Malawi 10-Day Rainfall & Agrometeorological Bulletin

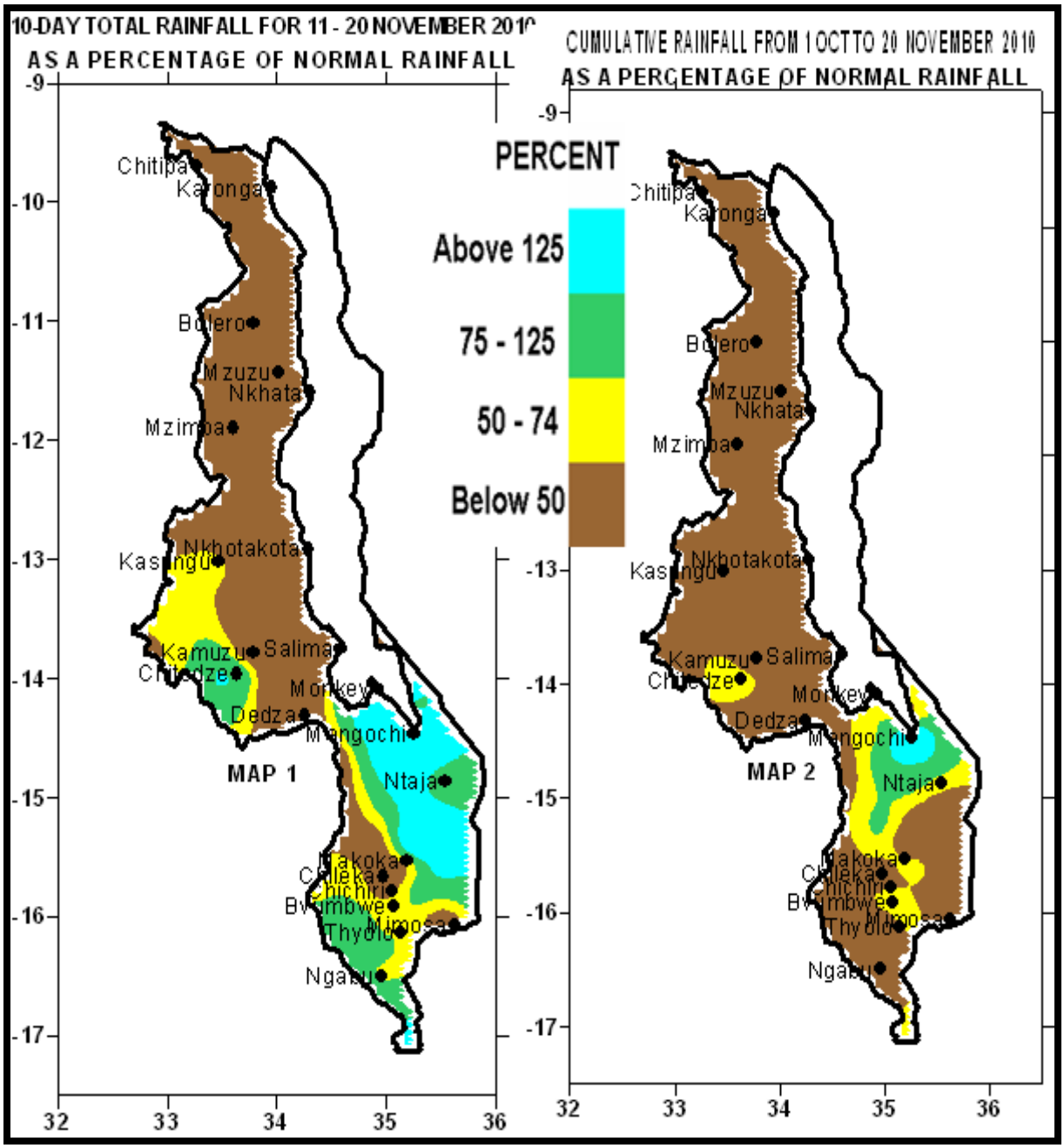
Department of Climate Change and Meteorological Services

Period: 11 – 20 November 2010 | Season: 2010/2011 | Issue No.5

Release date: 23 November 2010

HIGHLIGHTS

- **A slight improvement in rainfall amounts experienced in the south…**
- **Land preparation and acquisition of farm inputs continued…**
- **Rainfall expected to cover more areas during 21 – 30 November, 2010…**



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) 1 822 205 E-mail: metdept@metmalawi.com Homepage: www.metmalawi.com

1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

Southern and some parts of central Malawi generally experienced a few rainy days and slight improvement in rainfall amounts during the second ten days of November 2010. Some areas reported up to three rainfall days. See more details in Table 1. The north, on the other hand, remained dry. Average to above average rainfall amounts were confined mostly eastern sector of southern Malawi and a few places in central Malawi. During the period under review places that accumulated more than 40mm of rainfall in the south included Satemwa in Mulanje, Zomba Agriculture Residential Trading Centre (56mm), Lujeri and Nsanje Boma (48mm) and Chitedze (50mm) in the centre.
Cumulatively, from 1 October to 20 November 2010, most areas in Malawi have received below average rainfall below (Refer to Table 1 and Map 2).

