



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: 11 – 20 April 2017

Season: 2016/2017

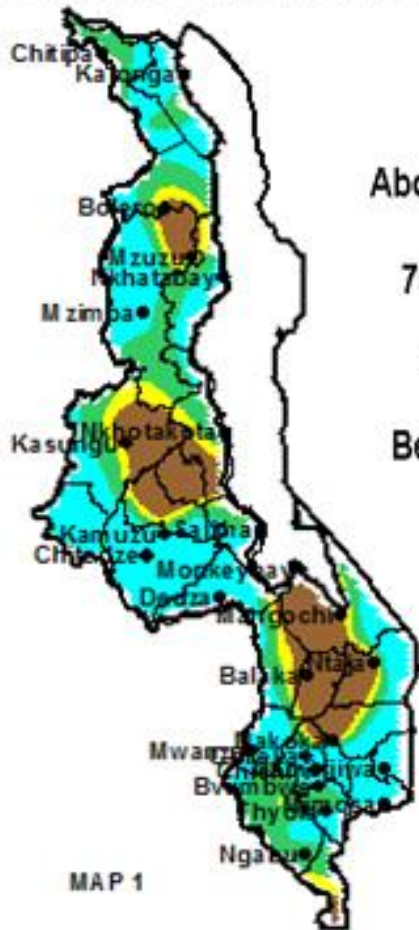
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HIGHLIGHTS

- Locally heavy rainfall persisted over highlands and northern lakeshore...
- Crops were mostly at drying and harvesting stages...
- Light to moderate rainfall expected during the period 21 to 30 April 2017...

10-DAY TOTAL RAINFALL FOR 11 - 20 APRIL 2017
AS A PERCENTAGE OF NORMAL RAINFALL



MAP 1

CUMULATIVE RAINFALL FROM 1 OCT 2016 TO 20 APRIL 2017
AS A PERCENTAGE OF NORMAL RAINFALL



MAP 2

Rainfall Maps for 11 to 20 April 2017

1.0 WEATHER SUMMARY

During the period 11 to 20 April 2017, Easterly waves had persisted over southern and central Malawi with equatorial rainfall belt still affecting northern parts of Malawi. As a result high rainfall amounts were reported mainly over highlands and along the Lakeshore areas (Green and light Blue colours on Map 1).

1.1 RAINFALL SITUATION

During the second ten days of April 2017, most areas in Malawi had recorded light to moderate rainfall amounts while heavy rainfall was confined mainly to a few highlands and along the Lakeshore areas. High cumulative rainfall amounts in excess of 100mm during the ten day period were reported at some stations including Chintheche Agric 259mm, Lujeri Tea Estate 219mm, Baka Research Station in Karonga had recorded 184mm, Nkhata Bay Met had 182mm, Vinthukutu Agric reported 157mm, Mulanje Agric had 130mm, Mimoso Met received 119mm and Karonga Met had reported 113mm. Other areas that had equally registered significant rainfall amounts included Chichiri Met 83mm, Dwangwa 81mm, Nathenje Agric 74mm, Nkhotakota Met 65mm, Chitedze Met 61mm, Mchinji Agric 57mm, Chelinda (Nyika) 55mm, Neno Agric 53mm and Euthini Agric 50mm. During the same period some parts of Mangochi, Machinga and Balaka districts in the south, Kasungu and Dowa in the centre and Mzimba in the north had registered nil rainfall throughout the period (Brown Colour on Map 1). Stations with nil rainfall included Kasungu Met, Malomo, Madisi, Mponela, Monkey Bay, Namiasi and Ntaja. More details are in Table 1.

Map 2 indicates the spatial cumulative rainfall distribution since the start of the 2016/17 rainfall season in October 2016, up to 20 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).

1.3 AIR TEMPERATURE

During the period 11 to 20 April 2017, warm to hot temperatures were observed over most parts of Malawi. Mean daily maximum temperatures had ranged from 23°C at Dedza to 32°C at Ngabu while the mean daily minimum temperatures had ranged from 15°C at Dedza to 22°C at Ngabu. During the same period the hottest temperature was 37°C recorded at Ngabu in Chikwawa. Details are in Table 2.

1.4 WIND SPEEDS

During the period 11 to 20 April 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 1.8km per hour at Ngabu in Chikwawa district to 12.2km per hour at Chitipa. More details are in Table 2.

1.5 RELATIVE HUMIDITY

The daily average relative humidity values recorded from various weather stations in Malawi for the period 11 to 20 April 2017 show that air over Malawi was still fairly moist. Daily average relative humidity values had ranged from 61% at Mimoso in Mulanje district to 83% at Mkondezi in Nkhata Bay district. Details are on the Table 2.

