Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services

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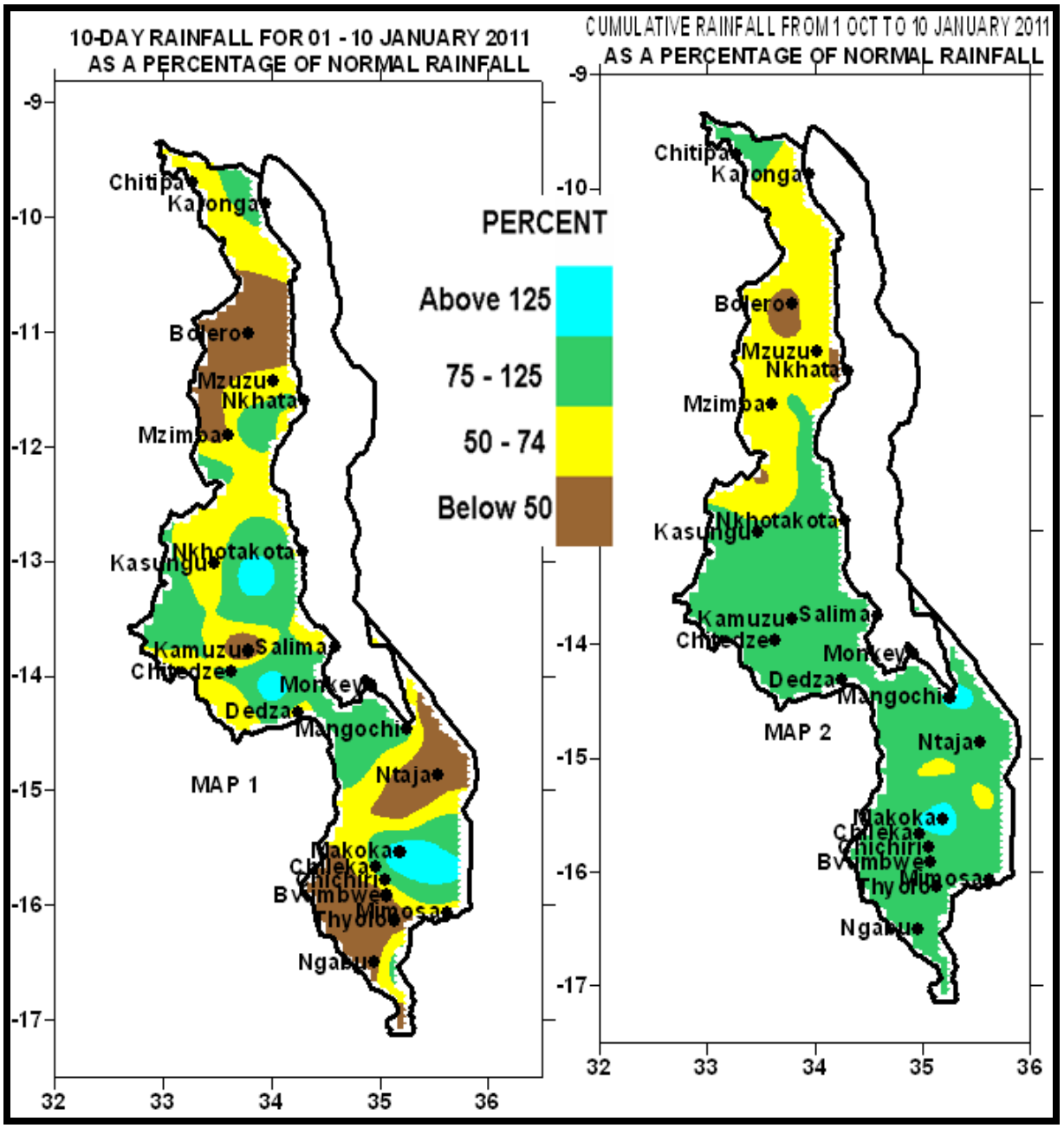
HIGHLIGHTS

- Slight improvement in rainfall distribution experienced over Malawi …
- Maize crop reported encouraging mostly at vegetative stage…
- Light to moderate rainfall to persist during 11 – 20th January 2011…



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1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During first ten days of January 2011, Malawi was under still under a broad equatorial trough. However, the main rain bearing systems were fairly active and most areas experienced slight improvement in rainfall distribution although the amounts were generally light and far below average in some areas (brown *Colour on Map 1*). During the period under review, very few areas mainly over the south and centre reported cumulative rainfall amounts in excess of 100mm. Such places included Makoka Met (157mm) in Zomba district, Naminjiwa (118mm) in Phalombe, Nathenje (132mm) in Lilongwe and Malomo Agric (119mm) in Ntchisi. More details are in Table 1 and Map 1.

