Malawi 10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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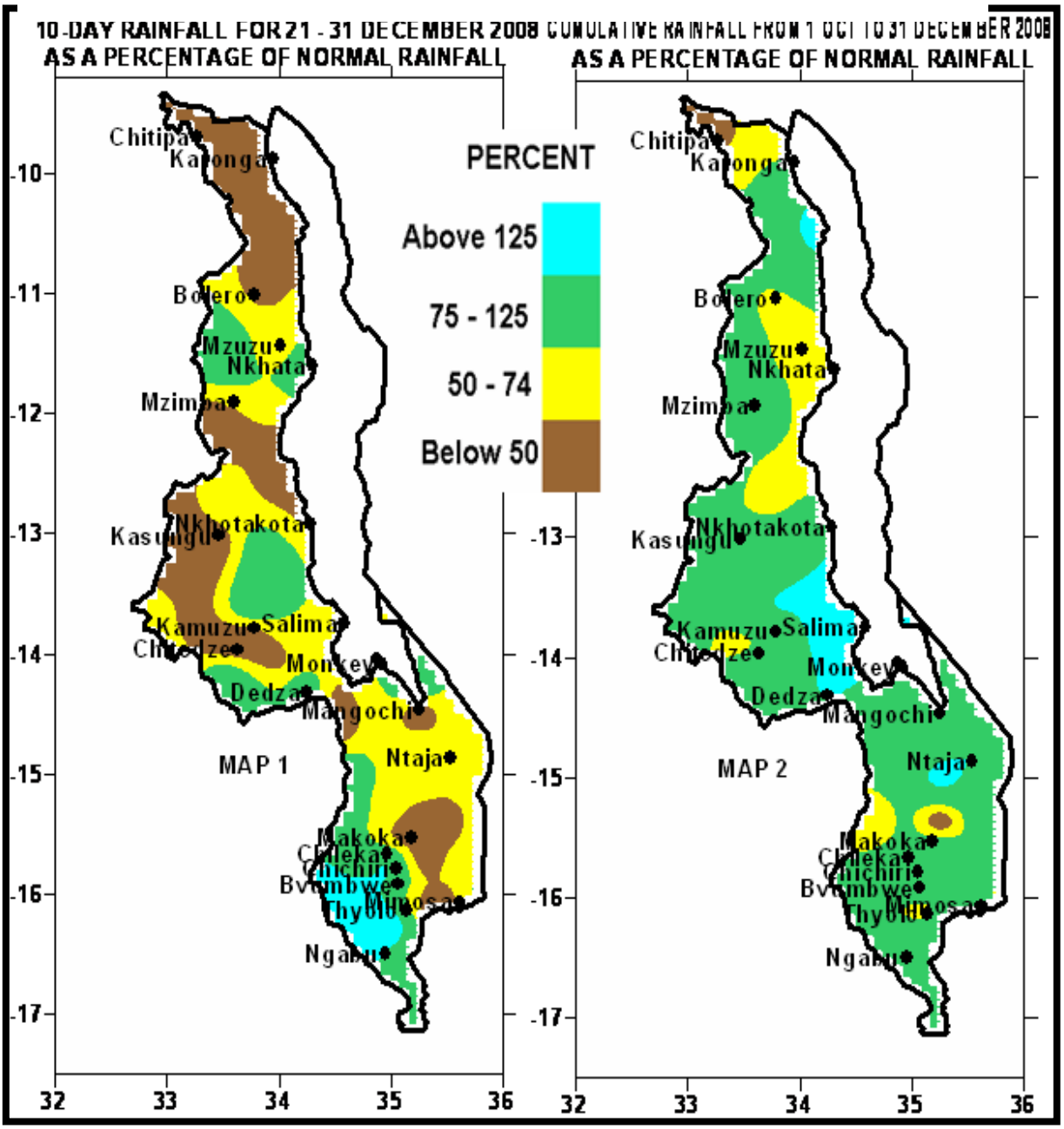
HIGHLIGHTS

- **Mostly below average rainfall performance experienced …**
- **Maize reported doing well, mostly at vegetative stage across Malawi …**
- **Sporadic rains expected between 1st and 10th January 2009…**



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1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

In the last 10-days of December 2008, the main rain bearing systems relaxed over Malawi. Hence below average rainfall **(brown and yellow colours on Map 1)** was received over most areas during the period. Light to moderate rainfall amounts were reported over most parts of the country. Very few areas registered total rainfall amounts of more than 95mm, Such areas were mostly confined to the south and included Chichiri Met, Chizunga Factory, Lujeri Tea Estate, and Mpemba and Sinyala Agric in the central Malawi. See details on **Table 1**.

