Malawi 10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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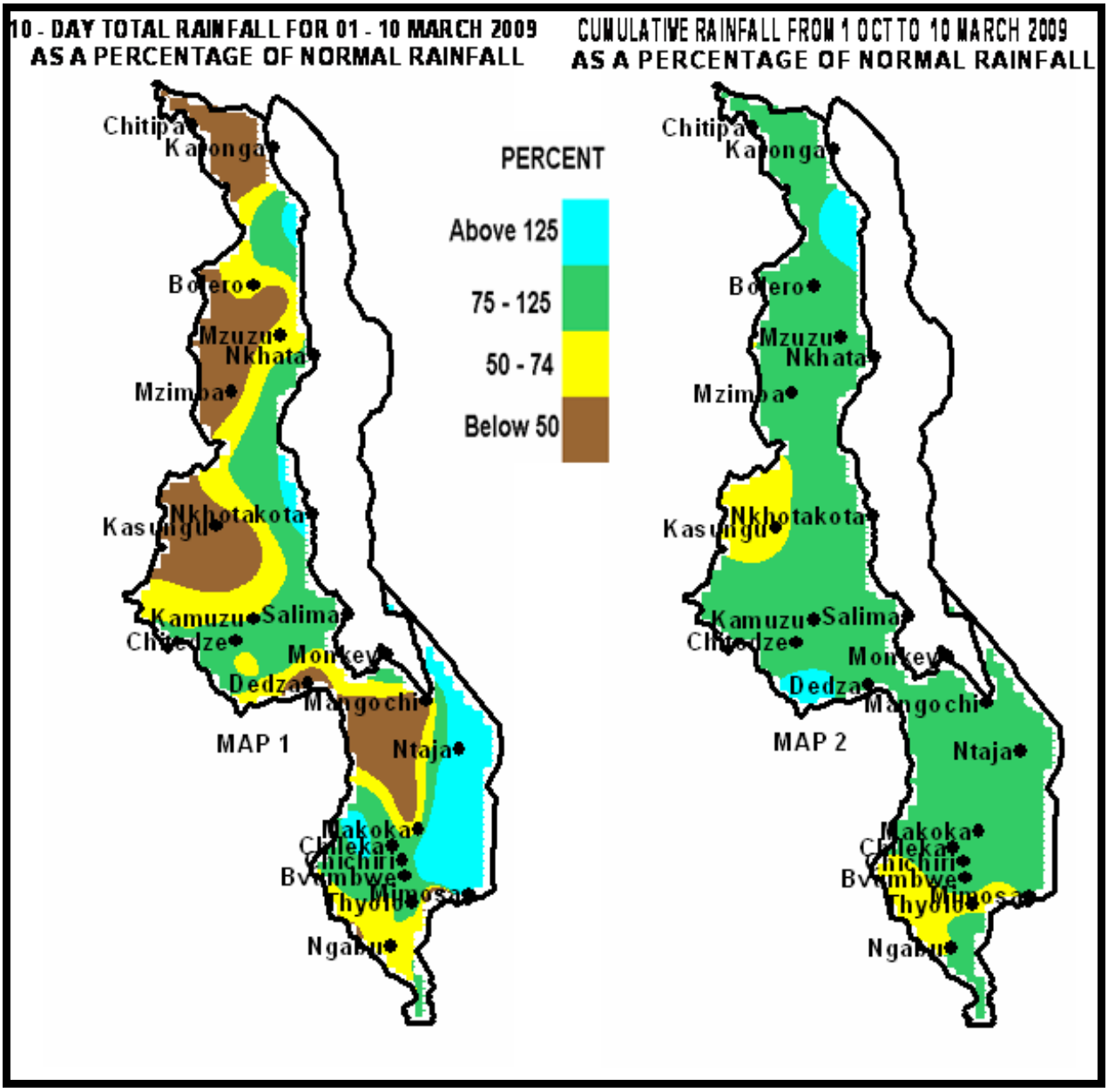
HIGHLIGHTS

- **Below average rainfall situation persisted in some parts …**
- **Maize crop was at maturity and drying stages ……**
- **Rainfall performance to improve during 11 – 20 March, 2009……**



All inquiries should be addressed to: The Director of Meteorological Services, P.O. Box 1808, Blantyre, MALAWI
Tel: (265) 1 822 014 Fax: (265) 1 822 215 E-mail: metdept@metmalawi.com Homepage: www.metmalawi.com

1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the first ten days of March 2009, the main rain bearing systems continued to relax over Malawi. Hence more areas in Malawi continued to receive less than 50 percent of the expected rainfall amounts for the period **(Brown colour on Map 1)**. Drier than normal rainfall situation continued to be experienced in some parts of lower Shire and Mangochi in the south, Ntcheu, Dedza, Lilongwe, Ntchisi, Dowa, Mchinji and Kasungu in the centre and in almost all the districts in the north. Analysis on the dry spell situation indicates that rainfall in some parts of Malawi particularly in the south has been persistently below average for at least forty days. Such areas include some parts of Chikwawa in the south and Kasungu in the centre. At the same time during the period under discussion some districts like Mulanje in the south, Nkhotakota in the centre and Nkhata Bay in the north registered rainfall amounts ranging between 170 and 335mm, causing improvements in the cumulative rainfall performance.

