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

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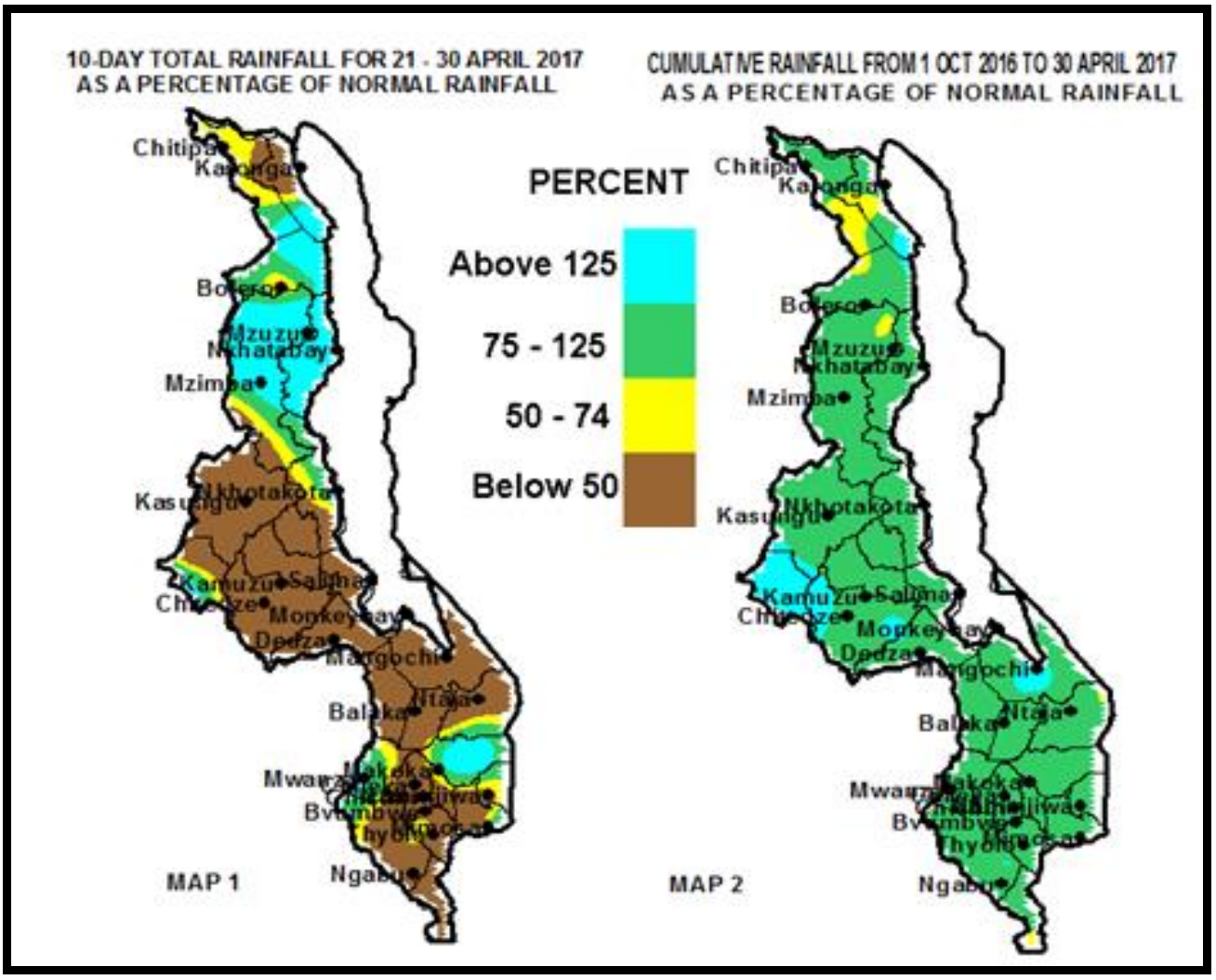
HIGHLIGHTS

- **Dry weather prevailed over central and southern Malawi…**
- **Crops were mostly at drying and harvesting stages…**
- **Occasional and generally light rainfall is expected between May and July 2017…**



Rainfall Maps for 21 to 30 April 2017

1.0 WEATHER SUMMARY

During the last ten days of April 2017, the main rain belt was over East Africa. As a result rainfall was mostly confined to northern Malawi and many areas in central and southern Malawi had recorded below average cumulative rainfall and dry weather conditions.