Cumulative rainfall performance as at 10th January 2011 (Map 2) showed below average rainfall performance in the north, generally average cumulative rainfall amounts over the centre and south.

1.2 MEAN AIR TEMPERATURE

Increased cloud cover caused reduction in day time temperatures. The average maximum temperatures ranged from 23°C at Dedza to 35°C at Ngabu in Shire Valley. The highest absolute daytime temperature dropped from 37°C in the last ten days of December to 36°C. while the lowest absolute night temperature was 13°C reported at Chongoni in 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 light. The lowest was 0.6 m/s (2.2 Km/h) recorded at Chichiri and the highest was 2.5 m/s (9.0 Km/h) reported at Chileka. See more details in Table 2.

1.5 MEAN RELATIVE HUMIDITY

During the first ten days of January 2011, fairly moist air covered most parts of Malawi. Almost all areas reported daily average relative humidity values of 65% and above. The highest daily average relative humidity value was 83% reported at Nkhata Bay and the lowest was 65% registered at Bolero. More details are in the Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

During the first ten days of January 2011, there was an improvement in rainfall distribution in that most areas that were mostly dry during the last ten days of December 2010 received light to moderate rainfall. This rainfall replenished soil moisture reserves and supported growth and development of most crops. The seasonal rainfall performance so far has been better than last season. Although the onset has been late in some areas, generally most areas have experienced timely onset with good distribution and intensity. The good rainfall performance has improved pasture availability for animal production and supported water resources.

The general crop stand in the fields particularly for maize has been reported encouraging and higher yields are expected this season if the good rains will persist up to February and March 2011. Maize crop ranged from vegetative to tasselling stages in the south and mostly vegetative in the north. So far no major outbreaks of pests and diseases have been reported over the country.

3. PROSPECTS OF 2010/11 RAINFALL SEASON

Climate model forecast still suggests that during 2010/2011 rainfall season, a greater part of Malawi is likely to experience normal to above normal total rainfall amounts as *La Nina* conditions have become fully established over the eastern equatorial Pacific Ocean. By 10th January 2011 the rainfall performance in Malawi has supported crop germination and establishment as well as crop growth and development. In simple terms the seasonal rainfall so far has been adequate to support both water resources and agricultural production.

4. OUTLOOK 11 – 20 JANUARY 2011

Medium range forecast suggest that most areas in Malawi will continue to experience good rainfall distribution and intensity during the second ten days of January 2011. The rains will be due to the presence of active Congo Air mass. These rains will support most farm operations including growth and development of most crops.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 01 – 10 JANUARY 2011 AT SELECTED STATIONS