Cumulative rainfall performance half way through the 2008/09 rainfall season indicated that generally Malawi had received average rainfall with just pockets of below average rainfall (**yellow and brown colours in Map 2)** and above average rainfall **(light blue colouron Map 2).** The below aveargе rainfall experienced in the some parts of the country is due to late onset of the main rains and poor performance of the main rain beraing systems

1.2 MEAN AIR TEMPERATURE

During the last 10-days of December 2008, mean daily maximum temperatures ranged from 24°C at Dedza in central Malawi to 36°C at Ngabu in Chikwawa in the south while average daily minimum temperatures ranged from 16°C to 24°C. at Ngabu See more details in Table 2.

1.4 MEAN WIND SPEEDS

Mean wind speeds at a height of two metres above ground level remained generally light. The average wind speeds ranged from 0.5 m/s (1.8 Km/h) at Chitipa to 2.9 m/s (10.4 Km/h) at Chileka (see Table 2).

1.5 MEAN RELATIVE HUMIDITY

The atmosphere was still fairly moist during the period under review. Daily average relative humidity values ranged from 70% at Karonga and Mangochi to 89% at Dedza. More details are in Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

In the period under review, most areas in Malawi received below average rainfall resulting into drier than normal conditions. The implications of drier than normal conditions were that in some areas crops had to survive on residual soil moisture and even some farming operations like application of fertilizer had to be temporarily suspended. In such cases farmers continued weeding their gardens.

In general the Maize crop, the staple food crop in Malawi, was reported doing well particularly where both basal and top dressing fertilisers have already been applied. Good crop yields are anticipated this season provided good rains continue in January and February 2009 which are critical months for crop production in Malawi. The crop across the country ranged from plating to early vegetative stage in the northern half and mostly at advanced vegetative stage in the south particularly for early planted hybrid maize.

So far most parts of Malawi have received good rainfall to support agricultural production though pockets of localized moisture deficits and surpluses existed in some parts of the country.

3. PROSPECTS OF 2008/09 RAINFALL SEASON

Climate prediction models still suggest that by end of April 2009 the greater part of Malawi should expect normal rainfall amounts. However the distribution of rains in both space and time is not expected to be uniform. Already there has been a delay in the onset of the wet season in some parts of the country. Externally, the influence of climate change cannot be ignored and one of the indicators is occurrence of extreme climatic events such as floods and drought. Low lying areas such as the Shire valley and lakeshore areas are more vulnerable to floods and droughts.

4. OUTLOOK FOR 01 – 10 JANUARY 2009

During the first 10-days of January 2009, models for short and medium range weather forecasts suggest that main rain bearing systems will continue to relax over Malawi. As such locally heavy and sporadic rains are expected to occur over Malawi.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 21 – 31 DECEMBER 2008 AT SELECTED STATIONS