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1.1 RAINFALL SITUATION

During the period 21 to 30 April 2017, most districts in central and southern Malawi had experienced dry conditions and below average rainfall amounts. During the entire period good rainfall amounts in excess of 40mm were confined to northern Malawi including Vinthukutu Agric which recorded 195mm, Nkhata Bay Met 109mm, Mzuzu Met 101mm, 50mm at Chikangawa Forest and Chelinda (Nyika) had 49mm. Many stations reported nil rainfall during the period 21 to 30 April 2017 included Kasungu Met, Mwimba Research, Dowa Agric, Madisi, Mponela, Malomo, Ntchisi Boma, Salima Met, Lifuwu, Chileka-Namitete, Chitedze, Kasiya Agric, Kamuzu International Airport, Nathenje, Mlangeni, Ntcheu, Mtakataka, Monkey Bay, Mangochi, Chikweo, Namiasi, Ntaja, Mpemba, Mulanje and Chikwawa Boma. More details are in Table 1.

Map 2 indicates cumulative rainfall distribution since the start of the 2016/17 rainfall season in October 2016, up to 30 April 2017. The map generally indicates that Malawi has received normal rainfall (Green colour) with few 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 21 to 30 April 2017, warm to hot temperatures were reported over most parts of Malawi. Mean daily maximum temperatures had ranged from 21°C at Bvumbwe to 31°C at Ngabu while the mean daily minimum temperatures had ranged from 13°C at Dedza to 22°C at Salima. During the same period the hottest temperature was 32°C recorded at Ngabu in Chikwawa. Details are in Table 2.

1.4 WIND SPEEDS

During the last ten days of April 2017 most parts of Malawi had experienced 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 1.8km per hour at Ngabu in Chikwawa district to 11.9km 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 21 to 30 April 2017 show that air over Malawi was still fairly moist. Daily average relative humidity values had ranged from 62% at Mimosa in Mulanje district to 88% at Mzuzu. Details are on the Table 2.

1.6 SUNSHINE HOURS

Generally sunny conditions were observed at most places and cloudy conditions were confined to highlands during the last ten days of April 2017. The daily values had ranged from 2.5 hours at Mzuzu and 8.4 hours at Chitipa. For details see Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

Dry conditions that prevailed over most parts of central and southern Malawi during the last ten days of April 2017 continued to facilitate harvesting and drying of matured crops. Harvesting of maize which is the staple food for Malawians was in progress in most parts of the country. This has improved food security at household level as most households had food from their own production. On the other hand, persistent wet weather over some parts of the north had hindered harvesting and drying of matured crops and this is likely to increase field losses.

The overall performance of the 2016/17 rainfall season for agricultural production has been much better than the 2015/16 rainfall season.

3. RAINFALL PROSPECTS FOR MAY TO JULY 2017

Climate models indicate that neutral conditions are likely to persist through May to July 2017. However, Malawi is likely to experience mostly below average Chiperoni type of rainfall during most of the period between May to July 2017.

