Malawi 10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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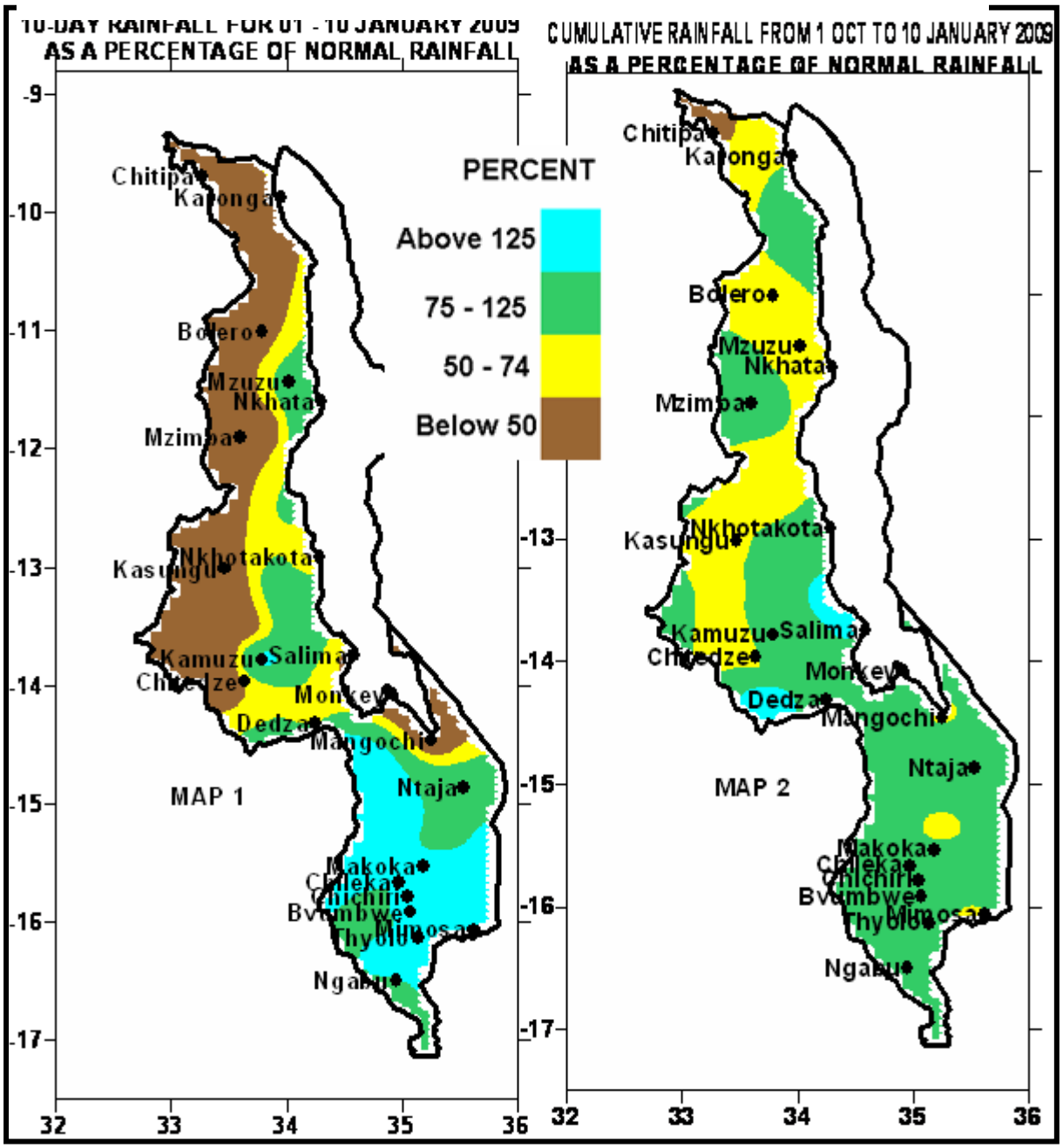
HIGHLIGHTS

- **Mostly below average rainfall continued in the centre and north …**
- **Maize starts flowering in some parts of the south …**
- **Locally heavy rains expected between 11 and 20th January 2009…**



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1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the first 10-days of January 2009, the main rain bearing systems continued to relax particularly over central and northern Malawi. As a result below average rainfall **(brown and yellow colours on Map 1)** was received over central and northern areas. Some areas like Mwimba Research in Kasungu registered nil rainfall during the entire 10-day period. The south however, received moderate to heavy rainfall that resulted in mostly above average rainfall performance (light blue colour on Map 1). Areas that registered 10-day cumulative rainfall amounts of more than 150mm were confined mostly to southern Malawi where Bvumbwe registered 153mm, Mimosa 161mm, Mulanje Boma 179mm, naminjiwa 184mm, Neno 160mm, and Thyolo 156mm.. See details on **Table 1**.

