



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 2017

Season: 2016/2017

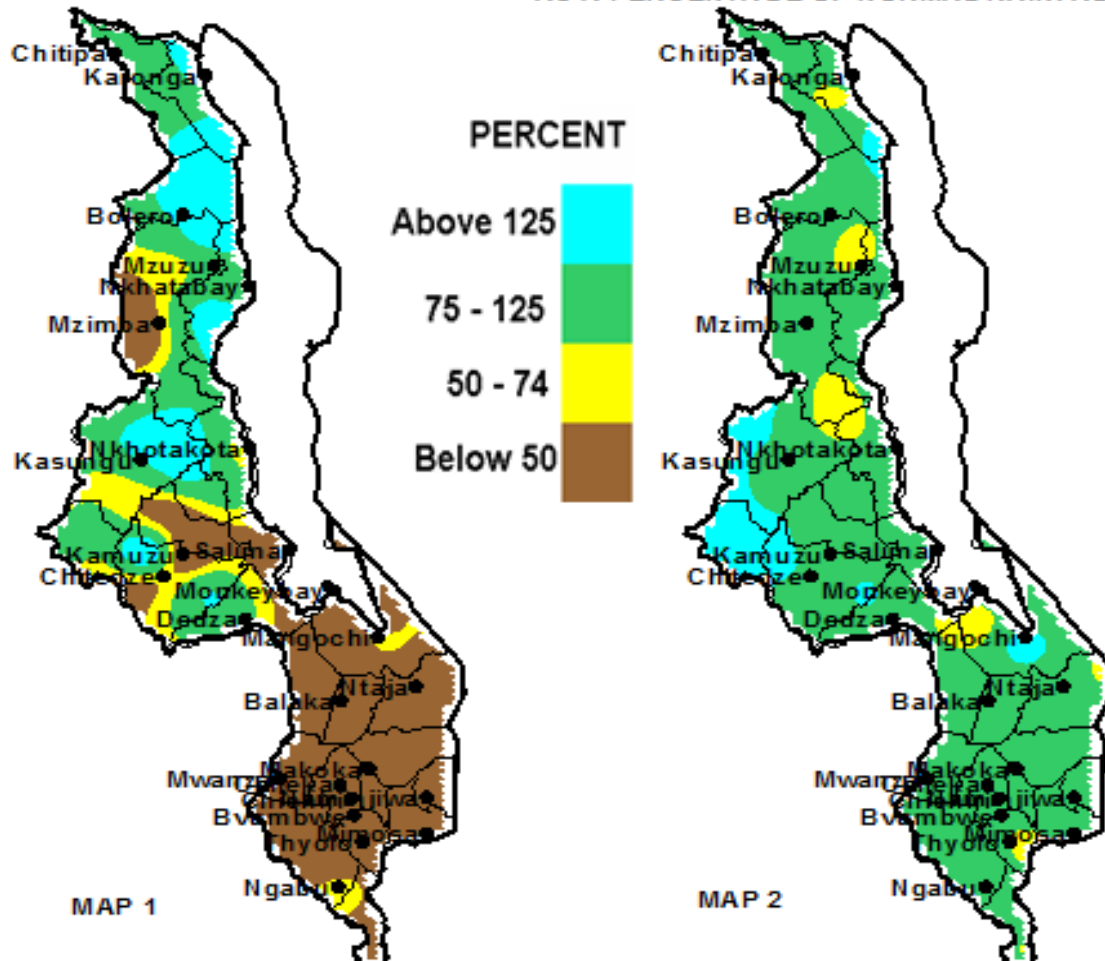
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HIGHLIGHTS

- Heavy rainfall persisted over the north with fairly dry weather in the south...
- Harvesting and drying of matured crops were major agricultural activities....
- Wet weather expected during the period 11 to 20 April 2017...

10-DAY TOTAL RAINFALL FOR 01 - 10 APRIL 2017 AS A PERCENTAGE OF NORMAL RAINFALL CUMULATIVE RAINFALL FROM 1 OCT 2016 TO 10 APRIL 2017 AS A PERCENTAGE OF NORMAL RAINFALL



Rainfall Maps for 01 to 10 April 2017

1.0 WEATHER SUMMARY

During the first ten days of April 2017, Easterly waves were mostly active over northern Malawi while central and Southern was mainly under relatively dry south easterlies. As a result high rainfall amounts were reported mainly over northern Malawi (Green and light Blue colours on Map 1) while central and southern Malawi recorded mainly light rainfall.

