Malawi 10-Day Rainfall & Agrometeorological Bulletin

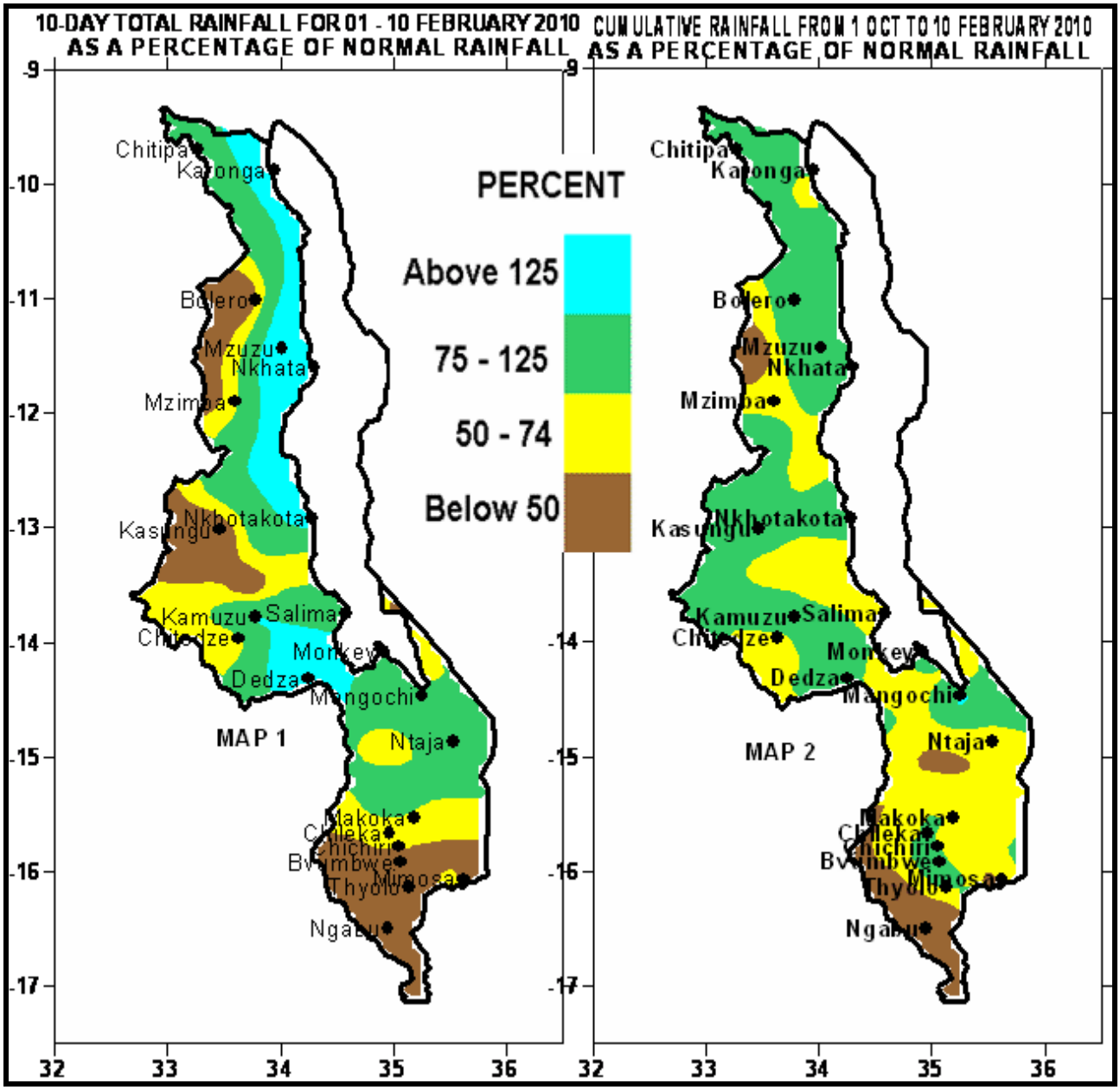
Department of Climate Change and Meteorological Services

Period: 1 – 10 February 2010 | Season: 2009/2010 | Issue No.13

Release date: 13 February 2010

HIGHLIGHTS

- **Improved rainfall distribution over southern Malawi …**
- **Prolonged dry spells over the south negatively affect production…**
- **Favorable rainfall conditions expected during ...**



All inquiries should be addressed to: The Director of Climate Change and Meteorological Services, P.O. Box 1808, Blantyre, MALAWI
Tel: (265) 1 822 014/106 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 February 2010, light to moderate rainfall was reported in most past of Malawi except in lower Shire valley and western parts of central and northern Malawi where mostly dry conditions existed. Areas that recorded at least 125mm of rainfall during the period under review were mostly confined to central and northern Malawi. Such areas in the north included 188mm recorded at Nkhata Bay Met (Mkondezi) and Kavuzi Rose falls 142mm while in the centre such rainfall was reported at Chongoni (Dedza Met) 130mm, in Nkhota Kota where Dwangwa accumulated 125mm and Nkhotakota met had 126mm.