1.2 MEAN AIR TEMPERATURE

Mean maximum air temperatures at most places were generally hot. However, Ngabu in lower Shire Valley continued to experience very hot temperatures (39℃). The lowest mean minimum temperature was reported at Mzuzu Airport (16℃). Average minimum temperatures ranged from 16℃ at Mzuzu Airport to 25℃ recorded at Salima, Nkhotakota and Mangochi along the lakeshore. See more details in Table 2.

1.4 MEAN WIND SPEEDS

Mean wind speeds at a height of two metres above the ground ranged from 0.9 m/s (3.2 Km/h) at Nkhata Bay to 4.3 m/s (15.5Km/h) at Ngabu. See more details in Table 2.

1.5 MEAN RELATIVE HUMIDITY

During the second ten days of November 2010, air over Malawi was generally dry. Most areas reported daily average relative humidity values of at less than 50%. Areas that reported daily average relative humidity values of more than 50% included Bvumbwe, Chichiri, Makoka and Mimosa in the south, Dedza in the centre and Mzuzu in the north. The highest daily average relative humidity was reported at Mzuzu Airport and Mimosa (58%). More details are in the Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

Light to moderate rainfall was reported in few areas particularly in the South and Centre. These rains encouraged farmers to speed up land preparation and acquisition of farm inputs in readiness for main planting rains which are likely to be registered during 21 – 30 November 2010. In Malawi, planting rains are normally expected in November in the south and in December in the northern half. So far sporadic rains have contributed to improvement of grazing conditions for livestock and wildlife. Land preparation and acquisition agricultural inputs (fertilizer and seeds) through normal sales and under government of Malawi input subsidy program to boost agricultural production was in progress in most parts of the country.

3. PROSPECTS OF 2010/11 RAINFALL SEASON

The climate models suggests that during 2010/2011 rainfall season, a greater part of Malawi is likely to experience normal to above normal total rainfall amounts that will result in floods in some areas as *La Nina* conditions have become established over the eastern equatorial Pacific Ocean. In simple terms the seasonal rainfall will be adequate to support agricultural production in most parts of Malawi but high rainfall intensities will result in flooding especially in low lying areas.

The 2010/11 forecast can be downloaded at http://www.metmalawi.com/forecasts/SEASONAL_FORECAST_2010_2011_Press_release_final.pdf

4. OUTLOOK 21 – 30 NOVEMBER 2010

The main rain bearing systems namely the Inter Tropical Convergence Zone and Congo Air mass are expected to get established and enhance rainfall over Malawi within the period 21 to 30 November 2010. Hence expect a general improvement in rainfall distribution and amounts during the last days of November 2010.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 11 – 20 NOVEMBER 2010 AT SELECTED STATIONS

