Malawi 10-Day Rainfall & Agrometeorological Bulletin

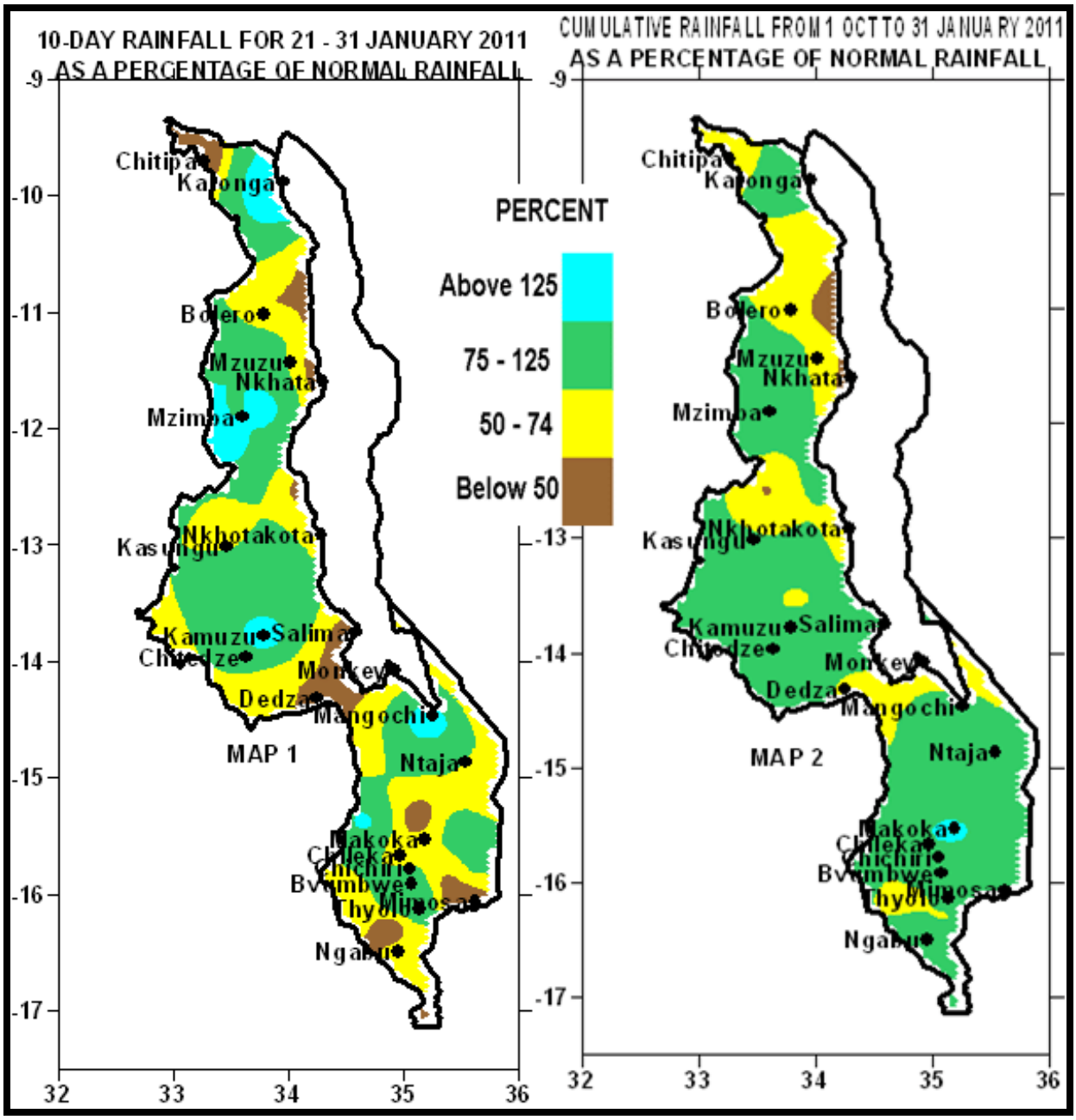
Department of Climate Change and Meteorological Services

Period: 21 – 31 January 2011 | Season: 2010/2011 | Issue No.12

Release date: 4th February 2011

HIGHLIGHTS

- A slight decline in rainfall experienced over Malawi …
- Maize crop reported promising better yields this season…
- Good rains expected over the northern half during 01– 10 February 2011…



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1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the period 21 to 31 January 2011, the main rain bearing systems became less active over Malawi. As a result most areas received light rainfall and below average cumulative 10-day rainfall amounts (yellow and brown *Colours on Map 1*). Stations which reported high cumulative ten day rainfall amounts in excess of 110mm included Satemwa Tea Estate (150mm), Bvumbwe Met (136mm), Mangochi Met (127mm) in the south and Mbawa Research (111mm) in Mzimba and Karonga Met (116mm) in the north. More details are in Table 1.

