Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services

HIGHLIGHTS

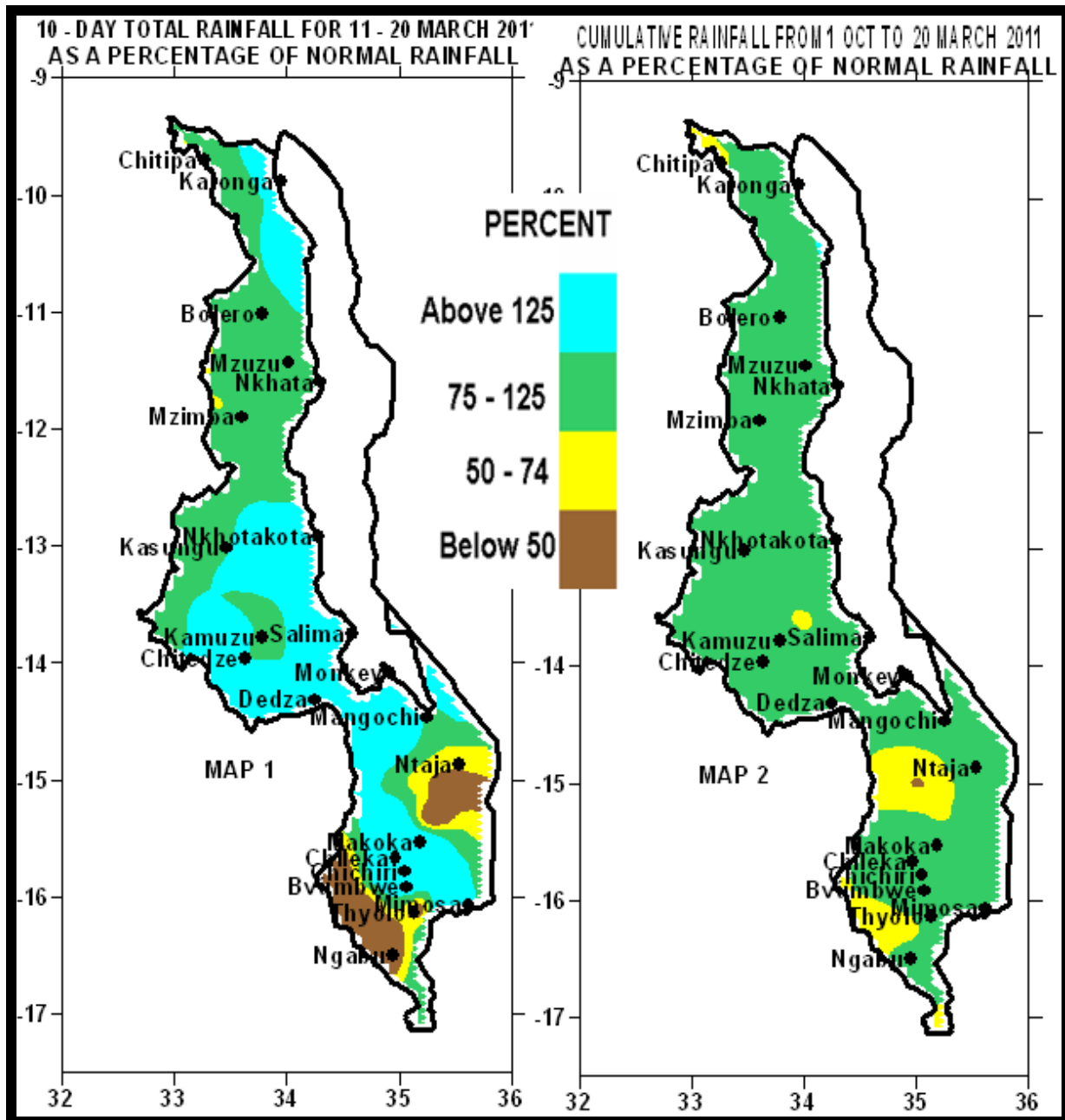❖ **Heavy rains cause floods in Karonga, Mzimba, Nkhotakota and Salima districts…**

❖ **Persistent rains hinder harvesting and drying of matured crops …**

❖ **Average to above average rainfall amounts to persist during 21 to 31 March 2011…**

10 - DAY TOTAL RAINFALL FOR 11 - 20 MARCH 2011 AS A PERCENTAGE OF NORMAL RAINFALL — MAP 1

CUMULATIVE RAINFALL FROM 1 OCT TO 20 MARCH 2011 AS A PERCENTAGE OF NORMAL RAINFALL — MAP 2

PERCENT

Above 125

75 - 125

50 - 74

Below 50

1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the second ten days of March 2011, Congo Air mass and Easterly waves caused moderate to heavy rains over Malawi. As a result several areas in Malawi experienced average to above average rainfall amounts except in Chikhwawa, Mwanza and Machinga districts in the south where below average rainfall amounts were reported. Several areas particularly along the lakeshore registered excessively wet conditions Areas that reported high cumulative rainfall amounts in excess of 150mm included Lifuwu in Salima 345mm, Mulanje Boma 258mm, Nkhotakota Met 257mm, Monkey Bay 186mm, Baka in Karonga 184mm, Salima Met 177mm, Vinthukutu Agric in Karonga 157mm and Chileka Airport 156mm. More details are in Table 1.

