10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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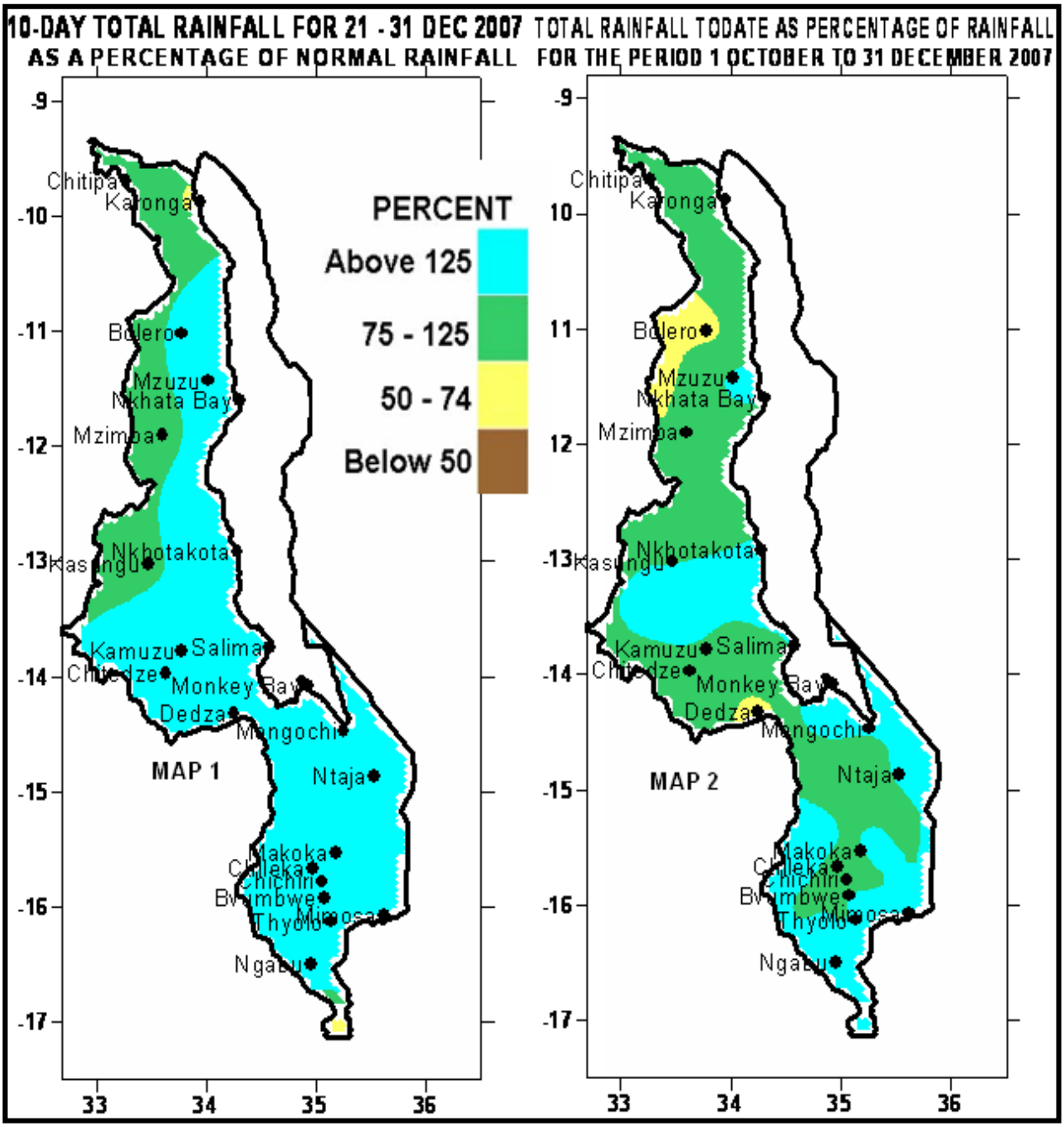
HIGHLIGHTS