Cumulative rainfall performance as at 31st January 2011 (Map 2) showed that a greater part of Malawi had received average cumulative rainfall amounts with pockets of below average rainfall amounts confined mostly to northern Malawi (yellow and brown colours on Map 1).

1.2 MEAN AIR TEMPERATURE

Increased cloud cover maintained warm to hot temperatures over most parts of Malawi. The average maximum temperatures ranged from 23°C at Dedza to 33°C at Ngabu. The highest absolute daytime temperature was 35°C still reported at Ngabu in Shire Valley while the lowest absolute night temperature was 11°C reported at Kamuzu International Airport in Lilongwe. 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 light. The lowest was 0.5 m/s (1.8 Km/h) recorded at Chichiri in Blantyre 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 last ten days of January 2011, air over Malawi became drier than the previous ten days of January. During this period the lowest average relative humidity was 68% reported at Salima while during the second ten day period of January the lowest was 75% registered at Chileka and Karonga. However, the highest daily average relative humidity value was 87% still reported at Makoka in Zomba. More details are in the Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

During the last 10-days of January 2011, there was a decline in rainfall amounts over some parts of Malawi. Most areas in Malawi received light rainfall that resulted in below average cumulative ten day rainfall situation. However, reports from the fields indicated that crops survived on residual soil moisture following good rainfall performance in this season.

Crops were reported doing well mostly between vegetative, flowering and cob formation stages. If good rains continue up to early March, yields of most crops are anticipated to be higher than last season. So far no major outbreaks of pests and diseases have been reported over the country.

3. PROSPECTS OF 2010/11 RAINFALL SEASON

Climate model forecasts continue to suggest that during February, March and April 2011, 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 so far translated into a good crop stand in the fields and better yields are expected this season compared to last season when most areas experienced poor rainfall performance with prolonged dry spells.

4. OUTLOOK 01 – 10 FEBRUAYY 2011

Medium range forecast suggest that during the first 10-days of February 2011 heavy rains will shift to central and northern Malawi. Therefore above average rainfall amounts with better distribution in time and space are expected to be confined to northern half of the country with average rainfall amounts in the south.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 21 – 31 JANUARY 2011 AT SELECTED STATION