The cumulative rainfall picture at 20th March 2011 indicated that most areas in Malawi had received average seasonal cumulative rainfall amounts (Green Colour on Map2).

1.2 MEAN AIR TEMPERATURE

During the second ten days of March 2011, average daily maximum temperatures over most areas in Malawi ranged from 25°C at Mzuzu to around 34°C at Ngabu.   The highest absolute daytime temperature was still reported at Ngabu (36°C) in Shire Valley while the lowest absolute night temperature was 14.3°C reported at Kamuzu International Airport.   See more details in Table 2.

1.4 MEAN WIND SPEEDS

Average wind speeds at a height of two metres above the ground continued to be generally light. The lowest was 0.5 m/s (1.8 Km/h) recorded at Chitedze Research Station and the highest was 2.1 m/s (7.6 Km/h) reported at Chileka. See more details in Table 2.

1.5 MEAN RELATIVE HUMIDITY

In the second ten days of March 2011, air over Malawi was fairly moist. The lowest reported daily average relative humidity was 72% reported at Ngabu in Shire Valley while the highest daily average relative humidity value was 84% reported at Nkhata Bay. More details are in the Table 2.

2.   AGROMETEOROLOGICAL ASSESSMENT

Most parts of Malawi received average to above average rainfall during the second ten days of March 2011. The above average rainfall has resulted in saturation of the soils and flooding in riverine areas in Karonga, Mzimba, Nkhotakota and Salima districts. These rains have facilitated planting, growth and development of tuber crops. However, persistent moderate to heavy rains were reported to be hindering harvesting and drying of matured crops.

According to fortnightly crop reports from extension officers in the Ministry of Agriculture and Food Security, despite dry spells throughout the month of February, crops were reported doing well and good harvest are expected.in central and northern Malawi. The negative impact of dry spells was reported severe on late planted crops in southern Malawi along the Shire River from Mangochi downstream to Nsanje districts.

3.   PROSPECTS OF 2010/11 RAINFALL SEASON

Despite dry spells in February, climate prediction models still suggest that a greater part of Malawi is likely to experience average to above average seasonal rainfall amounts by end of April 2011.

4.   OUTLOOK 21 – 31 MARCH 2011

Medium range forecast suggest that Congo Air mass and Easterly waves will maintain average to above average rainfall amounts over Malawi during the period 21 to 31 March 2011.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 11 – 20 MARCH 2011 AT SELECTED STATION