STATION NAME	DEKADAL TOTAL RAINFALL	DEKADAL NORMAL	DEKADAL TOTAL AS %	TOTAL TO DATE	NORMAL TO DATE	TOTAL TODATE AS %	RAINY DAYS
SOUTHERN REGION	mm	mm	NORMAL	mm	mm	NORMAL	≥ 0.3 mm
Bvumbwe Met.	14.8	80.2	18	514.2	416.5	123	4
Chichiri Met.	79.7	88.2	90	559.4	666.2	84	6
Chileka Airport	48.8	68.1	72	465.0	352.8	132	4
Chingale Agric	57.4	70.4	82	422.9	362.6	117	4
Chizunga Factory	57.6	96.6	60	530.0	573.8	92	4
Kasinthula Res. Stn.	32.7	62.9	52	374.0	291.5	128	3
Liwonde Township	11.5	60.2	19	204.1	292.1	70	2
Lujeri Tea Estate	58.7	135.4	43	662.6	813.6	81	3
Makhanga Met	80.3	62.2	129	245.6	320.6	77	4
Makoka Met	157.1	76.4	206	581.8	379.4	153	6
Mangochi Met.	45.4	54.2	84	276.2	210.7	131	3
Mimosa Met.	22.3	97.7	23	477.0	561.7	85	5
Monkey Bay Met.	45.9	49.1	93	157.0	199.4	79	2
Mulanje Boma	64.2	107.1	60	582.1	702.4	83	3
Naminjiwa Agric	117.5	76.2	154	351.5	373.3	94	4
Namwera Agric	16.4	89.6	18	186.0	385.2	48	3
Ngabu Met.	13.0	61.3	21	286.9	312.3	92	3
Nsanje Boma	28.0	75.7	37	348.7	430.9	81	2
Ntaja Met.	24.5	70.1	35	379.2	329.4	115	4
Phalula Agric	33.1	72.7	46	257.9	345.1	75	4
Thyolo Boma	31.1	82.5	38	418.5	458.5	91	4
Thyolo Met	16.9	80.2	21	564.3	433.7	130	4
Zomba RTC	89.8	81.7	110	486.8	469.0	104	4
CENTRAL REGION							
Bunda College	55.6	81.8	68	272.7	353.8	77	5
Chitedze Met.	65.1	68.9	94	313.4	321.0	98	4
Dedza Met	53.1	82.5	64	284.9	336.2	85	6
Dwangwa Sugar Corp.	54.0	85.8	63	417.5	418.9	100	4
K.I.A Met	5.8	72.7	8	243.0	295.4	82	4
Kasungu Met	35.8	70.1	51	212.8	281.9	75	5
Lisasadzi	43.1	77.2	56	283.0	321.1	88	4
Malomo Agric	119.1	66.0	180	320.8	254.0	126	6
Mchinji Boma	49.2	83.0	59	374.4	427.8	88	4
Mlangeni Njolomole	60.4	70.8	85	344.4	356.1	97	6
Mwimba Research	48.5	68.4	71	446.4	323.3	138	3
Mtakataka Airwing	26.4	50.7	52	222.8	284.4	78	3
Nathenje Agric	132.1	72.1	183	356.9	311.2	115	6
Nkhotakota Met	66.1	108.8	61	268.5	423.0	63	6
Ntcheu - Nkhande	85.9	86.3	100	351.9	405.5	87	7
Ntchisi Boma	74.6	93.3	80	214.9	434.5	49	7
Salima Met	67.7	94.8	71	446.4	364.3	123	7
Dedza RTC	65.7	75.4	87	241.3	346.9	70	5
NORTHERN REGION							
Bolero Met	12.1	62.6	19	108.8	238.2	46	5
Bwengu Agric.	2.0	63.8	3	148.1	273.7	54	1
Chikangawa forest	92.6	82.4	112	299.7	368.8	81	5
Chitipa Met	48.0	71.2	67	275.3	332.3	83	4
Chintheche Agric	57.6	107.7	53	284.9	481.0	59	3
Karonga Met.	55.3	63.0	88	185.3	276.4	67	5
Mbawa Res. Stn	73.5	76.3	96	203.0	318.2	64	4
Mzimba Met	15.0	92.7	16	204.8	336.6	61	4
Mzuzu Met.	43.9	66.6	66	184.3	337.8	55	6
NkhataBay Met.	70.8	89.9	79	164.6	409.2	40	6
Vinthukutu Agric	46.0	72.5	63	197.0	313.4	63	2
Zombwe Agric	33.9	68.6	49	129.8	265.2	49	3

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 01 –10 JANUARY 2011

STATION	MAX TEMP (℃)	MIN TEMP (℃)	ABS MAX (℃)	ABS MIN (℃)	WIND SPEED m/s	RH %
BOLERO	30.2	19.0	31.5	17.2	N/A	65
BVUMBWE	26.8	17.5	27.7	16.3	1.6	75
CHICHIRI	27.4	18.7	28.6	17.4	0.6	75
CHILEKA	28.9	20.6	30.9	18.4	2.5	76
CHITEDZE	27.3	18.3	29.8	17.3	0.8	77
CHITIPA	26.9	17.6	28.6	17.0	1.4	73
DEDZA	23.4	15.0	25.6	13.1	1.2	80
K I A	27.2	17.7	28.9	17.0	1.5	72
KARONGA	30.6	22.2	33.1	20.9	1.6	70
MANGOCHI	N/A	22.8	N/A	21.4	1.4	70
MIMOSA	31.7	19.6	32.1	18.1	1.0	75
MZIMBA	27.6	16.9	29.4	15.6	1.3	72
MZUZU	28.6	17.6	28.6	15.7	1.9	77
NGABU	35.2	23.2	36.4	22.0	1.8	69
NKHATA BAY	31.5	20.9	32.8	20.3	0.7	83
NKHOTAKOTA	29.3	21.7	31.5	20.6	1.9	78
NTAJA	30.0	21.6	31.7	19.9	1.7	76
SALIMA	29.2	22.3	31.7	20.1	2.1	74

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