Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services

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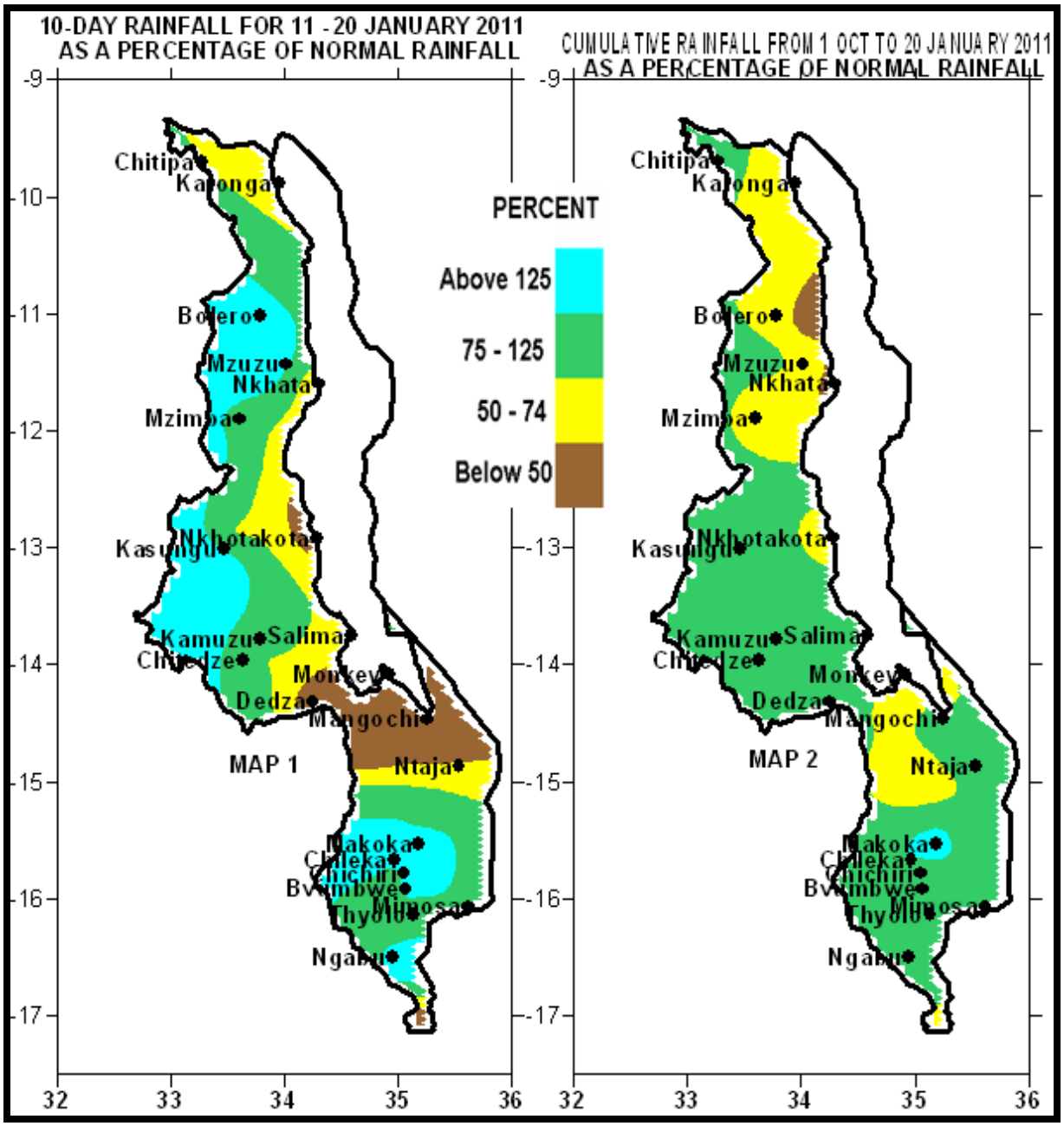
HIGHLIGHTS