Cumulative rainfall situation from October 2008 through to 10 March 2009 indicated that most areas in Malawi have received normal rainfall amounts (**green colour on Map 2)** with pockets of below average cumulative rainfall around Mchinji and Chikwawa..

1.2 MEAN AIR TEMPERATURE

During the first ten days of March 2009 maximum temperatures over Malawi were moderated. The average daily maximum temperatures ranged from 24 to 33°C.as opposed to 24 to 35 in the last days of February. Higher temperatures persisted in Shire Valley and along the Lakeshore areas. The highest average maximum temperaure was reported at Ngabu (33°C) in Chikwawa district while the lowest was registered at Dedza (24°C). The lowest absolute minimum temperatures ranged from 14°C to 22°C See details in Table 2.

1.3 MEAN DAILY WIND SPEEDS

Average daily wind speeds recorded at two meters above the ground were light. The highest speed was still observed at Chileka (2.3m/s or 8.3Km/hr) . See Table 2.

1.4 MEAN RELATIVE HUMIDITY

Daily average relative humidity values continued to increase. The values in the first ten days of March ranged from 74 to 87% while in the last days of February the values ranged from 66 to 84%. Humid conditions promote outbreaks of fungal diseases.

2. AGROMETEOROLOGICAL ASSESSMENT

In first ten days of March, 2009, although there was an improvement in rainfall distribution and amounts in some districts like Mulanje, some parts of Zomba and Machinga in the south, Nkhotakota in the centre and Nkhata Bay in the north, below average rainfall situation persisted in most parts of the country. Dry spells have both negative and positive impacts on crop production. For matured crops the dry spell facilitated drying and harvesting while on the other hand the dry spell negatively impacted on crops that were at a critical flowering stage where the water demand is highest. The dry spell situation in Chikwawa continued to worsen, leading to total crop failure in some parts. Reports indicate that Maize tobacco and cotton have been worse affected the dry spell. Farmers were reported prepare for winter cropping. The dry spell in lower Shire started towards the end of January and persisted around Chikwawa till early March.

Although localised dry spells have been experienced over the country, the general crop stand has been better than last season so another bumper harvest is anticipated. Maize crop was mostly at maturity and drying stages.

3. PROSPECTS OF 2008/09 SEASON

Climate prediction models continue to indicate weak La Nina to ENSO neutral conditions in the next few months. The models still suggest that above normal to normal rainfall amounts are expected over the greater part of Malawi during the period March to May 2009.

4. OUTLOOK FOR 11 – 20 MARCH 2009

Short and medium-term weather forecasts indicate that the rainfall over Malawi will be influenced by moist easterly waves during the second ten days of March. Hence slight improvement in rainfall performance expected over Malawi particularly over highlands and along the lakeshore areas during the period 11 to 20 March 2009.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 1 OF MARCH 2009: PERIOD 01 - 10

