



Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services



Period: 01 – 10 March 2011

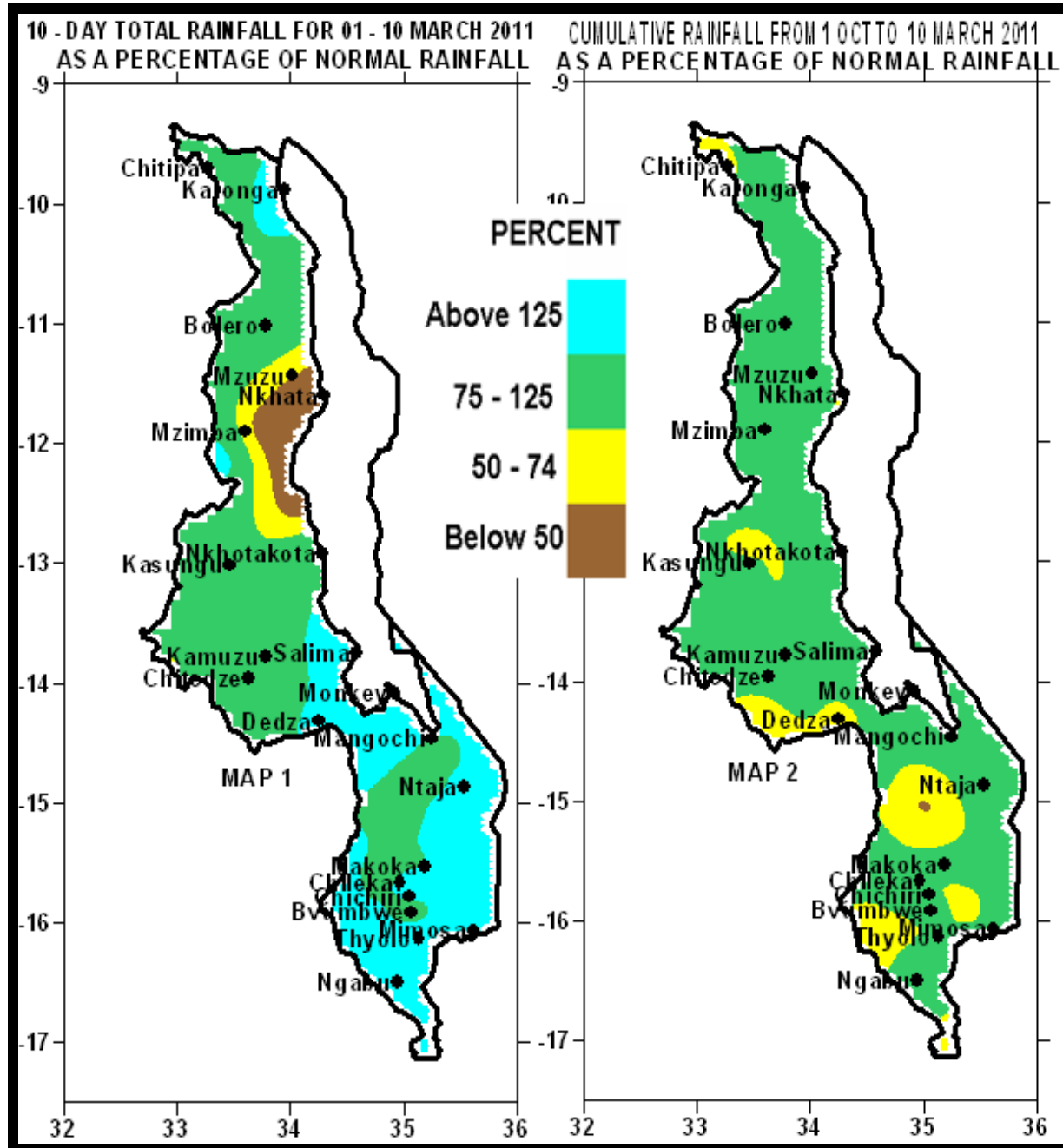
Season: 2010/2011

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HIGHLIGHTS

- ❖ Good rainfall amounts with better distribution received in most areas ...
- ❖ Average seasonal rainfall amounts experienced over a greater part of Malawi...
- ❖ More rains expected over Malawi during 11 to 20 March 2011...