- Further improvement in rainfall distribution experienced over Malawi …
- Maize crop reported promising for higher yields this season…
- Good rainfall distribution and intensity expected during 21 – 31 January 2011…



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1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During second ten days of January 2011, Malawi experienced an improvement in rainfall distribution and amounts. The improvement in rainfall distribution was due to fairly active rain belt that covered most parts of Malawi. Areas that experienced light and far below average rainfall were mostly confined along the lakeshore (yellow and brown *Colours on Map 1*). During the entire period under review, cumulative rainfall amounts in excess of 100mm were confined to southern and central Malawi and included the following stations: Mwanza Boma, Makoka, Lujeri, Chizunga factory, and Thuchila Agric in the south while in the centre such high amounts were reported at Mchinji Boma and Mwimba Research in Kasungu. More details are in Table 1.

Cumulative rainfall performance as at 20th 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 continued to cause a reduction in day time temperatures. The average maximum temperatures ranged from 23℃ at Dedza to 31.5 at Nkhata Bay. The highest absolute daytime temperature was 36℃ still reported at Ngabu in Shire Valley while the lowest absolute night temperature was 15℃ 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 0.5 m/s (1.8 Km/h) recorded at Chitedze in Lilongwe and the highest was 1.9 m/s (6.8 Km/h) reported at Chileka. See more details in Table 2.

1.5 MEAN RELATIVE HUMIDITY

During the second ten days of January 2011, fairly moist air covered most parts of Malawi. Almost all areas reported daily average relative humidity values of 75% and above. The highest daily average relative humidity value was 86% reported at Makoka in Zomba and the lowest was 75% registered at Chileka and Karonga. More details are in the Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

During the second ten days of January 2011, a further improvement in rainfall distribution and amounts was experienced in most areas that were hit by short dry spells during late December 2010. This rainfall replenished soil moisture reserves and supported growth and development of most crops. The seasonal rainfall performance in terms of distribution and amounts has been better than last season. Generally more rainy days have been reported this season. The good rainfall performance has contributed to improved pasture availability for animal production and growth and development of most crops.

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 early to advanced vegetative stages 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 continue to suggest that during 2010/2011 rainfall season, a greater part of Malawi is likely to experience average to above average total rainfall amounts as *La Nina* conditions have become fully established over the eastern equatorial Pacific Ocean. Good rainfall performance has supported establishment and growth and development of most crops.