4. OUTLOOK FOR MAY TO JULY 2017

A series of high pressure systems are expected to periodically induce cool and moist air from the Indian Ocean into Malawi. Therefore, occasional and generally light rainfall is expected particularly over highlands and along the Lakeshore during May and July 2017.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR 21 TO 30 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.	8.4	41.0	20	1039.8	1317.8	79	1
	Chitipa Met	3.1	4.2	74	847.2	940	90	1
	Karonga Met.	5.5	25.9	21	1048.5	980.8	107	1
	Lupembe	0.0	12.7	0	570.6	822.6	69	0
	Vinthukutu Agric	195.3	53.3	366	2096.5	1120.5	187	7
MZUZU	Bolero Met	1.9	4.2	45	584.1	629.1	93	2
	Bwengu Agric.	4.5	7.4	61	523.2	758.8	69	2
	Chikangawa forest	49.9	22.0	227	888.9	1090.5	82	7
	Chelinda (Nyika)	48.6	28.7	169	780.15	1194.3	65	9
	Ekwendeni Agric.	38.0	9.4	404	480.1	807.2	59	3
	Euthini Agric.	25.2	14.0	180	992	775.4	128	2
	Mbawa Res. Stn	3.1	7.3	42	827.8	801.2	103	1
	Mzimba Met	15.7	9.1	173	646.1	885.3	73	2
	Mzuzu Met.	100.7	43.6	231	871	1074.6	81	7
	NkhataBay Met.	109.2	81.9	133	1337.6	1393.8	96	7
	Rumphi Boma	3.0	8.3	36	577.4	728.3	79	2
	Zombwe Agric	22.6	8.5	266	547.1	744.4	73	5
KASUNGU	Dowa Agric	0.0	2.8	0	900.2	872.3	103	0
	Kasungu Met	0.0	4.0	0	913.5	770.4	119	0
	Lisasadzi	0.0	6.4	0	684.8	811.9	84	0
	Malomo Agric	0.0	14.9	0	733.7	825.8	89	0
	Madisi Agric	0.0	3.6	0	956	827.9	115	0
	Mchinji Boma	22.8	10.2	224	1675.5	1003.4	167	4
	Mponela Agric	0.0	2.6	0	709	786.9	90	0
	Mwimba Research	0.0	2.2	0	748.8	865.2	87	0
	Ntchisi Boma	0.0	12.1	0	996.9	1225.9	81	0
SALIMA	Dwangwa	36.8	33.3	111	1117.8	1320.4	85	5
	Lifuwu	0.0	11.7	0	1442.9	1228.3	117	0
	Nkhotakota Met	38.6	34.5	112	1200.6	1432.3	84	2
	Salima Met	0.0	9.2	0	1299.8	1205	108	0
LILONGWE	Chileka Namitete	0.0	13.9	0	1251.8	921.2	136	0
	Chitedze Met.	0.0	6.5	0	984.1	874.5	113	0
	Dzonzi Forest	0.0	5.4	0	912.4	978.8	93	0
	K.I.A Met	0.0	6.1	0	806.8	838.1	96	0
	Kasiya Agric	0.0	12.6	0	1179.1	948.1	124	0
	Mlangeni Njolomole	0.0	4.7	0	990.1	958.2	103	0
	Mtakataka Airwing	0.0	2.4	0	755.9	806.3	94	0
	Nathenje Agric	0.0	13.2	0	1211.8	865	140	0
	Ntcheu - Nkhande	0.0	7.2	0	1066	1035	103	0
	Dedza RTC	0.6	5.1	12	1029.2	979	105	1
MACHINGA	Balaka Agric	0.0	6.8	0	900	849.5	106	0
	Chikweo Agric.	0.0	9.6	0	792.9	1045.7	76	0
	Chingale Agric	7.0	5.7	123	770.2	910.3	85	1
	Mpilipili (Makanjila)	0.0	4.8	0	888.9	877.1	101	0
	Makoka Met	3.9	10.4	38	923.4	959.5	96	3
	Mangochi Met.	0.0	5.0	0	1041.2	697.9	149	0
	Monkey Bay Met.	0.0	1.5	0	552.6	562.9	98	0
	Namiasi Agric	0.0	1.7	0	621.2	742.5	84	0
	Namwera Agric	0.0	8.4	0	837.6	1035.5	81	0
	Ntaja Met.	0.0	15.1	0	825	887.5	93	0
	Phalula Agric	1.3	3.5	37	652.2	815.3	80	1
	Toleza Farm	1.0	9.8	10	958	860.2	111	1
	Zomba RTC	39.6	13.6	291	1060.5	1187.1	89	3
BLANTYRE	Bvumbwe Met.	6.0	16.5	36	1150.9	1082.9	106	4
	Chichiri Met.	3.9	16.7	23	1028.6	1095.3	94	2
	Chileka Airport	0.2	8.8	2	619.1	872.4	71	0
	Chiradzulu Agric	4.9	11.8	42	886.9	965.6	92	2
	Chizunga Factory	11.8	18.2	65	997.1	1308.9	76	3
	Lujeri Tea Estate	93.6	63.0	149	2740.5	1983.7	138	4
	Mimosa Met.	36.3	36.9	98	1623.2	1412.3	115	4
	Mpemba Vet	0.0	11.3	0	1031.4	1102.4	94	0
	Mulanje Boma	0.0	29.6	0	1858.9	1688.7	110	0
	Mwanza Boma	15.9	10.6	150	823.9	999.1	82	2
	Naminjiwa Agric	0.0	5.4	0	831.9	943.7	88	0
	Neno Agric	12.8	14.5	88	1165.4	1083.1	108	1
	Satemwa Tea Est.	12.7	17.9	71	1053.3	1067.2	99	3
	Thuchila Agric	1.5	7.7	19	1034.1	863.9	120	1
	Thyolo Boma	14.6	24.7	59	1130.3	1148.4	98	2
SHIRE VALLEY	Chikwawa Boma	0.0	6.9	0	651.6	750.2	87	0
	Nchalo	5.9	8.6	69	843.8	643.1	131	2
	Ngabu Met.	2.5	11.6	22	850.4	747.9	114	1
	Nsanje Boma	1.9	18.3	10	751.5	1066.7	70	2