1.6 SUNSHINE HOURS

Generally long hours of bright sunshine were observed along the lakeshore and cloudy conditions were confined to highlands during the second ten days of April 2017. The daily values had ranged from 4.5 hours at Mzuzu and 8.9 hours at Salima. For details see Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

The heavy rains that continued over the northern lakeshore areas during the second ten days of April 2017 have improved prospects for rice production particularly in Karonga and Nkhata Bay districts. These rains were also supportive to growth and development of roots and tuber crops. On the other hand, persistent wet weather had hindered harvesting and drying of matured crops and this is likely to increase losses of field crops.

Maize crop which is the staple food crop for Malawi was reported mostly at drying and harvesting stages. Harvesting of matured crops was in progress in most parts of Malawi. Reports also indicated that most farm families are having food from own production and this has improved household food security.

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 May and June 2017.

4. OUTLOOK FOR 21 TO 30 APRIL 2017

Short to medium-term weather forecasts suggest that an influx of cool and moist south easterly air is likely to affect most parts of Malawi within the period 21 to 30 April 2017. Therefore expect light to moderate rainfall particularly over highlands and along northern lakeshore areas to continue during the forecast period.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR 11 TO 20 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.	184.0	76.4	241	1031.4	1276.8	81	6	
	Chitipa Met	12.0	17.4	69	844.1	935.8	90	6	
	Karonga Met.	113.3	59.2	191	1043.0	954.9	109	7	
	Lupembe	22.5	36.0	63	570.6	809.9	70	2	
	Vinthukutu Agric	156.7	73.5	213	1901.2	1067.2	178	7	
MZUZU	Bolero Met	2.9	10.8	27	582.2	624.9	93	2	
	Bwengu Agric.	5.3	17.5	30	518.7	751.4	69	2	
	Chikangawa forest	28.8	29.5	98	839.0	1068.5	79	8	
	Chelinda (Nyika)	55.0	41.6	132	731.6	1165.6	63	8	
	Chintheche Agric	259.4	128.5	202	2203.6	1600.8	138	4	
	Ekwendeni Agric.	3.0	18.0	17	442.1	797.8	55	2	
	Euthini Agric.	50.0	13.3	376	966.8	761.4	127	3	
	Mbawa Res. Stn	16.3	12.3	133	824.7	793.9	104	2	
	Mzimba Met	21.9	13.9	158	630.4	876.2	72	2	
	Mzuzu Met.	31.7	65.6	48	770.3	1031.0	75	6	
	NkhataBay Met.	182.0	96.0	190	1228.4	1311.9	94	6	
	Rumphu Agric	2.1	13.2	16	574.4	720.0	80	2	
	Zombwe Agric	5.5	19.0	29	524.5	735.9	71	2	
KASUNGU	Dowa Agric	10.8	9.6	113	900.2	869.5	104	2	
	Kaluluma DTC	10.1	16.8	60	441.4	806.1	55	3	
	Kasungu Met	0.0	5.6	0	913.5	766.4	119	0	
	Lisasadzi	6.9	13.4	51	684.8	805.5	85	3	
	Malomo Agric	0.0	2.5	0	733.7	810.9	90	0	
	Madisi Agric	0.0	11.6	0	956.0	824.3	116	0	
	Mchinji Agric	57.4	15.3	375	1652.7	993.2	166	5	
	Mponela Agric	0.0	5.3	0	709.0	784.3	90	0	
	Mwimba Research	6.8	6.8	100	748.8	863.0	87	1	
	Nchisi Agric	6.4	24.8	26	996.9	1213.8	82	1	
	SALIMA	Dwangwa	81.4	58.2	140	1081.0	1287.1	84	6
Lifuwu		15.0	41.4	36	1442.9	1216.6	119	1	
Nkhotakota Met		64.8	56.1	116	1162.0	1397.8	83	5	
Salima Met		33.5	27.6	121	1299.8	1195.8	109	1	
LILONGWE	Chitedze Met.	60.7	9.0	674	984.1	868.0	113	3	
	Dzonzi Forest	25.2	21.1	119	912.4	973.4	94	2	
	K.I.A Met	2.3	1.6	144	806.8	832.0	97	3	
	Kasiya Agric	17.8	7.3	244	1179.1	935.5	126	3	
	Mlangeni Njolomole	26.7	14.0	191	990.1	953.5	104	3	
	Nathenje Agric	73.5	11.5	639	1211.8	851.8	142	4	
	Ntcheu - Nkhande	18.5	16.8	110	1066.0	1027.8	104	2	
	Dedza Met	16.4	6.4	256	1028.6	973.9	106	5	
	Chikweo Agric.	23.6	7.9	299	792.9	1036.1	77	2	
	Chingale Agric	3.3	15.5	21	763.2	904.6	84	4	
MACHINGA	Mpilipili (Makanjila)	13.3	8.3	160	888.9	872.3	102	1	
	Makoka Met	2.8	14.1	20	919.5	949.1	97	2	
	Mangochi Met.	2.9	9.4	31	1041.2	692.9	150	1	
	Monkey Bay Met.	0.0	3.3	0	552.6	561.4	98	0	
	Namiasi Agric	0.0	3.2	0	621.2	740.8	84	0	
	Namwera Agric	38.0	20.4	186	837.6	1027.1	82	1	
	Ntaja Met.	0.0	14.0	0	825.0	872.4	95	0	
	Phalula Agric	1.5	12.7	12	650.9	811.8	80	1	
	Toleza Farm	8.0	16.6	48	957.0	850.4	113	2	
	Zomba RTC	1.2	19.7	6	1020.9	1173.5	87	1	
	Chikweo Agric.	23.6	7.9	299	792.9	1036.1	77	2	
	BLANTYRE	Bvumbwe Met.	22.9	19.6	117	1144.9	1066.4	107	4
		Chichiri Met.	83.4	21.1	395	1024.7	1078.6	95	4
		Chileka Airport	21.1	16.7	126	618.9	863.6	72	3
		Chiradzulu Agric	42.1	11.9	354	882.0	953.8	92	3
Chizungu Factory		11.7	32.9	36	985.3	1290.7	76	2	
Lujeri Tea Estate		218.5	70.2	311	2646.9	1920.7	138	6	
Mimosa Met.		119.2	43.6	273	1586.9	1375.4	115	6	
Mpemba Vet		24.3	18.5	131	1031.4	1091.1	95	2	
Mulanje Agric		129.7	52.8	246	1858.9	1659.1	112	2	
Mwanza Agric		26.2	16.7	157	808.0	988.5	82	3	
Naminjiwa Agric		42.5	9.6	443	831.9	938.3	89	2	
Neno Agric		52.8	21.2	249	1152.6	1068.6	108	3	
Satemwa Tea Est.		45.5	24.4	186	1040.6	1049.3	99	4	
Thuchila Agric		16.9	15.6	108	1032.6	856.2	121	4	
Thyolo Agric		34.5	32.3	107	1115.7	1123.7	99	2	
Thyolo Met		29.4	19.6	150	N/A	1157.4	N/A	2	
SHIRE VALLEY		Chikwawa Agric	4.9	8.1	60	651.6	743.3	88	1
	Nchalo Sucoma	17.2	10.2	169	837.9	634.5	132	2	
	Ngabu Met.	12.5	13.6	92	847.9	736.3	115	2	
	Nsanje Agric	8.6	26.2	33	749.6	1048.4	71	2	