4. OUTLOOK 21 – 31 JANUARY 2011

Medium range forecast suggest that most areas in Malawi will experience good rainfall distribution and intensity during the last ten days of January 2011. The rains will be due to the presence of active Congo Air mass and Inter Tropical Convergence Zone. These rains will support growth and development of most crops.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 11 – 20 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.	89.6	84.0	107	603.8	500.5	121	8
Chichiri Met.	88.6	74.8	118	648.0	741.0	87	7
Chikwawa Boma	50.5	61.2	83	253.2	387.9	65	4
Chileka Airport	84.7	63.9	133	549.7	416.7	132	4
Chingale Agric	74.8	64.4	116	497.7	427.0	117	6
Chizunga Factory	107.9	70.9	152	637.9	644.7	99	7
Kasinthula Res. Stn.	32.0	33.3	96	406.0	324.8	125	3
Lujeri Tea Estate	112.1	127.7	88	774.7	941.3	82	8
Mpilipili	59.0	65.9	90	354.6	412.6	86	5
Makhanga Met	93.9	47.7	197	339.5	368.3	92	6
Makoka Met	150.8	79.4	190	732.6	458.8	160	8
Mangochi Met.	11.3	64.6	17	287.5	275.3	104	5
Masambanjati Agric	74.8	82.2	91	349.0	596.1	59	5
Mimosa Met.	79.6	93.8	85	556.6	655.5	85	7
Monkey Bay Met.	12.8	54.0	24	170.6	253.4	67	5
Mpemba Vet	110.9	88.8	125	615.5	545.3	113	6
Mulanje Boma	13.6	109.7	12	595.7	812.1	73	3
Mwanza Boma	121.3	69.9	174	449.1	471.5	95	7
Namiasi Agric	17.3	78.3	22	217.9	347.9	63	4
Nchalo Sucoma	53.0	58.1	91	250.7	314.0	80	3
Ngabu Met.	75.9	55.8	136	362.8	368.1	99	6
Nsanje Boma	32.3	97.8	33	381.0	528.7	72	1
Ntaja Met.	39.2	75.2	52	418.4	404.6	103	6
Thuchila Agric	102.5	67.6	152	363.9	399.1	91	5
Thyolo Met	51.4	84.0	61	615.7	517.7	119	4
CENTRAL REGION							
Chileka Namitete	84.7	61.3	138	84.7	445.9	19	4
Chitedze Met.	66.1	79.5	83	379.5	400.5	95	8
Dedza Met	23.1	69.3	33	308.0	405.5	76	1
Dowa Agric	83.2	82.0	101	383.2	394.0	97	4
K.I.A Met	70.4	87.2	81	313.4	382.6	82	6
Mchinji Boma	188.6	79.7	237	563.0	507.5	111	10
Mwimba Research	151.6	82.4	184	598.0	405.7	147	5
Nathenje Agric	45.0	57.7	78	401.9	368.9	109	6
Nkhotakota Met	36.5	105.9	34	305.0	528.9	58	6
Ntcheu - Nkhande	25.7	97.6	26	377.6	503.1	75	2
Salima Met	75.1	117.2	64	521.5	481.5	108	7
Dedza RTC	36.5	87.2	42	277.8	434.1	64	4
NORTHERN REGION							
Bolero Met	77.6	52.0	149	186.4	290.2	64	7
Chitipa Met	48.4	65.9	73	323.7	398.2	81	5
Karonga Met.	28.9	55.3	52	214.2	331.7	65	4
Mbawa Res. Stn	89.4	59.4	151	292.4	377.6	77	7
Mzimba Met	66.4	71.1	93	271.2	407.7	67	8

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 –20 JANUARY 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^{-2} p/day
BVUMBWE	26.3	18.0	27.8	16.8	0.9	82	N/A	N/A	N/A	N/A
CHILEKA	28.4	20.8	29.5	18.6	1.9	75	3.8	5.6	4.5	7.1
CHITEDZE	26.7	18.8	28.1	17.4	0.5	80	3.4	4.9	3.9	6.8
CHITIPA	26.3	17.4	28.2	17.0	1.4	76	3.0	4.8	3.9	6.5
DEDZA	23.4	16.4	24.9	15.4	1.0	82	N/A	N/A	N/A	N/A
K I A	25.9	17.1	26.8	11.7	1.0	78	3.2	4.8	3.8	6.7
KARONGA	30.8	22.8	31.9	21.2	1.1	75	6.1	6.6	5.3	8.5
MAKOKA	27.2	19.3	28.1	18.6	0.8	86	3.5	4.9	3.9	6.9
MIMOSA	30.1	20.5	31.4	18.2	0.7	83	3.0	5.0	4.0	6.6
MZIMBA	26.2	17.3	28.1	16.2	0.8	78	4.0	5.1	4.0	7.2
NGABU	30.6	23.1	35.9	22.0	1.1	78	N/A	N/A	N/A	N/A
NKHATA BAY	31.5	21.1	32.7	20.5	0.6	78	5.6	6.2	4.9	8.2
NKHOTAKOTA	29.0	22.2	30.8	21.0	1.4	76	5.7	6.5	5.2	8.3
NTAJA	29.0	21.8	30.0	21.0	1.0	81	5.2	5.9	4.7	8.0
SALIMA	28.5	22.0	30.7	20.0	1.0	81	6.1	6.3	5.0	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