STATION NAME SOUTH	*DEKADAL* TOTAL RAINFALL mm	*DEKADAL* NORMAL mm	*DEKADAL* TOTAL AS % NORMAL	*TOTAL* TO DATE mm	*NORMAL* TO DATE mm	*TOTAL* TODATE AS % NORMAL	*RAINY* DAYS
Bvumbwe Met.	72.5	71.6	**101**	415.6	345.7	**120**	8
Chancellor College	28.8	106.5	**27**	284.3	441.9	**64**	3
Chichiri Met.	131.5	73.4	**179**	379.3	352.8	**108**	6
Chileka Airport	41.6	64.8	**64**	287.9	301.9	**95**	4
Chiradzulu Agric	38.0	92.4	**41**	282.0	343.6	**82**	1
Chizunga Factory	99.0	100.8	**98**	350.0	477.2	**73**	7
Liwonde Township	41.5	55.2	**75**	321.3	236.8	**136**	3
Lujeri Tea Estate	98.1	125.3	**78**	428.8	678.2	**63**	7
Makoka Met	30.2	72.1	**42**	324.2	319.2	**102**	5
Mangochi Met.	25.6	67.1	**38**	212.7	251.0	**85**	4
Masambanjati Agric	94.5	100.8	**94**	380.2	417.0	**91**	6
Mimosa Met.	67.0	95.7	**70**	464.6	474.4	**98**	9
Monkey Bay Met.	77.9	94.6	**82**	318.2	292.3	**109**	5
Mpemba Vet	96.2	85.6	**112**	453.0	378.6	**120**	5
Mulanje Boma	33.1	95.7	**35**	N/A	524.1	**N/A**	4
Namiasi Agric	71.5	74.6	**96**	252.3	231.2	**109**	3
Naminjiwa Agric	56.9	82.8	**69**	302.4	332.2	**91**	5
Nchalo Sucoma	93.8	45.4	**207**	192.9	225.6	**86**	4
Neno Agric	72.4	81.2	**89**	189.0	336.0	**56**	6
Ngabu Met.	75.4	65.2	**116**	288.3	265.8	**108**	5
Nsanje Boma	65.7	70.5	**93**	294.4	294.1	**100**	4
Ntaja Met.	42.4	64.4	**66**	348.8	276.6	**126**	6
Satemwa	35.3	78.1	**45**	229.9	432.9	**53**	4
Thyolo Met	63.7	84.4	**75**	286.9	386.7	**74**	7
CENTRAL REGION							
Bunda College	49.2	74.3	**66**	308.4	305.7	**101**	6
Chileka Namitete	26.1	61.0	**43**	184.0	298.5	**62**	5
Chitedze Met.	13.8	71.5	**19**	233.2	292.2	**80**	4
Dedza Met	76.2	77.6	**98**	354.8	282.1	**126**	5
Dwangwa Sugar Corp.	13.7	88.7	**15**	204.7	340.4	**60**	4
Kaluluma DTC	51.9	72.3	**72**	204.3	248.0	**82**	6
K.I.A Met	33.0	63.6	**52**	224.2	239.0	**94**	7
Kasungu Met	22.2	50.9	**44**	228.0	266.4	**86**	6
Malomo Agric	54.8	53.2	**103**	197.1	188.0	**105**	6
Madisi Agric	47.0	65.6	**72**	228.9	239.0	**96**	3
Mchinji Boma	48.5	82.9	**59**	341.4	328.0	**104**	2
Mkanda Met	38.3	72.6	**53**	302.0	329.2	**92**	2
Mlangeni Njolomole	19.1	72.3	**26**	281.6	290.0	**97**	2
Mponela Agric	70.5	52.5	**134**	274.0	208.9	**131**	6
Mwimba Research	15.6	87.8	**18**	198.3	282.6	**70**	3
Nathenje Agric	23.0	71.0	**32**	286.5	253.2	**113**	3
Nkhotakota Met	43.1	93.4	**46**	377.8	317.3	**119**	3
Ntcheu - Nkhande	77.9	93.9	**83**	278.1	331.4	**84**	6
Ntchisi Boma	58.1	74.7	**78**	307.2	241.1	**127**	2
Salima Met	50.1	86.9	**58**	477.2	295.7	**161**	2
Sinyala Agric	97.1	71.4	**136**	463.4	302.2	**153**	8
Dedza RTC	27.5	72.5	**38**	322.9	271.5	**119**	2
NORTHERN REGION							
Baka Res. Stn.	35.5	73.9	**48**	226.9	256.2	**89**	4
Bolero Met	27.6	66.1	**42**	167.4	244.4	**68**	6
Chitipa Met	32.2	102.7	**31**	134.5	303.5	**44**	6
Euthini Agric.	90.6	74.9	**121**	254.8	242.8	**105**	3
Karonga Met.	17.6	70.9	**25**	182.3	242.6	**75**	5
Mbawa Res. Stn	2.0	84.4	**2**	N/A	259.8	N/A	2
Mzimba Met	48.0	74.4	**65**	325.3	262.3	**124**	8
Mzuzu Met.	48.5	82.6	**59**	168.8	362.3	**47**	6
NkhataBay Met.	89.6	80.5	**111**	389.2	538.0	**72**	6
Vinthukutu Agric	24.9	67.0	**37**	406.5	269.7	**151**	2

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 21 – 31 DECEMBER 2008

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
BOLERO	29.2	17.5	31.0	15.6	1.0	77
BVUMBWE	27.6	18.8	29.0	17.0	1.4	78
CHICHIRI	31.0	20.9	31.1	20.6	1.2	74
CHILEKA	30.8	21.8	33.0	20.5	2.9	71
CHITEDZE	27.8	18.9	29.2	17.3	0.6	73
CHITIPA	27.6	17.6	29.1	16.8	0.5	76
DEDZA	24.2	16.2	26.4	15.5	1.1	89
K I A	26.7	18.2	28.5	16.9	1.2	76
KARONGA	31.2	23.2	32.6	21.5	1.1	70
KASUNGU	27.6	19.5	29.6	17.5	1.6	78
MAKOKA	28.9	19.3	31.1	18.6	1.3	N/A
MANGOCHI	30.9	23.0	32.6	21.2	1.2	70
MIMOSA	26.4	19.6	33.6	19.1	1.1	87
MONKEY BAY	30.4	23.5	31.8	22.1	1.7	73
MZIMBA	27.4	17.6	29.3	16.2	0.7	73
MZUZU	27.2	16.9	28.4	15.4	1.2	75
NGABU	35.8	24.2	37.8	23.2	1.4	72
NKHATA BAY	31.0	20.9	32.8	19.7	0.6	79
NKHOTAKOTA	29.2	22.4	30.6	21.4	N/A	75
NTAJA	29.8	21.4	32.2	19.4	1.5	77
SALIMA	30.3	22.5	32.0	20.6	1.0	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