Cumulatively, by 10th February 2010, indicates that most areas in the centre and north had received substantial rainfall amounts with reference to the expected amounts (depicted by green colour on Map 2) with the exception of eastern parts of central region along the lake. On the other hand, most of the districts in southern Malawi had received below average rainfall (yellow and brown colours on Map 2).

1.2 MEAN AIR TEMPERATURE

Mean maximum air temperatures observed in the country were mostly in the warm to hot category. Hot conditions (≥28°C) were observed in lower altitude areas and warm weather (<28°C) was experienced over the highlands. The highest maximum temperature was recorded at Bolero and Kamuzu International Airport (33°C). On the other hand, the lowest minimum temperature was 15.6°C reported at Dedza (For more details see Table 2).

1.4 MEAN WIND SPEEDS

Malawi continued to record low average wind speeds during the first ten days of February 2010 such that the lowest wind speed was 0.7m/s (2.5 Km/h) reported at Nkhata Bay while the highest wind speed was 2.3 m/s (8.3 Km/h) recorded at Chileka (Refer to Table 2).

1.5 MEAN RELATIVE HUMIDITY

The average daily relative humidity values for the first ten days of February 2010 ranged from 74% at Bolero to 83% at Nkhata Bay, Refer to Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

Light to moderate rainfall was received over some parts of the country. These rains encouraged crop growth and development as well as planting of root and tuber crops such as sweet potatoes and cassava.

Crops over Malawi were reported to be at various developmental stages. The early planted crop had reached maturity stage while the late planted crop ranged from vegetative to flowering stages. The variation in crop developmental stages was mostly due to erratic and late start of rains in some parts of the country.

Despite the dry spells that have hit some parts of the country particularly southern Malawi, results from our Crop Water Requirement Satisfaction Index (WRSI) model suggest that it is still possible for Malawi to produce surplus maize at national level this season if favourable rains continue up to March 2010 particularly in major maize growing areas of Kasungu, Lilongwe, Machinga and Mzuzu Agricultural Development Divisions (ADDs). General crop production this season has been negatively affected by the prolonged dry spells that have been experienced between December 2009 and January 2010.

3. RAINFALL PROSPECTS FOR JANUARY TO MARCH 2010

Most dynamical and statistical model forecasts from advanced climate prediction centers indicate a continuation of the El Nino conditions into the middle of 2010. El Niño conditions are usually associated with below average and erratic rainfall over a greater part of Southern Africa and above normal rainfall over Eastern Africa. However, most climate models still project that Malawi will receive normal to above normal rainfall amounts during January to March 2010.

4. OUTLOOK FOR 11 – 20 FEBRUARY 2010

Medium range model projections indicate that good rains with better distribution are expected to be confined to southern and central Malawi during 11 – 20 February 2010.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 1 – 10 FEBRUARY 2010 AT SELECTED STATIONS

