Malawi 10-Day Rainfall & Agrometeorological Bulletin

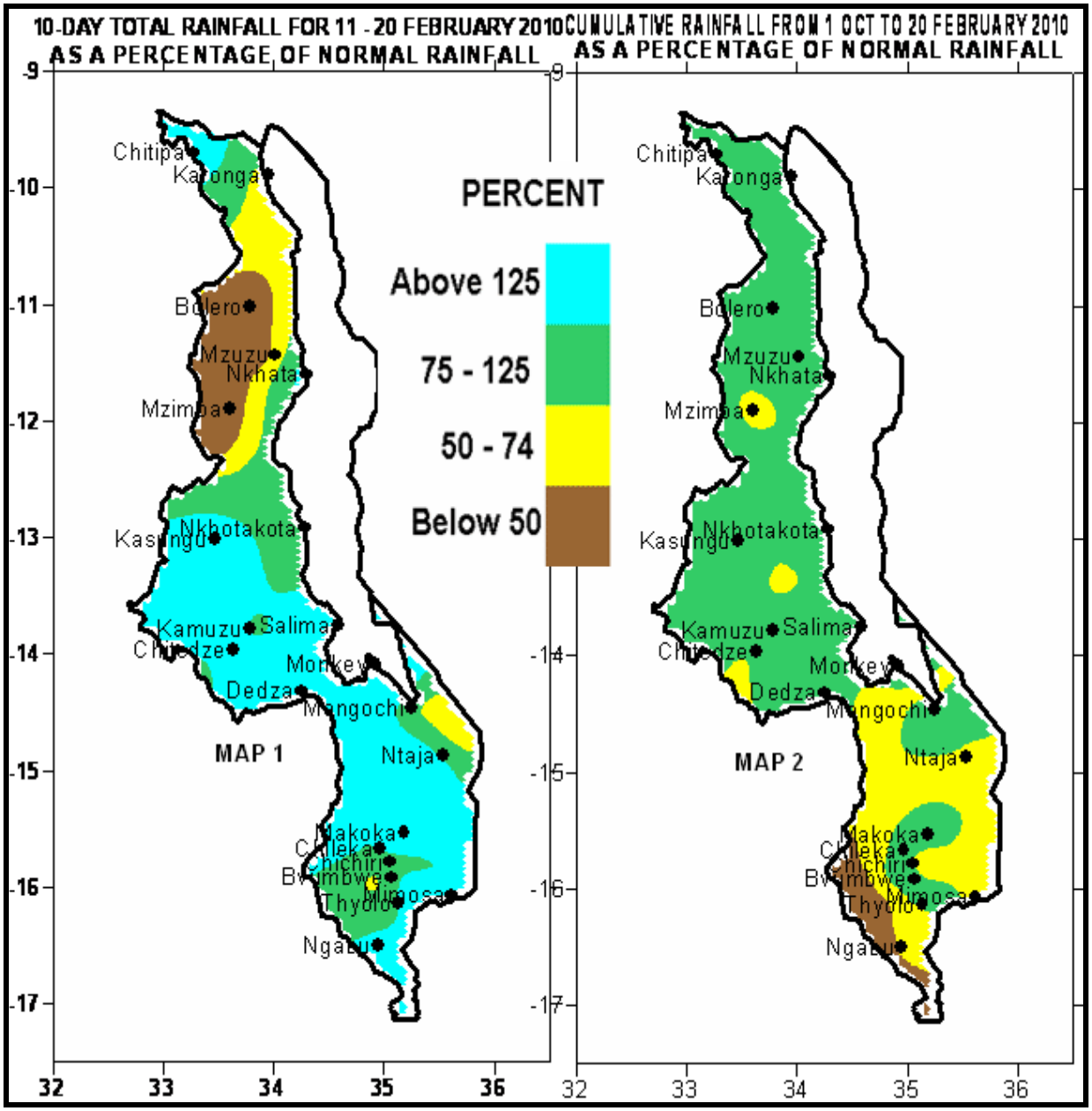
Department of Climate Change and Meteorological Services