- **Above normal rainfall experienced over most parts of Malawi…**
- **Maize crop reported doing well at vegetative stage …**
- **Widespread rains expected to continue during 1 – 10 January, 2008…**



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1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the last ten days of December 2007, both main rain bearing systems, namely Congo Air mass and Inter Tropical Convergence Zone were active over Malawi. As a result widespread locally heavy rains were experienced over the country. The two rain bearing systems improved the spatial and temporal distribution of rainfall over most parts of the country. Most areas registered more than eight rainy days. Above average ten day rainfall amounts were reported over most areas. See Table 1. However, areas with ten day total rainfall amounts of higher than 200mm were mostly confined to southern highlands where Lujeri reported 310mm, Mulanje Boma 265mm, Chizunga 248mm and Satemwa 215mm (See Table 1). These high rainfall figures in the catchment of Shire river have the potential to cause flooding in Shire Valley if heavy rains continue in the next few days.

Cumulative rainfall performance mid way through 2007/08 rainfall season suggest that by 31 December 2007 most areas in the south and central Malawi had received normal to above normal rainfall amounts (green and light blue colours on Map 2) with pockets of below normal rainfall (yellow colour) confined to some parts of the north. Pockets of below normal rainfall situation are mostly due to late onset of the main rains this season.

1.2 MEAN AIR TEMPERATURE

Due to high cloud cover during the last ten days of December 2007 mean daily maximum temperatures over Malawi were in the warm to hot category. The highest was reported at Ngabu. At the same time, mean daily minimum temperatures ranged from 17.5°C at Mzimba to 23.3°C at Ngabu (Table 2).

1.3 MEAN DAILY WIND SPEEDS

Mean daily wind speeds, measured at a height of two meters above the ground were light. The highest wind speed was reported at Chileka (2.5 m/s or 9 Km/hr) while the lowest wind speed was recorded at Chitedze (0.6m/s or 2.2 Km/hr). See Table 2.

1.4 MEAN RELATIVE HUMIDITY

Due to persistence of wet surface conditions, mean daily relative humidity values were high over most areas. The highest was registered at Chichiri in Blantyre (93%) while the lowest was registered at Karonga (75%). See Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

Ten day rainfall amounts during the period under review had been significantly above normal over most most parts of the country.

The major farming activities during the period includedplanting of crops, weeding and basal fertiliser application depending on when the first effective rains were received. The rains have significantly improved pasture availability for animal production, water resources, soil moisture reserves and supported seed germination, growth and development of crops. Due to variations in onset of main planting rains maize crop was reported at various stages of development ranging from planting to vegetative stages. Planting of crops was being finalised in the south and some parts of the centre while still going on in the north. Planting of crops in the north sometimes continue into January and early February.

The general crop stand in the fields particularly for maize was reported in good condition So far no major outbreaks of pests and diseases have been reported over the country..

3. PROSPECTS OF 2007/08 SEASON

Climate prediction models update for November 2007 to January 2008 indicate that Malawi will experience normal to above normal total rainfall amounts with an increased chance of floods.

4. OUTLOOK FOR 1 – 10 January 2008

Meanwhile, models for medium range forecasts indicate that during the first ten days of January 2008.both Congo Airmass and Inter Tropical Covergence Zone are likely to be active over Malawi. As result widespread locally heavy rains are anticipated to continue over the country.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 3 OF DECEMBER 2007: PERIOD 21 - 31