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 21 TO 30 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	25.7	16.9	27.0	15.1	11.9	76	8.4	6.9	5.4	10.2
Karonga	29.7	20.6	30.2	19.0	7.6	66	8.0	7.5	6.0	10.0
MZUZU ADD										
Bolero	26.8	16.8	28.9	13.6	5.8	69	7.3	5.6	4.4	8.3
Mzimba	25.0	15.8	28.7	14.2	5.8	74	6.5	5.2	4.1	7.9
Mzuzu	21.6	17.0	24.0	15.0	6.5	88	2.5	3.6	2.8	5.4
Nkhata Bay	27.5	20.5	29.6	19.5	2.9	85	5.5	5.0	4.0	7.3
Kasungu	25.9	15.8	27.0	13.5	4.7	65	5.7	5.2	4.1	7.5
LILONGWE ADD										
Chitedze	24.7	15.1	26.5	12.2	2.5	76	5.3	4.7	3.7	7.3
Dedza	21.6	12.8	24.4	9.6	7.2	78	6.3	4.8	3.7	7.9
KIA	24.4	14.3	26.3	11.5	6.1	73	6.2	5.1	4.0	7.8
SALIMA ADD										
Nkhotakota	27.4	20.6	28.2	19.0	4.3	71	7.6	6.1	4.8	8.7
Salima	28.4	21.8	29.5	20.5	10.4	66	8.2	6.9	5.5	9.1
MACHINGA ADD										
Makoka	23.8	14.3	27.5	12.1	3.6	79	5.0	4.5	3.5	7.2
Mangochi	29.5	19.6	31.0	18.0	4.7	69	7.5	6.3	5.0	8.7
Monkey Bay	28.9	20.9	30.1	18.9	9.0	68	7.5	6.6	5.3	8.7
Ntaja	27.4	17.5	28.7	17.5	7.6	70	4.1	5.1	4.2	6.8
BLANTYRE ADD										
Bvumbwe	20.8	12.8	22.9	11.4	8.3	80	6.0	4.7	3.6	7.9
Chichiri	22.0	14.9	25.2	13.6	7.2	78	6.0	4.9	3.8	7.9
Chileka	25.3	16.7	27.0	15.3	9.4	68	7.1	5.9	4.7	8.6
Mimosa	22.6	15.1	27.0	14.5	3.2	62	6.5	5.2	4.0	8.2
SHIRE VALLEY ADD										
Ngabu	30.3	20.5	32.4	18.5	1.8	68	6.6	6.0	4.8	8.3

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