Period: 11 – 20 February 2010 | Season: 2009/2010 | Issue No.16

Release date: 24 February 2010

HIGHLIGHTS

- **Ample and much-needed rainfall amounts received over Malawi …**
- **Recovery of rains relieved seasonal moisture deficits …**
- **High, favourable rainfall with good distribution to persist over Malawi ...**



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 second ten days of February 2010, moderate to heavy rainfall was reported in most past of Malawi. Locally heavy rainfall amounts in excess of 130mm was reported in many areas including Chingale Agric, Kasinthula, Liwonde Town, Makoka, Monkey Bay and Neno Agric in the south, Kasiya, Nathenje and nd Salima Met in the centre and Chitipa in the north. Generally lighter rainfall amounts ranging from 10 – 35mm were received in some parts of northern Malawi. For instance during the entire period Mbawa research station recorded 10mm, Bolero Met 20mm, Karonga Met 27mm, Mzimba Met 28mm and Mzuzu Met registered 35mm.

Cumulative rainfall performance by 20th February 2010 indicated 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). On the other hand, seasonal rainfall shortages persisted in most districts in southern Malawi (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 shire valley and along the lakeshore areas while warm weather (<28°C) was experienced over the highlands. The highest maximum temperature was recorded at Ngabu Met (39°C) in Chikhwawa district and the lowest minimum temperature was 16°C reported at Dedza (For more details see Table 2).

1.4 MEAN WIND SPEEDS

Malawi continued to register low average wind speeds during the second ten days of February 2010 such that the lowest wind speed was 0.6m/s (2.2 Km/h) while the highest wind speed was 2.5 m/s (9.0 Km/h) recorded at Chileka (For more details refer to Table 2).

1.5 MEAN RELATIVE HUMIDITY

The average daily relative humidity values for the second ten days of February 2010 ranged from 67% at Mimosa Met in Mulanje district to 85% at Bvumbwe in Thyolo district, Refer to Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

The onset of ample rainfall during the second ten days of February brought relief to areas that were negatively impacted by prolonged dryness particularly in southern Malawi. Moderate to severe rainfall deficits that were centered in Mwanza and Neno and lower Shire Valley districts of Chikhwawa and Nsanje have been mostly eradicated due to ample rainfall received. Although below-average rainfall situation still exist in some areas (Yellow and brown colours on Map 2), the increase in rainfall amounts is expected to encourage growth and development of crops, planting of root and tuber crops such as sweet potatoes and cassava as well as replenish water resources.

Crops over Malawi were reported to be at various developmental stages. The early planted crop was at 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.

Indications from the Crop Water Requirement Satisfaction Index (WRSI) model continue to suggest that if favourable rains continue up to March 2010 Malawi will most likely produce surplus maize at national level during 2009/2010 crop growing season. The model however, indicates that for the rain-fed cereal crops Shire Valley Agricultural Development Division will experience total crop failure.

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 usually bring mixed rainfall patterns over Malawi. However, most climate models still project that Malawi will receive normal to above normal rainfall amounts during January to March 2010.

