



Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services



Period: 21 – 28 February 2011

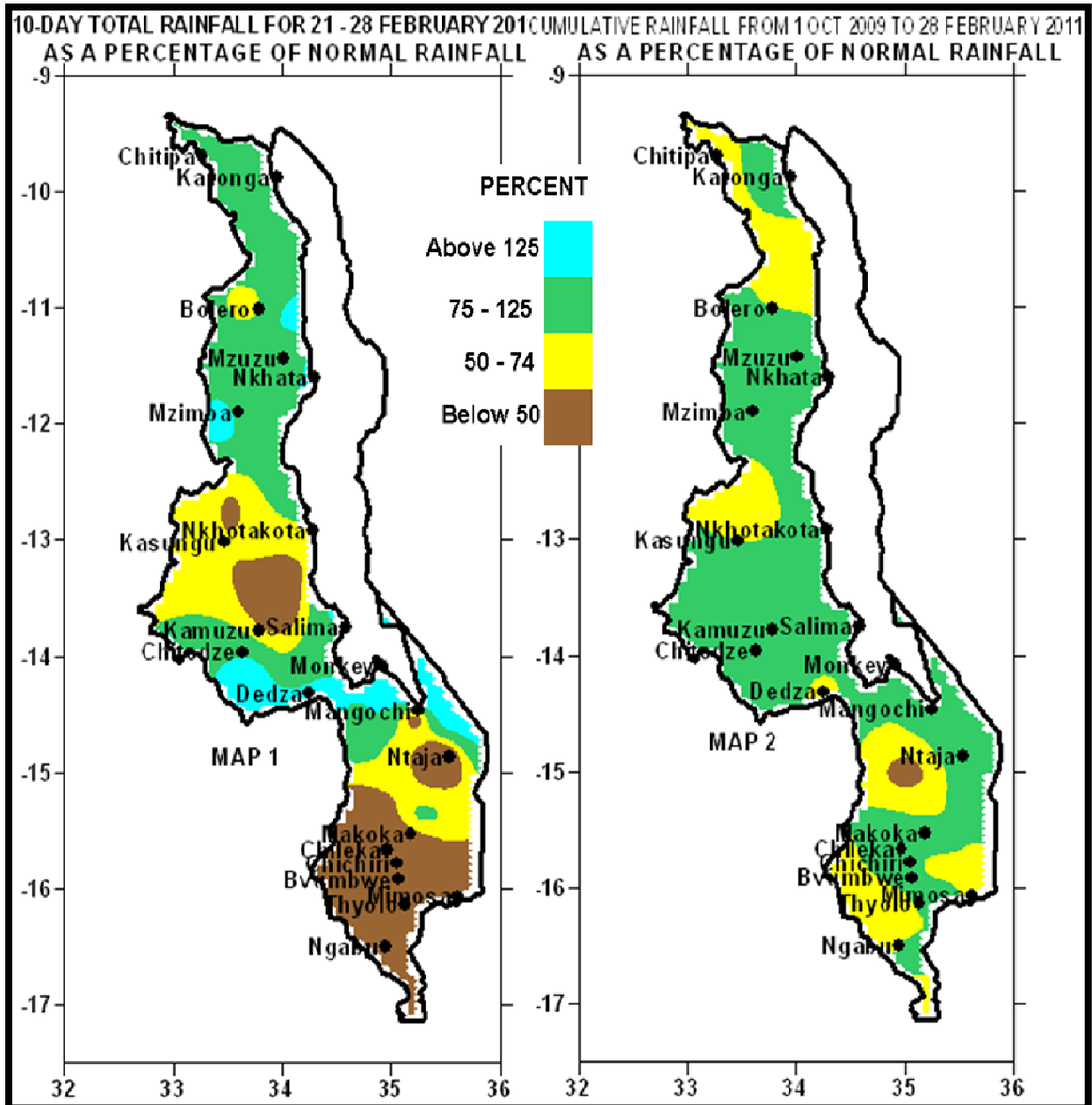
Season: 2010/2011

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HIGHLIGHTS

- ❖ Mostly dry south, light to moderate rainfall over north & centre ...
- ❖ Dry spells compromise crop yields especially in lower altitude areas in the south...
- ❖ More rains expected over the North and Centre during 01– 10 March 2011...



