	74	7.5	5.4	4.2	8.9
CHICHIRI	24.6	16.1	25.9	15.0	7.2	71	7.5	5.8	4.5	8.9
CHILEKA	26.9	17.6	28.4	16.4	9.0	65	8.7	6.7	5.3	9.6
MIMOSA	27.0	17.7	29.0	15.0	2.9	88	7.6	5.7	4.4	8.9
SHIRE VALLEY										
NGABU	31.9	21.2	34.0	20.0	1.1	51	8.5	6.8	5.4	9.6

**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