Cumulative rainfall performance since the season started from October 2008 up to 10 January 2009 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).** Below average rainfall has been confined mostly to the northern half of the country due to late onset of the main rains.

1.2 MEAN AIR TEMPERATURE

During the first 10-days of January 2009, mean daily maximum temperatures ranged from 25°C at Dedza in central Malawi to 33°C at Ngabu in Chikwawa district while average daily minimum temperatures ranged from 17°C to 24°C.. See more details in Table 2.

1.4 MEAN WIND SPEEDS

Mean wind speeds at a height of two metres above ground level remained continued to be light. The average wind speeds ranged from 0.3 m/s (1.1 Km/h) at Chichiri to 2.3 m/s (8.3 Km/h) at Chileka (see Table 2).

1.5 MEAN RELATIVE HUMIDITY

The atmosphere continued to be fairly moist. Daily average relative humidity values ranged from 71% at Karonga to 84% at Ngabu. More details are in Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

The first 10-days of January 2009 continued to experience drier than normal rainfall conditions in most parts of central and northern Malawi Reports indicated that crops started wilting at vegetative stage, but did not reach permanent wilting point. Some crops survived on residual soil moisture. Farm operations like application of fertilizer were temporarily suspended and farmers in the affected areas continued weeding their gardens.

In general the Maize crop was reported doing well particularly where both basal and top dressing fertilisers have 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 early vegetative stage in some parts of the northern half to advanced vegetative and flowering stages in the south..

3. PROSPECTS OF 2008/09 RAINFALL SEASON

Climate prediction models continue to suggest that by end of April 2009 the greater part of Malawi should expect normal rainfall amounts with poor distribution in both space and time. 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. Some floods have already been reported in Chikwawa in lower Shire.

4. OUTLOOK FOR 01 – 10 JANUARY 2009

During the period 11 to 20 January 2009, models for short and medium range weather forecasts suggest that Congo air will cover most parts Malawi. Therefore, moderate to locally heavy rains are expected to occur over Malawi during the period..