STATION NAME SOUTHERN REGION	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 ³ 0.3 mm
Bvumbwe Met.	52.3	73.2	**71**	1040.5	874.1	**119**	8
Chancellor College	92.3	110.7	**83**	844.8	1127.8	**75**	7
Chichiri Met.	43.8	76.8	**57**	930.2	887.1	**105**	7
Chileka Airport	70.2	53.6	**131**	720.5	736.7	**98**	5
Chingale Agric	48.5	57.7	**84**	697.5	801.8	**87**	5
Kasinthula Res. Stn.	23.5	87.2	**27**	358.2	616.4	**58**	4
Liwonde Township	42.0	63.0	**67**	568.8	709.2	**80**	3
Lujeri Tea Estate	335.3	14.8	**2266**	1417.3	1466.3	**97**	9
Mpilipili (Makanjila)	120.2	N/A	N/A	954.7	N/A	N/A	4
Makoka Met	34.0	85.3	**40**	885	853.1	**104**	5
Mangochi Met.	23.2	58.3	**40**	532.8	704.0	**76**	6
Masambanjati Agric	104	100.3	**104**	862.7	1049	**82**	8
Mimosa Met.	223.8	112.2	**199**	1219.8	1111	**110**	8
Monkey Bay Met.	87.8	60.6	**145**	826.0	851.8	**97**	5
Mpemba Vet	111.8	77.9	**144**	1026.7	952.8	**108**	6
Mulanje Boma	184.4	136.6	**135**	898.1	1251.5	**72**	7
Nchalo Sucoma	35.9	57.0	**63**	436.6	588.6	**74**	3
Neno Agric	124.2	83.2	**149**	922.8	971.2	**95**	6
Ngabu Met.	39.9	52.1	**77**	485.9	645.0	**75**	4
Nsanje Boma	68.6	68.7	**100**	657.5	723.9	**91**	5
Ntaja Met.	107.4	55.8	**192**	916.2	740.9	**124**	7
Satemwa	69.7	108.2	**64**	609.6	1018.0	**60**	8
Thyolo Met	117.3	87.7	**134**	917.2	915.8	**100**	8
Zomba RTC	107.8	78.1	**138**	828.6	997.9	**83**	5
CENTRAL REGION							
Bunda College	28.1	60.7	**46**	803.7	743.5	**108**	5
Chitedze Met.	55.1	59.1	**93**	637.5	768.6	**83**	6
Dedza Met	17.4	63.5	**27**	830.9	806.4	**103**	6
Dowa Agric	48.3	61.6	**78**	689.1	740.9	**93**	6
Dwangwa Sugar Corp.	178.1	128.4	**139**	1123.9	928.7	**121**	8
Kaluluma DTC	48.9	69.5	**70**	446.8	686.6	**65**	6
K.I.A Met	52.7	72.4	**73**	685.4	727.4	**94**	6
Kasungu Met	20.8	62.1	**33**	472.2	768.8	**61**	3
Lisasadzi	3.0	52.9	**6**	524.0	719.1	**73**	2
Malomo Agric	36.3	84.3	**43**	801.4	714.6	**112**	3
Mchinji Boma	53.6	66.8	**80**	1016.8	862.4	**118**	6
Mwimba Research	32.6	100.9	**32**	519.5	824.0	**63**	3
Mtakataka Airwing	52.5	57.0	**92**	1205.2	725.4	**166**	4
Nathenje Agric	76.0	63.9	**119**	869.5	743.6	**117**	7
Nkhotakota Met	212.8	121.1	**176**	1286.7	1017.6	**126**	10
Ntcheu - Nkhande	24.3	79.9	**30**	1069.6	921.5	**116**	3
Ntchisi Boma	48.2	53.5	**90**	849.5	733.2	**116**	3
Salima Met	119.2	111.3	**107**	978.1	1023	**96**	8
Dedza RTC	43.2	86.8	**50**	800.6	851.5	**94**	3
NORTHERN REGION							
Bolero Met	39.4	56.2	**70**	557.4	627.7	**89**	5
Bwengu Agric.	10.5	41.2	**25**	555.4	676.6	**82**	3
Chitipa Met	30.0	68.2	**44**	635.3	799.4	**79**	3
Chintheche Agric	246.9	190.7	**129**	925.3	1141.3	**81**	4
Karonga Met.	15.7	76.3	**21**	842.8	662.6	**127**	0
Lupembe	26.5	82.7	**32**	606.2	614.3	**99**	5
Mzimba Met	23.7	73.9	**32**	605.6	750.4	**81**	5
Mzuzu Met.	49.3	83.8	**59**	666.1	830.7	**80**	9
NkhataBay Met.	76.0	92.5	**82**	927	1046.5	**89**	10
Vinthukutu Agric	149.5	83.6	**179**	1484.7	736.9	**201**	6

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 1 OF MARCH 2009

STATION	MAX TEMP (℃)	MIN TEMP (℃)	ABS MAX (℃)	ABS MIN (℃)	WIND SPEED m/s	RH %
BOLERO	27.8	16.3	28.9	15.0	N/A	82
BVUMBWE	24.9	17.3	26.8	16.0	2.1	87
CHICHIRI	25.4	17.8	27.2	16.6	0.9	74
CHILEKA	27.7	20.0	29.6	18.1	2.3	79
CHITEDZE	27.1	18.3	28.7	16.9	0.5	81
CHITIPA	26.6	17.4	28.4	16.3	1.4	80
DEDZA	23.8	15.9	25.2	14.2	0.6	74
K.I.A.	25.7	17.6	26.8	17.0	1.5	79
KARONGA	29.6	22.0	31.6	20.4	0.9	79
KASUNGU	27.5	18.9	29.0	18.0	1.1	79
MAKOKA	26.7	18.5	29.1	16.7	1.2	80
MANGOCHI	N/A	22.0	N/A	21.5	1.4	78
MIMOSA	28.6	19.5	31.3	18.0	1.1	72
MONKEY BAY	29.5	21.9	30.7	20.3	1.5	79
MZIMBA	26.3	16.6	28.5	15.2	0.5	83
MZUZU	25.0	17.0	26.6	15.0	1.4	85
NGABU	33.1	23.1	35.2	22.0	1.5	74
NKHATA BAY	29.3	21.1	31.0	20.5	0.7	86
NKHOTAKOTA	27.4	21.3	29.0	19.6	N/A	86
NTAJA	29.0	20.8	30.6	19.4	1.1	82
SALIMA	28.9	21.8	30.7	19.8	1.5	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