1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the last days of February 2011, Malawi experienced a mixed rainfall pattern. Moderate to heavy rainfall was reported over most areas of northern and central Malawi except a few areas particularly in Dowa, Ntchisi and Kasungu which registered light rainfall with poor distribution. Heavy rainfall amounts in excess of 100mm were recorded in a few areas such as Salima Met (104mm), Lifuwu (156mm), Bunda College (121mm) and Namwera Agric (174mm) and Namiasi Agric (110mm) in Mangochi. On the other hand most areas in southern Malawi were mostly dry with very few places registering light rainfall. Areas that reported nil rainfall throughout the period were mostly confined along the Shire River from Balaka to Nsanje including Mwanza and Neno districts and some parts of Blantyre, Chiradzulu, Thyolo, and Mulanje districts. More details are in Table 1.

On 28th February 2011, the cumulative rainfall picture 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 just a few areas (yellow and brown colours on Map 2).

1.2 MEAN AIR TEMPERATURE

During the last days of February 2011, warm to hot temperatures were maintained over Malawi. Average daily maximum temperatures ranged from 25°C at Mzuzu to 34°C at Ngabu. The highest absolute daytime temperature was still reported at Ngabu (35°C) in Shire Valley while the lowest absolute night temperature was 14°C reported at Mzuzu. See more details in Table 2.

1.4 MEAN WIND SPEEDS

Average wind speeds at a height of two metres above the ground were still light. The lowest was 0.5 m/s (1.8 Km/h) recorded at Chitedze Research Station and Chitipa and the highest was 2.3 m/s (8.3 Km/h) reported at Chileka. See more details in Table 2.

1.5 MEAN RELATIVE HUMIDITY

In the last ten days of February 2011, air over Malawi remained relatively drier than during the previous reporting period. The lowest reported daily average relative humidity was 50% compared to 69% report during the second ten days of February. The highest daily average relative humidity value was 84% reported at Mzuzu Airport. More details are in the Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

During the last 10-days of February 2011, good rains for agricultural production were confined to northern and central

Malawi while dry spells continued to deplete soil moisture in most of southern



Malawi causing wilting and premature drying of crops. According to fortnightly crop reports from field officers of the Ministry of Agriculture and Food Security, crops were reported doing well in central and northern Malawi while the negative impact of dry spells was reported worst for the late planted crops in southern Malawi particularly along the Shire River from Mangochi to Nsanje where in some areas crops have been scorched and reached permanent wilting point (**Fig. 1**). Localised dry spells have compromised crop yield in the south. No major outbreaks of pests and diseases have been reported over the country.

3. PROSPECTS OF 2010/11 RAINFALL SEASON

Despite dry spells in February, climate model forecasts continue to 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 01 – 10 MARCH 2011