STATION NAME	DEKADAL TOTAL RAINFALL (mm)	DEKADAL NORMAL RAINFALL (mm)	RAINFALL DEKADAL TOTAL (%)	TOTAL TO DATE (mm)	NORMAL TO DATE (mm)	RAINFALL TOTAL TODATE (%)	RAINY DAYS
SOUTHERN REGION							
Balaka Township	33.0	79.3	**42**	258.0	585.2	**44**	2
Bvumbwe Met.	13.5	90.3	**15**	565.6	697.5	**81**	3
Chichiri Met.	53.2	72.9	**73**	559.7	867.7	**65**	4
Chikweo Agric.	89.9	78.5	**115**	518.7	673.8	**77**	3
Chileka Airport	43.8	88.5	**49**	499.8	586.5	**85**	5
Chizunga Factory	27.0	74.2	**36**	686.0	811.1	**85**	3
Lujeri Tea Estate	41.4	126.3	**33**	891.6	1202.4	**74**	4
Mpilipili	31.7	96.8	**33**	310.9	588.3	**53**	3
Makoka Met	56.3	91.7	**61**	493.0	640.1	**77**	4
Mangochi Met.	88.7	72.4	**123**	554.2	418.4	**132**	5
Mimosa Met.	29.3	95.2	**31**	547.7	867.8	**63**	3
Monkey Bay Met.	77.2	71.7	**108**	403.7	399.1	**101**	5
Mpemba Vet	41.8	84.8	**49**	693.6	725.9	**96**	3
Mulanje Boma	62.6	109.5	**57**	416.3	1067.0	**39**	3
Mwanza Boma	48.0	91.2	**53**	323.7	657.1	**49**	5
Namiasi Agric	48.5	92.2	**53**	316.9	515.2	**62**	3
Naminjiwa Agric	38.4	83.6	**46**	487.5	638.2	**76**	2
Nchalo Sucoma	6.7	70.2	**10**	187.6	434.9	**43**	3
Neno Agric	69.8	107.8	**65**	347.0	721.7	**48**	5
Ngabu Met.	2.8	69.1	**4**	209.5	498.4	**42**	1
Nsanje Boma	14.9	81.8	**18**	345.8	695.3	**50**	1
Phalula Agric	97.6	67.3	**145**	326.3	548.4	**60**	5
Satemwa Tea Est.	18.0	87.3	**21**	648.5	656.5	**99**	4
Thuchila Agric	27.0	80.2	**34**	356.0	563.2	**63**	2
Thyolo Met	33.4	90.3	**37**	605.3	711.9	**85**	3
CENTRAL REGION							
Chileka Namitete	51.0	76.2	**67**	343.3	609.0	**56**	4
Chitedze Met.	26.1	65.2	**40**	345.1	544.9	**63**	4
Dedza Met	130.2	74.9	**174**	516.1	582.5	**89**	4
Dwangwa Sugar Corp.	124.9	76.7	**163**	456.6	661.9	**69**	8
Kaluluma DTC	65.3	57.6	**113**	517.5	517.3	**100**	5
K.I.A Met	99.9	72.1	**139**	429.9	524.2	**82**	5
Kasiya Agric	61.0	64.5	**95**	610.3	605.2	**101**	3
Kasungu Met	13.7	72.0	**19**	441.1	486.2	**91**	4
Malomo Agric	81.5	81.0	**101**	382.3	515.8	**74**	5
Mchinji Boma	42.9	62.1	**69**	691.3	648.8	**107**	6
Mlangeni Njolomole	90.0	81.5	**110**	525.0	593.6	**88**	3
Mponela Agric	22.0	83.0	**27**	379.0	510.4	**74**	6
Nathenje Agric	76.5	56.4	**136**	569.0	516.1	**110**	6
Nkhotakota Met	125.5	84.2	**149**	739.2	710.9	**104**	7
Ntcheu - Nkhande	71.1	84.6	**84**	515.2	672.3	**77**	4
Ntchisi Boma	54.8	103.8	**53**	370.0	739.8	**50**	5
Salima Met	102.0	102.3	**100**	426.3	683.0	**62**	8
NORTHERN REGION							
Bolero Met	15.7	51.2	**31**	367.2	394.7	**93**	5
Bwengu Agric.	69.9	58.8	**119**	346.4	465.7	**74**	4
Chitipa Met	91.9	87.6	**105**	663.1	561.1	**118**	6
Karonga Met.	75.6	48.7	**155**	339.6	436.4	**78**	0
Kavuzi Rosefalls	141.6	64.6	**219**	1024.1	762.1	**134**	9
Mzimba Met	39.0	67.2	**58**	349.6	543.5	**64**	6
Mzuzu Met.	98.1	51.9	**189**	668.2	527.9	**127**	8
NkhataBay Met.	188.0	65.3	**288**	443.4	604.3	**73**	8
Zombwe Agric	49.3	48.8	**101**	488.3	422.2	**116**	7

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 1 – 10 FEBRUARY 2010

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED (m/s)	RELATIVE HUMIDITY (%)
BOLERO	29.0	17.7	33.0	16.1	N/A	74
BVUMBWE	25.4	17.4	26.6	15.7	1.7	81
CHICHIRI	26.3	16.1	27.5	17.4	1.0	81
CHILEKA	28.4	20.2	29.2	20.2	2.3	76
CHITEDZE	27.9	20.2	28.9	16.9	1.0	72
DEDZA	24.4	16.3	25.9	15.6	1.2	80
K I A	30.6	22.8	33.0	22.2	1.3	76
KARONGA	28.3	19.7	29.5	19.0	1.6	81
KASUNGU	26.7	17.3	28.4	16.5	1.6	77
MAKOKA	27.8	18.4	29.0	16.8	1.1	79
MANGOCHI	N/A	21.9	N/A	20.1	0.9	76
MIMOSA	30.3	20.0	31.5	17.9	1.0	71
MONKEY BAY	30.1	22.3	31.5	21.4	1.4	77
MZIMBA	27.4	17.9	30.5	16.4	1.0	76
MZUZU	26.3	18.0	30.4	17.3	1.5	82
NKHATA BAY	30.1	21.4	32.8	20.5	0.7	83
NKHOTAKOTA	28.4	21.9	29.5	20.9	N/A	80
SALIMA	29.2	21.9	30.7	20.5	1.5	81

Glossary of some terms on this table

- 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 (m/s) to Kilometers per hour (Km/h) = m/s x 3.6