STATION NAME	DEKADAL TOTAL RAINFALL	DEKADAL NORMAL	DEKADAL TOTAL AS % NORMAL	TOTAL TO DATE	NORMAL TO DATE	TOTAL TODATE AS % NORMAL	RAINY DAYS
SOUTHERN REGION	mm	mm		mm	mm		≥ 0.3 mm
Balaka Township	36.0	40.2	90	350.0	776.7	45	5
Bvumbwe Met.	101.0	54.2	186	971.5	958.2	101	7
Chichiri Met.	80.2	16.1	498	897.3	1013.2	89	5
Chikwawa Boma	11.8	32.9	36	500.5	680.1	74	1
Chileka Airport	156.1	45.8	341	834.0	782.4	107	7
Chingale Agric	23.5	52.0	45	658.6	833.1	79	5
Chiradzulu Agric	105.3	38.1	276	726.3	875.0	83	4
Kasinthula Res. Stn.	18.4	29.6	62	677.9	646.0	105	4
Liwonde Township	21.5	41.5	52	431.0	728.3	59	3
Lujeri Tea Estate	111.6	146.5	76	1511.3	1612.8	94	7
Mpilipili (Makanjila)	81.3	39.6	205	791.2	810.5	98	3
Makhanga Met	43.9	38.0	116	671.5	650.5	103	4
Makoka Met	138.8	46.7	297	1035.1	871.8	119	5
Mangochi Met.	50.7	44.1	115	629.0	630.1	100	8
Mimosa Met.	32.3	89.0	36	926.4	1186.7	78	6
Monkey Bay Met.	186.3	16.3	1143	702.5	538.2	131	8
Mpemba Vet	129.1	61.9	209	1138.4	988.4	115	7
Mulanje Boma	258.3	70.2	368	1334.1	1399.1	95	6
Mwanza Boma	14.0	55.4	25	703.1	901.7	78	2
Naminjiwa Agric	57.0	44.3	129	740.5	873.6	85	5
Namwera Agric	123.4	69.3	178	747.0	920.5	81	9
Nchalo Sucoma	5.6	19.3	29	408.9	578.8	71	1
Ngabu Met.	0.6	37.3	2	567.7	669.7	85	1
Nsanje Boma	65.0	49.9	130	656.5	942.8	70	4
Ntaja Met.	24.6	44.6	55	783.6	778.6	101	6
Phalula Agric	66.3	37.0	179	598.8	757.6	79	5
Satemwa Tea Est. No.1	61.9	63.1	98	757.7	917.2	83	7
Thyolo Met	46.5	58.6	79	1128.8	1050.8	107	7
Zomba R.T.C	52.2	73.9	71	1035.1	1053.6	98	5
CENTRAL REGION							
Chitedze Met.	43.8	51.1	86	694.8	788.1	88	6
K.I.A Met	41.5	41.8	99	709.8	763.5	93	8
Kasiya Agric	92.3	38.9	237	924.3	873.0	106	4
Kasungu Met	39.3	38.7	102	537.5	712.1	75	5
Lifuwu	345.3	78.7	439	988.1	1057.2	93	8
Lisasadzi	54.3	33.7	161	607.4	752.8	81	8
Malomo Agric	137.8	46.7	295	743.7	761.3	98	6
Mchinji Boma	34.4	46.7	74	780.4	898.0	87	7
Mkanda Met	41.4	41.3	100	615.6	783.7	79	7
Mponela Agric	33.0	35.1	94	591.0	739.5	80	6
Mtakataka Airwing	176.0	52.4	336	631.2	727.5	87	7
Nathenje Agric	54.7	39.1	140	690.4	757.8	91	6
Nkhotakota Met	256.9	113.7	226	1094.1	1102.1	99	9
Ntchisi Boma	116.0	82.4	141	965.2	1074.1	90	7
Salima Met	177.5	85.6	207	1030.8	1051.8	98	9
Dedza RTC	77.1	49.2	157	690.4	900.7	77	5
NORTHERN REGION							
Baka Res. Stn.	184.2	140.0	132	859.4	871.3	99	6
Bolero Met	27.1	27.9	97	447.2	566.3	79	5
Chitipa Met	47.6	66.1	72	593.8	827.7	72	6
Karonga Met.	171.5	78.9	217	767.5	693.7	111	6
Mbawa Res. Stn	39.9	40.4	99	693.4	729.3	95	7
Mzimba Met	30.4	41.7	73	698.6	790.6	88	6
Mzuzu Met.	54.8	58.2	94	647.0	775.3	83	7
NkhataBay Met.	97.2	96.7	101	664.2	915.9	73	8
Vinthukutu Agric	157.9	79.5	199	1013.9	758.5	134	5

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 – 20 MARCH 2011

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %	SUN SHINE HOURS	Eo mm per day	Et mm per day	RAD-TION cal cm-²p/day
BOLERO	28.5	17.6	30.1	16.0	1.0	74	7.4	6.3	4.9	9.1
BVUMBWE	25.8	N/A	28.0	N/A	2.2	83	N/A	N/A	N/A	N/A
CHICHIRI	27.1	18.4	29.4	17.4	0.7	79	N/A	3.5	2.9	4.3
CHILEKA	28.4	20.3	31.4	19.1	2.1	80	5.9	6.0	4.8	8.2
CHITEDZE	26.7	18.0	28.3	17.3	0.5	81	5.5	5.4	4.2	7.9
CHITIPA	27.6	19.2	29.2	16.8	1.1	73	N/A	N/A	N/A	N/A
K I A	26.0	16.6	27.6	14.3	1.4	75	N/A	N/A	N/A	N/A
KARONGA	30.0	21.3	31.3	20.0	0.8	78	7.8	6.7	5.3	9.4
KASUNGU	N/A	18.6	N/A	17.9	1.3	77	N/A	N/A	N/A	N/A
MAKOKA	27.8	18.8	29.1	17.4	1.1	78	7.8	6.4	5.0	9.4
MANGOCHI	31.0	22.1	33.5	21.3	1.4	75	7.6	7.0	5.6	9.3
MIMOSA	N/A	20.0	N/A	18.6	1.2	81	N/A	N/A	N/A	N/A
MONKEY BAY	30.2	22.4	31.0	21.3	1.4	73	8.4	7.3	5.8	9.8
MZIMBA	26.7	17.0	28.5	15.6	0.9	78	5.4	5.4	4.2	7.8
MZUZU	25.1	16.9	N/A	N/A	1.4	84	5.7	5.3	4.1	8.0
NGABU	33.9	22.0	35.5	20.1	1.6	72	N/A	N/A	N/A	N/A
NKHATA BAY	29.5	20.8	32.6	20.0	0.8	84	5.4	5.6	4.5	7.8
NKHOTAKOTA	28.8	21.1	30.4	19.9	1.6	81	7.0	6.5	5.1	8.9
NTAJA	29.5	21.2	31.6	20.0	1.2	78	7.8	6.8	5.4	9.4
SALIMA	29.2	21.8	30.3	20.9	1.5	80	7.0	6.5	5.1	8.9

Glossary of some terms on this table

- 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 Kilometers per hour (Km/hr) = mpsx3.6