4. OUTLOOK FOR 21 – 28 FEBRUARY 2010

Medium range model projections suggest a continuation of high, favorable rainfall with good distribution and amounts over Malawi during the period 21 – 28 February 2010.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 11 – 20 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 ≥ 0.3 mm
Bvumbwe Met.	82.7	73.8	**112**	648.3	771.3	**84**	6
Chichiri Met.	114.1	52.3	**218**	673.8	920.0	**73**	5
Chikweo Agric.	34.5	65.1	**53**	553.2	738.9	**75**	6
Chileka Airport	46.8	50.4	**93**	546.6	636.9	**86**	5
Chingale Agric	130.5	68.2	**191**	562.0	669.5	**84**	5
Chiradzulu Agric	64.5	66.2	**97**	475.1	710.5	**67**	5
Kasinthula Res. Stn.	163.7	46.3	**354**	555.1	487.8	**114**	8
Liwonde Township	137.4	62.5	**220**	365.4	568.5	**64**	6
Mpilipili	118.4	62.7	**189**	429.3	651.0	**66**	6
Makoka Met	154.0	63.1	**244**	647.0	703.2	**92**	8
Mangochi Met.	44.4	65.0	**68**	598.6	483.4	**124**	5
Masambanjati Agric	99.4	95.3	**104**	482.9	873.1	**55**	4
Mimosa Met.	114.1	71.9	**159**	661.8	939.7	**70**	4
Monkey Bay Met.	149.3	46.7	**320**	553.0	445.8	**124**	9
Mpemba Agric	52.2	68.0	**77**	745.8	793.9	**94**	4
Mulanje Boma	86.7	86.9	**100**	503.0	1153.9	**44**	6
Neno Agric	152.2	68.8	**221**	499.2	790.5	**63**	6
Ngabu Met.	76.8	51.3	**150**	286.3	549.7	**52**	5
Ntaja Met.	73.9	56.7	**130**	394.4	618.5	**64**	7
Thuchila Agric	60.4	57.8	**104**	416.4	621.0	**67**	5
Thyolo Met	78.1	73.8	**106**	683.4	785.7	**87**	6
CENTRAL REGION							
Chileka Namitete	76.3	68.3	**112**	419.6	677.3	**62**	4
Chitedze Met.	120.8	57.7	**209**	465.9	602.6	**77**	5
Dedza Met	89.6	74.7	**120**	605.7	657.2	**92**	8
K.I.A Met	67.1	61.9	**108**	497.0	586.1	**85**	5
Kasiya Agric	242.0	63.6	**381**	852.3	668.8	**127**	5
Kasungu Met	104.1	63.3	**164**	545.2	549.5	**99**	4
Mchinji Boma	94.8	74.7	**127**	786.1	723.5	**109**	7
Nathenje Agric	169.0	73.4	**230**	738.0	589.5	**125**	6
Nkhotakota Met	84.0	73.6	**114**	823.2	784.5	**105**	8
Ntchisi Boma	67.3	90.3	**75**	437.3	830.1	**53**	5
Salima Met	305.8	91.7	**333**	732.1	774.7	**95**	8
NORTHERN REGION							
Bolero Met	20.4	60.7	**34**	387.6	455.4	**85**	4
Chitipa Met	133.5	77.5	**172**	796.6	638.6	**125**	6
Karonga Met.	27.2	49.1	**55**	366.8	485.5	**76**	5
Mbawa Res. Stn	9.8	66.0	**15**	582.3	573.3	**102**	5
Mzimba Met	28.0	79.3	**35**	377.6	622.8	**61**	5
Mzuzu Met.	34.8	65.3	**53**	703.0	593.2	**119**	7
NkhataBay Met.	94.5	62.1	**152**	537.9	666.4	**81**	7

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 – 20 FEBRUARY 2010

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED (m/s)	RELATIVE HUMIDITY (%)
BVUMBWE	26.7	18.7	28.5	18.0	1.7	85
CHICHIRI	27.8	19.7	29.5	18.5	0.6	79
CHILEKA	29.4	21.8	30.8	20.2	2.5	79
CHITEDZE	27.4	18.6	29.8	17.5	0.6	83
CHITIPA	27.4	16.4	29.0	17.1	1.1	80
DEDZA	24.7	17.1	28.8	16.1	1.1	81
K I A	26.7	17.7	28.4	16.6	1.4	77
KASUNGU	27.9	19.6	29.9	18.5	1.4	83
MAKOKA	27.9	20.4	30.1	19.5	1.2	84
MANGOCHI	N/A	23.4	N/A	22.0	1.0	75
MIMOSA	30.8	20.7	33.8	19.4	1.0	67
MONKEY BAY	29.9	32.6	21.6	23.6	1.1	79
MZIMBA	27.8	18.3	29.0	16.6	0.9	73
MZUZU	26.9	18.2	28.6	16.6	1.3	80
NGABU	35.9	24.6	39.3	22.3	2.1	68
NKHATA BAY	31.5	22.0	33.1	21.5	0.6	80
NKHOTAKOTA	28.9	22.6	31.4	21.0	N/A	81
NTAJA	29.9	22.1	33.0	21.0	1.4	80
SALIMA	28.7	21.7	31.4	20.0	1.2	77
THYOLO	28.4	21.5	30.8	19.6	N/A	83

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