Medium range forecast suggest that during the first 10-days of March 2011 more rains with better distribution and amounts will still be confined to central and northern Malawi while generally light rainfall is expected in the south.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 21 – 28 FEBRUARY 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	33.0	47.2	70	249.0	679.0	37	1
Bvumbwe Met.	1.5	62.4	2	813.3	833.7	98	1
Chichiri Met.	20.4	52.5	39	772.0	972.5	79	2
Chikwawa Boma	0.0	32.8	0	349.0	603.4	58	0
Chikweo Agric.	72.8	67.5	108	799.7	806.4	99	3
Chileka Airport	3.1	47.9	6	624.6	684.8	91	2
Kasinthula Res. Stn.	0.0	41.4	0	497.8	529.2	94	0
Mpilipili	85.5	58.4	146	670.8	709.4	95	6
Makhanga Met	0.0	33.4	0	478.9	564.1	85	0
Makoka Met	16.4	56.8	29	837.2	760.0	110	3
Mangochi Met.	29.5	47.5	62	541.3	530.9	102	2
Mimosa Met.	0.0	62.9	0	760.9	1002.6	76	0
Monkey Bay Met.	49.4	33.7	147	436.2	479.5	91	4
Mpemba Vet	25.3	54.7	46	918.7	848.6	108	1
Mulanje Boma	11.0	55.9	20	878.5	1209.8	73	1
Mwanza Boma	0.0	57.4	0	561.0	780.5	72	0
Namiasi Agric	109.8	50.0	220	518.1	615.8	84	3
Namwera Agric	173.9	63.1	276	623.6	780.1	80	4
Neno Agric	0.0	51.2	0	700.7	841.7	83	0
Ngabu Met.	0.0	40.9	0	452.2	590.6	77	0
Nsanje Boma	0.0	43.6	0	524.2	811.4	65	0
Ntaja Met.	4.2	57.5	7	673.2	676.0	100	2
Thuchila Agric	0.0	47.4	0	487.4	668.4	73	0
Thyolo Boma	0.0	52.6	0	784.9	833.9	94	0
Thyolo Met	0.0	136.2	0	937.7	921.9	102	0
Zomba RTC	64.0	66.1	97	830.0	903.7	92	3
CENTRAL REGION							
Bunda College	120.7	73.2	165	695.4	699.5	99	8
Chitedze Met.	79.1	66.9	118	597.9	669.5	89	7
Dowa Agric	10.8	64.9	17	538.6	673.9	80	3
Dwangwa Sugar Corp.	87.0	70.1	124	858.8	792.1	108	5
K.I.A Met	39.5	66.5	59	590.8	652.6	91	4
Lifuwu	155.9	86.4	180	498.1	879.8	57	5
Malomo Agric	26.6	48.8	55	562.9	630.3	89	3
Mchinji Boma	53.9	70.0	77	703.3	793.5	89	5
Nathenje Agric	57.0	66.5	86	581.3	656.0	89	5
Nkhotakota Met	63.2	85.7	74	698.7	870.2	80	6
Ntcheu - Nkhanda	66.9	69.3	97	548.2	817.3	67	5
Ntchisi Boma	33.0	75.3	44	779.9	905.4	86	3
Salima Met	103.8	92.8	112	700.3	867.5	81	5
Dedza RTC	61.0	42.3	144	482.5	764.7	63	5
NORTHERN REGION							
Baka Res. Stn.	69.8	54.6	128	503.1	615.5	82	5
Bolero Met	21.2	35.1	60	365.4	490.5	74	3
Bwengu Agric.	58.8	45.4	130	440.3	577.3	76	4
Chikangawa forest	47.0	63.9	74	751.1	734.3	102	3
Chitipa Met	57.7	58.7	98	480.3	697.3	69	3
Emfeni Agric	21.6	50.8	43	276.3	613.7	45	4
Karonga Met.	48.8	55.9	87	494.7	541.4	91	0
Mbawa Res. Stn	64.5	46.8	138	552.6	620.1	89	3
Mzimba Met	69.4	54.4	128	628.1	677.2	93	7
Mzuzu Met.	32.6	42.9	76	551.1	636.1	87	4
NkhataBay Met.	84.4	55.3	153	548.6	721.7	76	4
Zombwe Agric	52.5	47.4	111	546.7	532.2	103	2

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 21 – 28 FEBRUARY 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	27.8	17.6	29.1	15.6	1.0	78	4.9	5.4	4.3	7.7
BVUMBWE	25.4	15.9	25.9	14.9	2.0	73	N/A	N/A	N/A	N/A
CHICHIRI	26.2	17.2	27.5	16.0	0.9	50	N/A	N/A	N/A	N/A
CHILEKA	29.6	19.9	31.0	18.5	2.3	69	7.7	7.1	5.7	9.4
CHITEDZE	26.3	17.7	28.2	16.9	0.5	78	4.3	5.0	4.0	7.2
CHITIPA	26.7	13.6	28.1	16.1	0.5	78	N/A	N/A	N/A	N/A
K I A	25.4	17.0	28.0	16.4	1.2	80	N/A	N/A	N/A	N/A
KARONGA	29.5	21.4	30.4	20.7	0.7	80	6.3	6.2	4.9	8.6
MAKOKA	27.8	17.4	28.7	15.8	0.9	78	7.6	6.3	4.9	9.4
MANGOCHI	29.6	21.6	31.8	20.7	0.8	77	7.5	6.7	5.3	9.3
MIMOSA	30.6	18.4	31.5	16.9	1.0	68	N/A	N/A	N/A	N/A
MONKEY BAY	28.5	22.8	30.8	20.7	1.1	82	5.5	5.9	4.7	8.0
MZIMBA	26.2	16.5	27.9	15.5	0.8	78	N/A	N/A	N/A	N/A
MZUZU	25.0	15.5	26.2	13.6	1.3	84	4.0	4.7	3.7	7.1
NGABU	34.4	21.7	35.4	20.9	1.7	60	N/A	N/A	N/A	N/A
NKHATA BAY	29.2	20.4	31.0	19.0	0.6	84	3.9	5.1	4.0	7.0
NKHOTAKOTA	27.4	21.2	28.9	20.0	1.6	81	4.7	5.7	4.5	7.5
NTAJA	28.2	20.6	30.6	19.9	0.9	79	6.4	6.1	4.8	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) = mps x 3.6