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 TO 20 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	25.8	17.6	27.1	16.6	12.2	80	7.6	6.6	5.2	9.7
Karonga	29.8	20.8	31.5	19.5	5.8	76	7.5	7.0	5.6	9.6
MZUZU ADD										
Bolero	27.8	17.6	29.0	16.9	5.4	71	7.2	5.9	4.6	8.5
Mzimba	26.5	16.9	28.2	15.4	5.0	73	7.2	5.7	4.5	8.5
Mzuzu	23.8	17.2	25.8	16.4	5.8	82	4.5	4.6	3.6	6.8
Nkhata Bay	29.1	20.3	32.7	18.7	2.5	83	6.2	5.5	4.4	7.9
KASUNGU ADD										
Kasungu	27.0	17.2	29.0	16.5	5.0	73	6.7	5.7	4.4	8.3
LILONGWE ADD										
Chitedze	26.4	16.9	29.1	15.5	2.9	73	6.3	5.4	4.2	8.1
Dedza	23.3	14.9	25.6	13.9	6.1	79	6.0	5.1	3.9	7.9
KIA	25.3	16.5	27.5	15.4	6.1	77	6.3	5.4	4.2	8.1
SALIMA ADD										
Nkhotakota	28.6	21.5	30.5	20.9	3.2	76	7.0	6.1	4.9	8.5
Salima	27.0	21.8	32.0	20.8	7.2	68	8.9	7.1	5.7	9.7
MACHINGA ADD										
Makoka	26.2	17.2	29.6	15.5	3.2	79	6.0	5.3	4.1	8.0
Mangochi	31.1	20.7	34.0	19.3	2.9	69	8.5	6.9	5.4	9.5
Monkey Bay	30.5	22.1	32.8	21.2	6.5	70	8.1	7.0	5.6	9.3
Ntaja	30.2	19.7	32.2	18.4	5.0	75	8.4	7.0	5.5	9.9
BLANTYRE ADD										
Bvumbwe	24.0	15.2	28.2	13.6	7.9	80	5.6	5.1	4.0	7.8
Chichiri	25.7	17.2	30.5	15.8	5.4	79	5.6	5.3	4.1	7.8
Chileka	27.7	18.8	31.0	17.2	8.6	72	6.9	6.2	5.0	8.6
Mimosa	28.2	18.2	31.5	16.7	3.6	61	5.5	5.7	4.5	7.7
SHIRE VALLEY ADD										
Ngabu	31.7	22.4	36.8	20.5	1.8	68	6.6	6.4	5.1	8.5

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