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.	136.4	106.7	128	740.2	607.2	122	6
Chichiri Met.	47.3	53.8	88	695.3	794.8	87	9
Chikwawa Boma	56.4	74.5	76	309.6	462.4	67	3
Chikweo Agric.	72.4	98.7	73	609.8	595.3	102	5
Chileka Airport	41.5	81.3	51	591.2	498.0	119	2
Chingale Agric	21.9	90.7	24	519.6	517.7	100	3
Kasinthula Res. Stn.	32.2	62.5	52	438.2	387.3	113	2
Lujeri Tea Estate	62.9	134.8	47	837.6	1076.1	78	7
Mpilipili	54.1	78.9	69	408.7	491.5	83	3
Makhanga Met	33.8	51.9	65	373.3	420.2	89	4
Makoka Met	59.1	89.6	66	791.7	548.4	144	8
Mangochi Met.	126.7	70.7	179	414.2	346.0	120	5
Masambanjati Agric	82.5	93.9	88	431.5	690.0	63	6
Mimosa Met.	9.3	117.1	8	565.9	772.6	73	2
Monkey Bay Met.	34.5	74.0	47	205.1	327.4	63	3
Mpemba Vet	97.3	95.8	102	712.8	641.1	111	6
Mwanza Boma	77.5	94.4	82	526.6	565.9	93	4
Namiasi Agric	84.6	75.1	113	302.5	423.0	72	5
Naminjiwa Agric	79.8	96.5	83	506.0	554.6	91	3
Nchalo Sucoma	22.0	50.7	43	272.7	364.7	75	3
Neno Agric	150.2	103.0	146	653.3	613.9	106	6
Ngabu Met.	33.7	61.2	55	396.5	429.3	92	3
Ntaja Met.	63.8	91.4	70	482.2	496.0	97	6
Phalula Agric	44.1	74.1	60	421.6	481.1	88	5
Satemwa Tea Est. No.1	150.4	90.3	167	383.6	569.2	67	7
Thuchila Agric	27.1	83.9	32	391.0	483.0	81	3
Thyolo Boma	108.7	91.2	119	661.9	606.3	109	7
Thyolo Met	79.9	103.9	77	812.2	621.6	131	7
Zomba RTC	86.8	107.3	81	717.6	667.0	108	8
CENTRAL REGION							
Chitedze Met.	71.7	79.2	91	451.2	479.7	94	5
Dedza Met	48.2	102.1	47	356.2	507.6	70	6
Dwangwa	33.0	84.7	39	533.5	585.2	91	4
K.I.A Met	111.6	69.5	161	425.0	452.1	94	8
Kasungu Met	37.2	70.0	53	283.1	414.2	68	5
Lisasadzi	81.5	80.9	101	442.8	469.7	94	6
Malomo Agric	67.5	55.1	123	411.8	434.8	95	6
Mchinji Boma	41.9	79.2	53	604.9	586.7	103	7
Mponela Agric	80.0	77.2	104	288.5	427.4	68	7
Mwimba Research	62.8	71.1	88	660.8	476.8	139	6
Nathenje Agric	54.8	90.8	60	456.7	459.7	99	7
Nkhotakota Met	50.5	97.8	52	355.5	626.7	57	3
Ntcheu - Nkhande	37.4	84.6	44	415.0	587.7	71	5
Salima Met	9.4	99.2	9	530.9	580.7	91	6
NORTHERN REGION							
Bolero Met	26.8	53.3	50	213.2	343.5	62	3
Bwengu Agric.	45.9	74.0	62	194.0	406.9	48	3
Chikangawa forest	106.5	73.1	146	518.7	525.4	99	6
Chitipa Met	6.2	75.3	8	329.9	473.5	70	1
Karonga Met.	115.9	56.0	207	330.1	387.7	85	1
Mbawa Res. Stn	110.7	63.2	175	403.1	440.8	91	6
Mzimba Met	76.3	68.6	111	347.5	476.3	73	5
Mzuzu Met.	47.4	68.9	69	320.1	476.0	67	5
NkhataBay Met.	18.2	64.2	28	210.1	539.0	39	4
Vinthukutu Agric	27.0	58.8	46	232.7	441.2	53	2
Zombwe Agric	60.9	54.2	112	314.1	373.4	84	4

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 21 – 31 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
BOLERO	29.8	18.7	31.8	17.6	1.0	71	N/A	N/A	N/A	N/A
BVUMBWE	25.4	17.3	27.1	15.5	1.5	77	N/A	N/A	N/A	N/A
CHICHIRI	26.8	18.7	29.0	17.0	0.5	75	N/A	N/A	N/A	N/A
CHILEKA	28.4	20.6	30.7	18.9	1.9	74	5.2	6.1	4.9	8.0
CHITEDZE	27.7	18.2	29.5	16.3	0.7	76	5.3	5.7	4.5	8.0
CHITIPA	27.7	17.1	29.3	16.4	1.2	69	9.2	7.1	5.5	10.6
DEDZA	23.3	16.2	25.2	14.7	1.0	81	N/A	N/A	N/A	N/A
K I A	26.7	15.7	28.3	11.2	1.4	76	N/A	N/A	N/A	N/A
KARONGA	30.7	22.4	32.3	20.6	1.2	75	10.5	8.3	6.6	11.4
KASUNGU	28.1	18.5	30.2	18.0	1.5	75	N/A	N/A	N/A	N/A
MAKOKA	27.7	20.7	29.0	17.9	1.3	87	3.6	5.1	4.0	6.9
MANGOCHI	N/A	23.7	N/A	19.5	1.7	85	N/A	N/A	N/A	N/A
MIMOSA	30.6	19.5	32.2	17.6	1.1	75	N/A	N/A	N/A	N/A
MONKEY BAY	30.5	23.0	33.7	21.1	1.7	71	6.2	6.8	5.5	8.6
MZIMBA	27.3	17.5	28.7	16.6	1.1	75	6.2	6.0	4.7	8.6
MZUZU	27.4	17.2	28.8	16.7	1.4	76	6.0	5.9	4.7	8.5
NGABU	33.0	22.3	34.8	20.6	1.2	70	N/A	N/A	N/A	N/A
NKHATA BAY	32.1	20.8	33.7	20.0	0.7	76	6.7	6.7	5.3	8.9
NKHOTAKOTA	29.9	22.2	30.7	20.4	1.7	74	6.5	7.0	5.6	8.8
NTAJA	29.2	20.9	32.0	20.0	1.0	78	4.7	5.7	4.6	7.6
SALIMA	29.3	22.2	30.9	20.0	1.0	68	6.0	6.5	5.2	8.5

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