1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the first 10-days of March 2011, the main rain bearing systems namely Congo Air mass and Inter Tropical Convergence Zone became fairly active over Malawi. As a result there was marked improvement on the rainfall performance as moderate to heavy rains were experienced over most parts of Malawi and an average of five rainy days was reported. Many areas experienced excessively conditions including those that were previous hit by dry spells especially in southern Malawi where Makhanga registered 149mm, Ngabu 115mm, Thyolo 145mm, Mulanje Boma 197mm, Mimoso 133mm, and Namiasi 118mm. More details are in Table 1. The cumulative rainfall picture at 10th March 2011 showed that the greater part of Malawi had received average cumulative rainfall amounts (Green Colour on Map2) and below average rainfall situation was confined to a few areas (yellow colour on Map 2).

1.2 MEAN AIR TEMPERATURE

In the first 10-days of March 2011, warm to hot temperatures were continued over Malawi. Average daily maximum temperatures ranged from 23°C at Dedza to 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 13.8°C reported at Dedza. 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 0.7 m/s (2.5 Km/h) recorded at Chitedze Research Station and Chileka and the highest was 2.8 m/s (10.1 Km/h) reported at Chileka. See more details in Table 2.

1.5 MEAN RELATIVE HUMIDITY

In the first ten days of March 2011, air over Malawi became fairly moist. The lowest reported

daily average relative humidity was 71% reported at Ngabu in Shire Valley while the highest daily average relative humidity value was 85% reported at Dedza. More details are in the Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

Good rains for agricultural production returned to most parts of Malawi during the first 10-days of March 2011. Most areas received moderate to heavy rainfall amounts with good distribution. These rains brought relief to some crops that were negatively affected by dry spells in February but had not reached permanent wilting point. On the other hand these rains are detrimental to cereals and legumes that had reached maturity and drying stages and required more sunshine for proper drying. The quality of these crops will be negatively affected due to rotting as a result of excessive moisture.

According to fortnightly crop reports from extension officers in the Ministry of Agriculture and Food Security, despite dry spells crops in central and northern Malawi were reported doing well and good harvest are expected. The negative impact of dry spells was reported worst along the Shire River from Mangochi to Nsanje where late planted crops have been scorched and reached permanent wilting point. The situation was better off for the early planted crop which had already reached maturity and drying stages. Overall, the prolonged dry spells have compromised crop yields in southern Malawi.