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 01 – 10 JANUARY 2009 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.	152.9	77.4	**198**	568.5	423.1	**134**	9
Chancellor College	99.8	107.0	**93**	384.1	548.9	**70**	7
Chichiri Met.	114.2	76.7	**149**	493.5	429.5	**115**	7
Chikwawa Boma	58.6	60.8	**96**	215.8	297.1	**73**	6
Chikweo Agric.	57.8	58.2	**99**	354.0	402.9	**88**	6
Chileka Airport	87.6	68.3	**128**	375.5	370.2	**101**	6
Chingale Agric	86.5	73.0	**118**	192.9	365.1	**53**	8
Chiradzulu Agric	136.2	84.5	**161**	418.2	428.1	**98**	9
Chizunga Factory	132.2	96.6	**137**	531.2	573.8	**93**	6
Lujeri Tea Estate	122.9	135.4	**91**	551.7	813.6	**68**	8
Mpilipili	0.0	N/A	**N/A**	387.6	N/A	**N/A**	0
Makoka Met	130.7	76.2	**172**	454.9	395.4	**115**	7
Mangochi Met.	11.6	60.5	**19**	224.3	311.5	**72**	5
Mimosa Met.	161.2	91.4	**176**	625.8	565.8	**111**	8
Monkey Bay Met.	0.6	64.9	**1**	318.8	357.2	**89**	1
Mpemba Vet	117.4	100.8	**116**	570.4	479.4	**119**	6
Mulanje Boma	178.6	108.4	**165**	406.5	632.5	**64**	9
Naminjiwa Agric	183.8	71.3	**258**	486.2	403.5	**120**	6
Nchalo Sucoma	114.2	50.6	**226**	307.1	276.2	**111**	3
Neno Agric	159.9	80.6	**198**	348.9	416.6	**84**	7
Ngabu Met.	64.6	60.8	**106**	352.9	326.6	**108**	4
Nsanje Boma	56.8	56.7	**100**	351.2	350.8	**100**	6
Ntaja Met.	77.2	69.9	**110**	426.0	346.5	**123**	6
Satemwa Tea	97.2	89.5	**109**	327.1	522.4	**63**	7
Thyolo Met	156.3	66.6	**235**	443.2	453.3	**98**	8
Zomba RTC	118.2	73.0	**162**	349.2	481.1	**73**	9
CENTRE							
Chileka Namitete	27.5	86.1	**32**	211.5	384.6	**55**	3
Chitedze Met.	28.5	77.6	**37**	261.7	369.8	**71**	5
Dedza Met	57.9	79.1	**73**	412.7	361.2	**114**	7
Dwangwa	72.5	79.4	**91**	277.2	419.8	**66**	4
Kaluluma DTC	21.0	59.1	**36**	225.3	307.1	**73**	2
K.I.A Met	100.1	65.7	**152**	324.3	304.7	**106**	6
Kasiya Agric	21.5	69.8	**31**	243.1	386.1	**63**	7
Kasungu Met	16.5	68.3	**24**	244.5	334.7	**73**	4
Lisasadzi	1.9	77.2	**2**	234.7	321.1	**73**	1
Malomo Agric	61.9	66.0	**94**	259.0	254.0	**102**	4
Mchinji Boma	35.3	82.0	**43**	376.7	410.0	**92**	5
Mkanda Met	24.1	57.2	**42**	326.1	386.4	**84**	2
Mponela Agric	27.5	70.2	**39**	301.5	279.1	**108**	2
Mwimba Research	0.0	49.6	**0**	198.3	332.2	**60**	0
Mtakataka Airwing	35.5	54.3	**65**	629.0	329.5	**191**	4
Nathenje Agric	43.5	71.2	**61**	330.0	324.4	**102**	3
Nkhotakota Met	37.2	109.8	**34**	415.0	427.1	**97**	4
Ntcheu - Nkhande	264.1	92.9	**284**	542.2	424.3	**128**	6
Ntchisi Boma	97.5	76.1	**128**	404.7	317.2	**128**	5
Salima Met	32.5	101.2	**32**	509.7	396.9	**128**	2
NORTH							
Baka Res. Stn.	24.0	66.1	**36**	250.9	322.3	**78**	2
Bolero Met	18.7	66.9	**28**	186.1	311.3	**60**	5
Chitipa Met	29.2	76.7	**38**	163.7	380.2	**43**	5
Chintheche Agric	108.1	88.2	**123**	360.8	563.5	**64**	3
Euthini Agric.	4.4	74.3	**6**	259.2	317.1	**82**	2
Karonga Met.	36.7	66.1	**56**	219.0	308.7	**71**	2
Mbawa Res. Stn	16.0	73.5	**22**	265.5	333.3	**80**	4
Mzimba Met	47.1	89.4	**53**	372.4	351.7	**106**	7
Mzuzu Met.	67.2	67.4	**100**	236.0	429.7	**55**	6
NkhataBay Met.	79.4	61.4	**129**	468.6	599.4	**78**	7

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 01 – 10 JANUARY 2009

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
BOLERO	29.8	17.1	34.2	15.4	1.0	72
BVUMBWE	26.3	18.4	28.0	17.6	1.1	82
CHICHIRI	28.0	19.0	31.5	17.0	0.3	74
CHILEKA	29.2	21.3	31.0	19.8	2.3	78
CHITEDZE	27.5	18.6	30.2	17.8	0.5	77
CHITIPA	27.9	17.3	30.6	16.6	0.5	72
DEDZA	24.5	16.5	26.3	15.7	0.9	79
K I A	26.7	17.7	28.8	16.4	1.2	77
KARONGA	31.2	22.7	35.0	21.4	1.1	71
KASUNGU	28.0	19.4	31.1	18.0	1.5	77
MAKOKA	28.2	19.0	30.3	17.8	0.9	82
MANGOCHI	31.7	22.7	34.3	21.9	1.1	72
MIMOSA	31.3	20.2	33.6	18.2	0.8	75
MONKEY BAY	31.1	23.3	33.4	22.2	1.6	72
MZIMBA	27.2	17.5	30.0	16.4	0.7	73
MZUZU	27.2	16.7	29.3	14.7	1.4	76
NGABU	33.4	23.4	36.6	22.5	1.2	84
NKHATA BAY	31.5	21.0	33.4	19.9	0.6	77
NKHOTAKOTA	29.4	22.8	32.2	22.1	1.5	75
NTAJA	30.1	21.5	32.1	20.6	1.2	77
SALIMA	30.8	22.5	32.5	20.1	1.2	77

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