1.1 RAINFALL SITUATION

During the first ten days of April 2017, light to moderate rainfall amounts were reported particularly over southern and central Malawi while heavy rainfall persisted over most areas in the north. High cumulative rainfall amounts exceeding 100mm during the ten day period were only confined to a few places in northern lakeshore areas including Vinthukutu Agric in Karonga which had recorded 307mm, Chintheche Agric in Nkhata Bay had 254mm, Baka Research Station in Karonga reported 177mm, 141mm of rainfall was collected at Karonga Met while Dwangwa in Nkhotakota received 106mm. Other areas that had also registered significant rainfall amounts of between 45 and 94mm included Chikangawa Forest 93mm, Mzuzu Met 90mm, Chelinda (Nyika) 86mm, Nkhata Bay Met 68mm, 66mm was recorded at Nathenje Agric in Lilongwe, Bwengu Agric in Mzimba received 50mm, Ntchisi Boma had 48mm and Lupembe Agric in Karonga reported 45mm. Many more stations experienced far below average rainfall situation (Brown colour on Map 1) with some areas reporting nil rainfall throughout the entire period. More details are in Table 1 and Map 1.

Map 2 indicates the spatial cumulative rainfall distribution since the start of the 2016/17 rainfall season in October 2016, up to 10 April 2017. The map generally indicates that Malawi has received normal rainfall (Green colour) with portions of above normal rainfall (light Blue colour) and a few pockets of below normal rainfall (Yellow colour) particularly in northern Malawi.

1.3 AIR TEMPERATURE

Warm to hot temperatures were still experienced over most parts of Malawi during the first ten days of April 2017. Mean daily maximum temperatures had ranged from 23°C at Mzuzu in Mzimba district to 33°C at Ngabu while the mean daily minimum temperatures had ranged from 14°C at Dedza to 23°C at Salima. During the same period the hottest temperature was 34°C still recorded at Ngabu in Chikwawa. The lowest temperature was 11°C recorded at Dedza Met. Details are in Table 2.

1.4 WIND SPEEDS

During the period 21 to 31 March 2017 most parts of Malawi had experienced light to moderate wind speeds. For instance, daily average wind speeds measured at a height of two metres above the ground level across the country had ranged from 1.4km per hour at Ngabu in

Chikwawa district to 9.0km per hour at Chileka Airport in Blantyre district. More details are in Table 2.

1.5 RELATIVE HUMIDITY

In the period 01 to 10 April 2017, air over Malawi was still fairly moist. Daily average relative humidity values recorded from various weather stations in Malawi had ranged from 62% at Ngabu in Chikwawa district to 85% at Mzuzu in Mzimba district. Details are on the Table 2.

1.6 SUNSHINE HOURS

Generally long hours of bright sunshine were observed over Malawi during the first ten days of April 2017. The daily values had ranged from around 5 hours at Mzuzu and Nkhata Bay to around 10 hours at Salima. For details see Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

The heavy rains that persisted over northern Malawi during the first ten days of April 2017 have improved prospects for rice production in Karonga district. The rains apart from replenishing soil moisture reserves, water bodies and improving pasture availability were also supportive to growth and development of roots and tubers crops. On the other hand, low rainfall and dry conditions had supported harvesting and drying of matured crops.

Maize crop had ranged mostly from maturity to drying and harvesting stages. Reports have indicated that the household food security situation continued to improve because some farm families have started harvesting matured crops. Crops that had reached physiological maturity required more sunshine hours for proper drying.

3. PROSPECTS FOR 2016/2017 RAINFALL SEASON

Climate models indicate that neutral conditions are likely to persist through April to June 2017. Neutral conditions mean that neither La Nina nor El Nino will be in effect. Therefore expect normal rainfall between April and June (AMJ) 2017.