3. PROSPECTS OF 2010/11 RAINFALL SEASON

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

4. OUTLOOK 11 – 20 MARCH 2011

Medium range forecast suggest that Easterly waves will maintain fairly moist and unstable air mass over Malawi during the period 11 to 20 March 2011. As a result moderate to heavy rains with better distribution in both space and time are expected over most areas in Malawi.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 01 – 10 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 ≥ 0.3 mm
SOUTHERN REGION							
Balaka Township	65.0	57.5	113	314.0	736.5	43	3
Bvumbwe Met.	57.2	70.3	81	870.5	904	96	4
Chichiri Met.	45.1	24.6	183	817.1	997.1	82	4
Chileka Airport	53.3	51.8	103	677.9	736.6	92	4
Liwonde Township	80.7	62.4	129	409.5	686.8	60	6
Makhanga Met	148.7	48.4	307	627.6	612.5	103	5
Mangochi Met.	37.0	55.1	67	578.3	586	99	5
Mimosa Met.	133.2	95.1	140	894.1	1097.7	82	5
Monkey Bay Met.	80.0	42.4	189	516.2	521.9	99	7
Mpemba Vet	90.6	77.9	116	1009.3	926.5	109	4
Mulanje Boma	197.3	119.1	166	1075.8	1328.9	81	6
Namiasi Agric	118.0	44.0	268	636.1	659.8	96	4
Neno Agric	103.0	79.9	129	803.7	921.6	87	4
Ngabu Met.	114.9	41.8	275	567.1	632.4	90	3
Ntaja Met.	85.8	58.0	148	759.0	734	103	6
Thyolo Met	144.6	70.3	206	1082.3	992.2	109	5
CENTRAL REGION							
Chitedze Met.	53.1	67.5	79	651.0	737	88	6
Dedza Met	102.3	68.6	149	537.9	799.9	67	5
Dwangwa.	25.4	108.4	23	884.2	900.5	98	4
K.I.A Met	77.5	69.1	112	668.3	721.7	93	7
Kasungu Met	50.9	64.3	79	409.5	673.4	61	8
Mchinji Boma	42.7	57.8	74	746.0	851.3	88	5
Nathenje Agric	54.4	62.7	87	635.7	718.7	89	6
Nkhotakota Met	138.5	118.2	117	837.2	988.4	85	8
Salima Met	153.0	98.7	155	853.3	966.2	88	8
NORTHERN REGION							
Bolero Met	54.7	47.9	114	420.1	538.4	78	7
Chikangawa forest	27.5	76.1	36	778.6	810.4	96	5
Chitipa Met	65.9	64.3	103	546.2	761.6	72	7
Karonga Met.	101.3	73.4	138	596.0	614.8	97	0
Mbawa Res. Stn	100.9	68.8	147	653.5	688.9	95	7
Mzimba Met	40.1	71.7	56	668.2	748.9	89	6
Mzuzu Met.	41.1	81.0	51	592.2	717.1	83	5
NkhataBay Met.	18.4	97.5	19	567.0	819.2	69	6

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 01 – 10 MARCH 2011

STATION	MAX TEMP	MIN TEMP	ABS MAX	ABS MIN	WIND SPEED	RH	SUN SHINE HOURS	Eo mm per day	Et mm per day	RAD- TION cal cm ⁻² p/day
	(°C)	(°C)	(°C)	(°C)	m/s	%				
BOLERO	28.3	17.9	29.7	16.8	1.0	77	5.7	5.7	4.5	8.1
BVUMBWE	25.0	N/A	26.8	N/A	1.8	77	N/A	N/A	N/A	N/A
CHICHIRI	25.7	17.4	27.1	15.7	0.8	75	N/A	N/A	N/A	N/A
CHILEKA	28.0	20.1	29.4	18.7	2.8	74	6.5	6.5	5.2	8.6
CHITEDZE	26.3	17.4	27.7	15.9	0.7	82	5.2	5.2	4.1	7.8
CHITIPA	27.5	16.9	28.4	16.1	1.0	72	N/A	N/A	N/A	N/A
DEDZA	22.6	15.1	24.4	13.8	0.8	85	N/A	N/A	N/A	N/A
K I A	25.4	16.4	27.0	14.3	1.1	80	5.5	5.3	4.1	8.0
KARONGA	29.4	20.9	30.4	20.2	0.8	81	6.2	6.0	4.8	8.4
KASUNGU	N/A	18.7	N/A	17.2	1.0	81	6.0	3.9	2.9	8.3
MANGOCHI	31.1	22.1	32.1	21.4	1.2	73	6.0	6.4	5.2	8.3
MIMOSA	N/A	19.6	N/A	18.5	1.1	76	N/A	N/A	N/A	N/A
MONKEY BAY	28.8	22.5	30.7	21.6	1.3	76	5.3	6.0	4.8	7.9
MZIMBA	26.3	16.4	28.1	15.4	0.9	79	5.2	5.3	4.1	7.8
MZUZU	25.0	16.4	26.4	14.5	1.3	84	5.0	5.1	4.0	7.7
NGABU	34.1	22.1	36.4	21.0	1.6	71	N/A	N/A	N/A	N/A
NKHATA BAY	29.8	20.2	31.3	18.8	0.8	83	4.8	5.5	4.3	7.5
NKHOTAKOTA	27.7	21.1	29.0	19.4	1.6	82	4.5	5.6	4.5	7.4
NTAJA	28.8	21.0	30.3	20.6	1.2	81	6.4	6.2	4.9	8.5
SALIMA	27.7	21.5	29.3	20.1	1.5	81	6.5	6.2	4.9	8.6

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