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**	**[3] 0.3 mm**
Bvumbwe Met.	151.1	71.6	**211**	434.3	345.7	**126**	9
Chancellor College	124.1	106.5	**117**	533.5	441.9	**121**	8
Chichiri Met.	142.4	73.4	**194**	380.6	352.8	**108**	9
Chileka Airport	78.5	64.8	**121**	278.7	301.9	**92**	7
Chiradzulu Agric	190.6	92.4	**206**	359.3	343.6	**105**	7
Chizunga Factory	248.0	100.8	**246**	686.0	477.2	**144**	10
Kasinthula Res. Stn.	212.5	53.0	**401**	614.4	228.6	**269**	7
Lujeri Tea Estate	309.5	125.3	**247**	940.3	678.2	**139**	10
Mpilipili (Makanjila)	143.1		**N/A**	282.1		**N/A**	9
Makoka Met	142.2	72.1	**197**	406.9	319.2	**127**	8
Mangochi Met.	93.4	67.1	**139**	320.3	251.0	**128**	8
Mulanje Boma	265.2	95.7	**277**	718.5	524.1	**137**	11
Nankumba Agric	155.1	64.3	**241**	435.4	265.8	**164**	10
Nchalo Sucoma	124.0	45.4	**273**	390.1	225.6	**173**	8
Neno Agric	194.0	81.2	**239**	706.0	336.0	**210**	11
Ngabu Met.	111.9	65.2	**172**	448.4	265.8	**169**	7
Nsanje Boma	43.0	70.5	**61**	483.6	294.1	**164**	3
Ntaja Met.	182.7	64.4	**284**	359.7	276.6	**130**	9
Satemwa Tea Est	207.2	78.1	**265**	594.6	432.9	**137**	10
Thyolo Met	215.0	84.4	**255**	537.0	386.7	**139**	9
Zomba RTC	205.7	91.6	**225**	602.1	408.1	**148**	8
CENTRAL REGION							
Bunda College	135.8	74.3	**183**	280.8	305.7	**92**	7
Chileka Namitete	119.8	61.0	**196**	310.2	298.5	**104**	6
Chitedze Met.	118.1	71.5	**165**	301.4	292.2	**103**	9
Dwangwa Sugar Corp.	190.9	88.7	**215**	370.2	340.4	**109**	10
K.I.A Met	106.9	63.6	**168**	251.0	239.0	**105**	11
Mchinji Boma	114.5	82.9	**138**	392.9	328.0	**120**	6
Mponela Agric	118.5	52.5	**226**	348.8	208.9	**167**	7
Mwimba Research	75.8	87.8	**86**	356.0	282.6	**126**	6
Nkhotakota Met	257.6	93.4	**276**	414.4	317.3	**131**	10
Ntchisi Boma	113.6	74.7	**152**	376.3	241.1	**156**	5
Salima Met	148.3	86.9	**171**	386.8	295.7	**131**	8
Dedza RTC	101.8	72.5	**140**	157.2	271.5	**58**	10
NORTHERN REGION							
Chitipa Met	128.3	102.7	**125**	276.4	303.5	**91**	9
Karonga Met.	43.1	70.9	**61**	176.5	242.6	**73**	6
Mzimba Met	69.3	74.4	**93**	198.4	262.3	**76**	10
Mzuzu Met.	133.6	82.6	**162**	502.6	362.3	**139**	8
Vinthukutu Agric	93.4	67.0	**139**	287.0	269.7	**106**	3

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 3 OF DECEMBER 2007

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
BVUMBWE	24.8	17.8	27.6	16.5	1.2	87
CHICHIRI	27.8	20.5	27.2	17.5	0.8	93
CHILEKA	27.2	21.0	29.2	19.6	2.5	87
NTAJA	27.4	20.8	29.2	19.6	1.1	86
CHITEDZE	28.1	20.5	27.9	17.6	0.6	90
KARONGA	29.7	22.4	31.0	20.5	1.5	78
K.I.A.	24.9	17.8	27.2	16.9	1.5	86
MAKOKA	25.9	19.6	28.0	18.1	1.3	87
MANGOCHI	N/A	21.8	33.6	21.0	1.0	85
MZIMBA	25.2	17.5	28.2	16.8	0.8	79
MZUZU	25.7	17.6	27.5	16.7	1.5	81
NGABU	31.4	23.3	33.7	21.7	1.6	64
NKHOTAKOTA	27.4	21.3	29.0	19.3	1.5	79
SALIMA	27.8	21.8	29.1	20.2	2.0	84

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