4. OUTLOOK FOR 11 TO 20 APRIL 2017

Models for medium range weather forecast suggest that Easterly waves will persist over some parts of Malawi during the period 11 to 20 April 2017. Therefore expect fairly scattered locally heavy rainfall to persist during the period.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR 01 TO 10 APRIL 2017

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.	177.4	140.5	126	847.4	1200.4	71	5	
	Chitipa Met	34.8	37.9	92	832.1	918.4	91	6	
	Karonga Met.	140.6	88.0	160	929.7	895.7	104	5	
	Lupembe	45.0	63.1	71	548.1	773.9	71	2	
	Vinthukutu Agric	306.9	112.7	272	1744.5	993.7	176	9	
MZUZU	Bolero Met	28.6	18.2	157	579.3	614.1	94	5	
	Bwengu Agric.	50.4	21.7	232	513.4	733.9	70	7	
	Chikangawa forest	92.6	70.3	132	810.2	1039.0	78	10	
	Chelinda (Nyika)	85.6	52.3	164	676.6	1124.0	60	8	
	Chintheche Agric	253.6	146.7	173	1944.2	1472.3	132	8	
	Ekwendeni Agric.	24.0	42.2	57	439.1	779.8	56	5	
	Mbawa Res. Stn	2.2	16.5	13	808.4	781.6	103	2	
	Mzimba Met	6.8	23.5	29	608.5	862.3	71	5	
	Mzuzu Met.	90.2	89.2	101	738.6	965.4	77	10	
	NkhataBay Met.	67.9	133.0	51	1046.4	1215.9	86	10	
	Rumpho Boma	18.7	30.0	62	572.3	706.8	81	7	
	Zombwe Agric	27.5	36.0	76	519.0	716.9	72	6	
	KASUNGU	Dowa Agric	3.2	24.5	13	889.4	859.9	103	1
Kasungu Met		32.4	17.6	184	913.5	760.8	120	3	
Lisasadzi		14.7	15.8	93	677.9	792.1	86	3	
Malomo Agric		25.4	16.3	156	733.7	808.4	91	2	
Mchinji Boma		22.5	29.3	77	1595.3	977.9	163	4	
Mponela Agric		3.0	11.6	26	709.0	779.0	91	3	
Mwimba Research		6.4	15.8	41	742.0	856.2	87	1	
Ntchisi Boma		47.6	47.4	100	990.5	1189.0	83	5	
SALIMA	Dwangwa	105.8	92.8	114	999.6	1228.9	81	8	
	Lifuwu	0.9	46.3	2	1427.9	1175.2	122	1	
	Nkhotakota Met	31.3	97.1	32	1097.2	1341.7	82	4	
	Salima Met	0.6	44.8	1	1266.3	1168.2	108	1	
	LILONGWE	Chileka Namitete	9.2	27.9	33	1251.8	889.5	141	2
Chitedze Met.		10.2	29.3	35	923.4	859.0	107	1	
Dzonzi Forest		0.0	20.5	0	887.2	952.3	93	0	
K.I.A Met		0.0	19.6	0	804.5	830.4	97	0	
Kasiya Agric		36.7	19.0	193	1161.3	928.2	125	2	
Mlangeni Njolomole		0.0	24.3	0	963.4	939.5	103	0	
Nathenje Agric		65.5	44.0	149	1138.3	840.3	135	2	
Nicheu - Nkhande		0.0	19.0	0	1047.5	1011.0	104	0	
Dedza Met		18.1	22.5	80	1012.2	967.5	105	3	
MACHINGA		Balaka Agric	0.0	21.4	0	900.0	830.9	108	0
		Chikweo Agric.	0.0	27.1	0	769.3	1028.2	75	0
	Chingale Agric	0.0	25.9	0	759.9	889.1	85	0	
	Mpilipili (Makanjila)	0.0	18.5	0	875.6	864.0	101	0	
	Makoka Met	3.1	30.7	10	916.7	935.0	98	1	
	Mangochi Met.	11.0	20.2	54	1038.3	683.5	152	1	
	Monkey Bay Met.	0.0	6.5	0	552.6	558.1	99	0	
	Namiasi Agric	0.0	4.6	0	621.2	737.6	84	0	
	Namwera Agric	20.4	34.5	59	799.6	1006.7	79	2	
	Ntaja Met.	1.1	31.2	4	825.0	858.4	96	1	
	Phalula Agric	0.0	14.3	0	649.4	799.1	81	0	
	Toleza Farm	1.0	27.7	4	949.0	833.8	114	1	
	Zomba Agric.	4.2	42.0	10	1019.7	1153.8	88	1	
BLANTYRE	Bvumbwe Met.	3.5	30.7	11	1122.0	1046.8	107	2	
	Chichiri Met.	3.4	29.0	12	941.3	1057.5	89	3	
	Chileka Airport	15.0	20.0	75	597.8	846.9	71	1	
	Chiradzulu Agric	0.0	22.4	0	839.9	941.9	89	0	
	Chizunga Factory	1.2	54.5	2	973.6	1257.8	77	1	
	Lujeri Tea Estate	18.6	106.5	17	2428.4	1850.5	131	2	
	Masambanjati Agric	6.8	51.7	13	904.3	1240.3	73	1	
	Mimosa Met.	9.9	63.8	16	1467.7	1331.8	110	3	
	Mpemba Agric	0.0	32.1	0	1007.1	1072.6	94	0	
	Mulanje Boma	20.9	82.2	25	1729.2	1606.3	108	2	
	Mwanza Boma	0.0	34.9	0	781.8	971.8	80	0	
	Naminjiwa Agric	0.0	18.6	0	789.4	928.7	85	0	
	Neno Agric	0.0	36.3	0	1099.8	1047.4	105	0	
	Thuchila Agric	0.0	25.5	0	1015.7	840.6	121	0	
	Thyolo Met	5.1	30.7	17	668.5	1137.8	59	2	
	SHIRE VALLEY	Chikwawa Boma	0.0	21.2	0	646.7	735.2	88	0
Kasinthula Res. Stn.		0.5	18.1	3	N/A	685.3	N/A	1	
Nchalo Sucoma		0.0	18.9	0	820.7	624.3	131	0	
Ngabu Met.		12.8	17.9	72	835.4	722.7	116	2	
	Nsanje Boma	2.5	21.7	12	741.0	1022.2	72	2	