STATION NAME	DEKADAL TOTAL RAINFALL	DEKADAL NORMAL	DEKADAL TOTAL AS %	TOTAL TO DATE	NORMAL TO DATE	TOTAL TODATE AS %	RAINY DAYS
SOUTHERN REGION	mm	mm	NORMAL	mm	mm	NORMAL	≥ 0.3 mm
Bvumbwe Met.	26.1	34.0	**77**	50.1	84.9	**59**	3
Chichiri Met.	7.0	59.2	**12**	50.1	225.7	**22**	1
Chileka Airport	12.9	30.7	**42**	31.5	79.1	**40**	3
Chiradzulu Agric	16.5	23.5	**70**	42.1	80.8	**52**	1
Kasinthula Res. Stn.	13.2	13.7	**96**	13.2	60.0	**22**	1
Lujeri Tea Estate	48.3	90.5	**53**	76.3	248.4	**31**	2
Mpilipili (Makanjila)	0.0	15.9	**0**	2.0	43.5	**5**	0
Makoka Met	1.5	18.1	**8**	28.9	57.9	**50**	2
Mangochi Met.	26.1	7.3	**358**	57.2	28.5	**201**	2
Masambanjati Agric	31.0	39.5	**78**	31.0	105.0	**30**	1
Mimosa Met.	25.8	49.4	**52**	54.0	145.1	**37**	3
Monkey Bay Met.	9.8	3.9	**251**	9.8	13.9	**71**	3
Mpemba Vet	23.5	33.0	**71**	82.2	96.6	**85**	2
Mulanje Boma	4.5	49.8	**9**	56.0	212.1	**26**	1
Mwanza Boma	14.0	21.7	**65**	14.0	91.2	**15**	1
Namiasi Agric	14.0	10.6	**132**	14.0	22.9	**61**	1
Ngabu Met.	10.6	15.5	**68**	15.8	55.5	**28**	1
Nsanje Boma	48.2	34.3	**141**	67.1	119.2	**56**	1
Ntaja Met.	14.3	22.0	**65**	25.6	44.2	**58**	1
Phalula Agric	16.0	32.4	**49**	66.7	73.4	**91**	1
Satemwa Tea Est. No.1	43.7	26.4	**166**	76.1	90.9	**84**	2
Thyolo Met	12.0	24.5	**49**	64.2	98.9	**65**	1
Zomba R.T.C	55.6	20.2	**275**	59.6	64.0	**93**	1
CENTRAL REGION							
Chitedze Met.	49.8	32.6	**153**	49.8	53.5	**93**	1
Dedza Met	3.3	20.8	**16**	3.3	41.9	**8**	1
Dwangwa Sugar Corp.	0.0	30.3	**0**	0.0	52.4	**0**	0
K.I.A Met	0.0	26.3	**0**	0.0	46.6	**0**	0
Kasungu Met	8.8	14.8	**59**	8.8	27.6	**32**	1
Mchinji Boma	8.2	28.6	**29**	10.9	73.4	**15**	1
Mkanda Met	20.2	30.8	**66**	20.2	55.9	**36**	1
Mlangeni Njolomole	0.0	16.5	**0**	12.1	59.9	**20**	0
Mponela Agric	0.0	16.8	**0**	0.0	34.5	**0**	0
Mtakataka Airwing	6.0	8.0	**75**	6.0	30.0	**20**	2
Nathenje Agric	0.0	22.5	**0**	0.0	44.6	**0**	0
Nkhotakota Met	0.0	14.0	**0**	0.0	30.4	**0**	0
Ntcheu - Nkhande	2.8	17.4	**16**	9.9	57.9	**17**	2
Ntchisi Boma	0.0	15.5	**0**	0.0	29.2	**0**	0
Salima Met	0.0	11.9	**0**	4.7	25.9	**18**	0
NORTHERN REGION							
Bolero Met	0.0	13.5	**0**	0.0	23.4	**0**	0
Bwengu Agric.	2.0	16.3	**12**	2.0	35.1	**6**	1
Chitipa Met	0.0	16.8	**0**	0.0	31.1	**0**	0
Chintheche Agric	0.0	52.5	**0**	0.0	91.7	**0**	0
Karonga Met.	0.0	15.6	**0**	0.0	20.8	**0**	0
Lupembe	0.0	11.6	**0**	0.0	17.2	**0**	0
Mbawa Res. Stn	0.0	24.8	**0**	0.0	44.8	**0**	0
Mzimba Met	1.7	24.1	**7**	14.3	39.1	**37**	1
Mzuzu Met.	0.0	28.1	**0**	17.4	76.9	**23**	0
NkhataBay Met.	0.0	33.1	**0**	0.0	63.9	**0**	0
Vinthukutu Agric	0.0	24.8	**0**	0.0	39.9	**0**	0

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 – 20 November 2010

STATION	MAX TEMP (℃)	MIN TEMP (℃)	ABS MAX (℃)	ABS MIN (℃)	WIND SPEED m/s	RH %
BOLERO	33.2	21.5	34.5	19.3	N/A	40
BVUMBWE	30.1	18.5	32.2	16.2	2.8	57
CHICHIRI	30.5	19.4	33.4	18.1	1.1	54
CHILEKA	33.3	23.1	36.4	21.0	3.8	46
CHITEDZE	32.2	18.7	33.4	17.5	1.5	47
CHITIPA	31.6	20.1	33.1	18.1	2.6	43
DEDZA	27.2	17.3	28.3	16.5	1.7	58
K I A	30.5	19.2	31.5	16.6	2.4	45
KARONGA	34.7	24.4	36.0	23.6	2.6	45
KASUNGU	32.2	20.6	33.8	19.4	3.4	44
MAKOKA	31.6	19.8	32.9	18.0	1.8	55
MANGOCHI	N/A	25.0	N/A	22.8	2.2	45
MIMOSA	35.0	19.2	38.0	17.5	1.6	58
MZIMBA	30.7	19.5	32.0	18.0	1.9	46
MZUZU	29.4	16.1	30.4	15.2	1.9	51
NGABU	39.3	23.0	42.6	23.7	4.3	47
NKHATA BAY	35.5	19.2	36.2	18.2	0.9	50
NKHOTAKOTA	33.5	24.6	34.1	22.9	2.6	46
NTAJA	34.7	23.2	36.0	22.0	2.9	46
SALIMA	33.5	24.9	34.2	23.3	2.5	50

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