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 01 TO 10 APRIL 2017

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	25.3	17.3	26.3	16.6	13.3	78	8.3	6.9	5.4	10.1
Karonga	30.1	20.5	31.0	19.5	6.5	71	7.9	7.2	5.8	9.8
MZUZU ADD										
Bolero	26.9	17.6	27.8	15.8	5.4	74	7.6	6.0	4.7	8.9
Mzimba	25.4	16.3	27.2	14.5	5.4	71	7.6	5.9	4.6	9.0
Mzuzu	23.1	17.3	24.3	16.1	6.1	85	4.8	4.7	3.7	7.2
Nkhata Bay	28.8	20.3	30.9	19.5	2.9	84	5.1	5.2	4.1	7.4
KASUNGU ADD										
Kasungu	27.2	17.0	29.0	15.6	4.7	74	8.4	6.3	4.9	9.5
LILONGWE ADD										
Chitedze	27.1	16.3	28.4	14.7	2.5	74	8.4	6.2	4.8	9.6
Dedza	24.0	13.9	25.3	11.4	6.5	78	8.5	5.9	4.5	9.7
KIA	25.8	15.7	26.1	14.0	6.1	73	9.1	6.4	4.9	10.0
SALIMA ADD										
Nkhotakota	29.1	21.6	30.0	20.6	3.6	75	8.2	6.7	5.3	9.4
Salima	30.3	22.8	31.1	21.5	8.3	66	10.1	8.0	6.3	10.7
MACHINGA ADD										
Makoka	27.1	16.9	28.4	14.4	2.9	77	8.3	6.2	4.8	9.6
Mangochi	31.0	21.1	32.5	19.8	3.2	73	9.5	7.4	5.8	10.3
Monkey Bay	30.6	22.3	31.5	20.7	7.2	73	9.5	7.7	6.1	10.3
Ntaja	30.3	18.6	30.3	18.6	6.1	72	9.0	7.3	5.7	10.4
BLANTYRE ADD										
Bvumbwe	24.6	15.2	27.4	13.1	7.9	76	9.4	6.5	5.0	10.4
Chichiri	25.8	17.2	27.1	15.2	6.5	75	9.5	6.7	5.2	10.4
Chileka	27.9	18.8	29.4	16.5	10.1	70	8.4	7.0	5.5	9.7
Mimosa	28.3	19.0	29.5	16.1	4.3	78	9.4	7.0	5.4	10.4
SHIRE VALLEY ADD										
Ngabu	32.5	22.5	34.0	20.1	1.4	62	9.6	7.7	6.1	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