REPUBLIC OF MALAWI

Department of Climate Change and Meteorological Services

10-day Weather and Agrometeorological Bulletin

In support of national early warning systems

Period: 01 – 10 November 2012 | Season: 2012/2013 | Issue No.4

Release date: 14 November 2012

HIGHLIGHTS

- **Scattered thunderstorms experienced in parts of Malawi…**
- **Land preparation continued and planting done in some parts…**
- **Isolated thunderstorms are expected during 11-20 November 2012…**

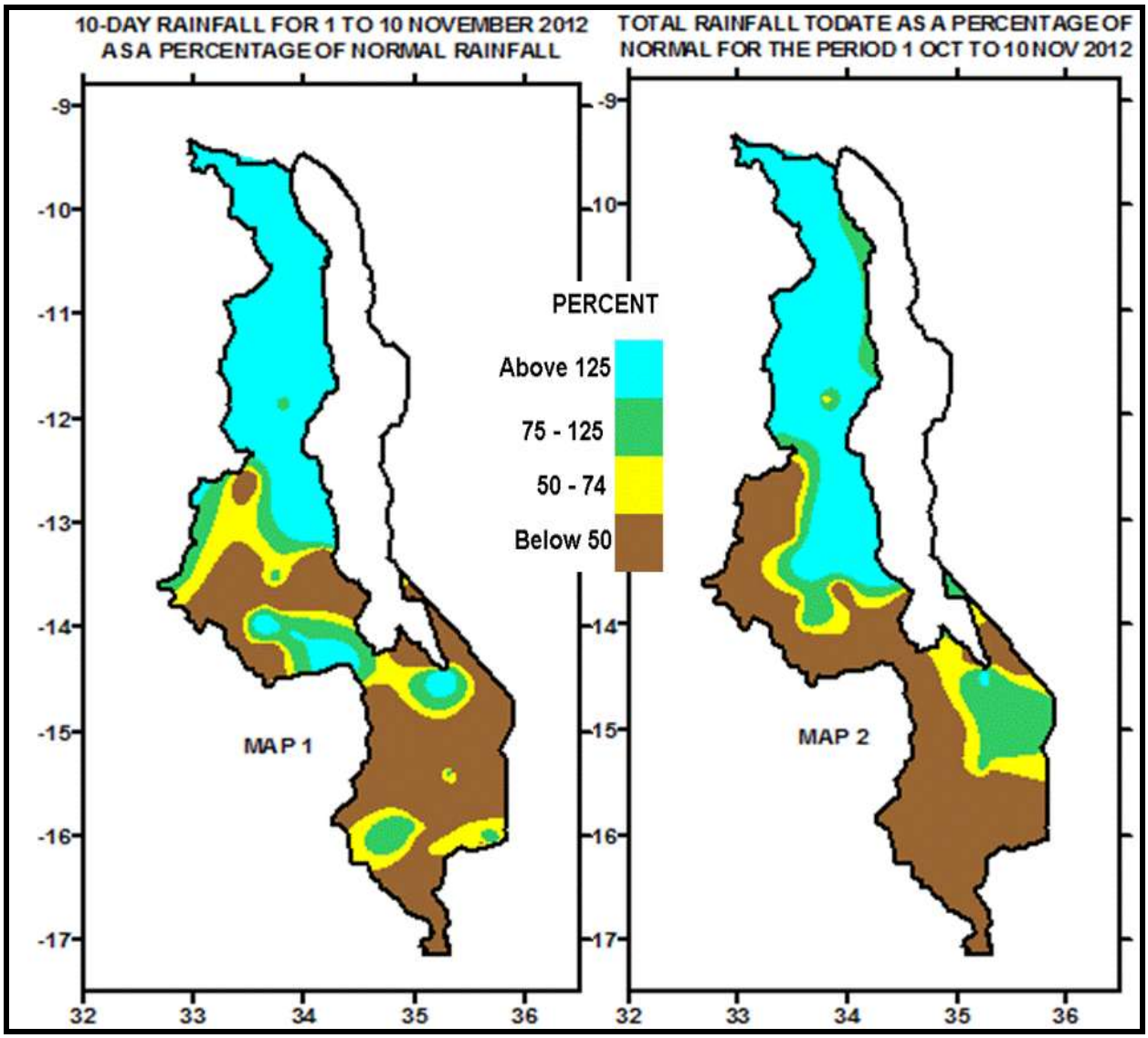

Figure 1: Rainfall Maps for Malawi for 1-10 November 2012

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

1.0 WEATHER SUMMARY AND IMPACTS

1.1 RAINFALL SITUATION

During the first ten days of November 2012, the effects of the convergence of airmasses that started the previous dekad brought rains to some parts of the country, especially over the northern half. The rainfall was received mostly during the first two to three days. Stations that recorded amounts higher than 20 mm include: Lujeri, Mpemba and Mulanje Boma in the South; Dwangwa and Nkhota kota in the Central Region. As for the north, Chitipa, Chintheche, Euthini, Mbawa, Mzimba, Mzuzu Nkhata Bay and Zombwe reported 20 mm and more. See Table 1. The highest number of rainy days was registered at Bvumbwe followed by a few stations in the Northern Region. It can be seen from Map 1 that most areas in the northern half of Malawi registered above 125% of the expected amounts while over the southern half, mainly dry conditions prevailed. These dry conditions were carried over from the previous dekad in most areas in the southern half while for the northern half, significant improvements in the distribution of the rains was achieved during the period under review.

Map 2 on page 1 gives an idea of the performance of rainfall for the country since 1 October 2012. From the map, it is clear that the northern parts of the country have received more rains than expected while most parts of the southern and central regions have received less than expected for the areas. However, in most areas, the rainfall was received during the last few days of the previous dekad into the very first few days of the dekad under review. A few stations have so far registered over 200% cumulative rainfall, some of which include: Dwangwa, Madisi, Nkhota kota, Bolero, Chitipa, Euthini, Mzimba and Zombwe (Table 1).

1.2 VEGETATION CONDITION

Figure 2: Vegetation Condition over Southern Africa

Vegetation condition map for Southern Africa for the period 1 to 10 November 2012 show signs of slight improvement compared with the previous dekads (Figure2). This is due to isolated cases of rainfall being received in parts of the region as the rainy season is due to set in. Vegetation condition over Malawi is expected to improve significantly with the rainfall received during this dekad and the previous one.

1.3 AIR TEMPERATURE

Generally hot conditions prevailed over the country during the period 1 to 10 November 2012. Mean maximum temperatures ranged from 25.5°C at Mzuzu to about 35.8°C at Ngabu while mean minimum temperatures ranged from around 14.9°C at Bvumbwe to 23.1°C at Monkey Bay (Table 2). Maximum temperatures were generally lower while minimum temperatures were slightly higher than the previous dekad. This can be attributed to increased cloudness that lowered day time temperatures and slightly raised night temperatures.

1.4 WIND SPEEDS

Mean wind speeds at a height of two metres above the ground level were lower than the previous dekad across the country and ranged from 0.7 to 3.6 metres per second. The lowest mean wind speed (0.7 m/s) was reported at Nkhata Bay while the highest mean wind speed (3.6 m/s) was recorded at Chileka. Refer to Table 2.

1.5 RELATIVE HUMIDITY

During the period 1 to 10 November 2012, air over Malawi was relatively moist compared to the previous dekad. Daily average relative humidity values ranged from 48% at Ngabu to 71% at Mzuzu in the north. This was due to dominance of moist south-easterly to easterly airmass over the country, and resulted in scattered thunderstorms that were experienced during the dekad. For details refer to Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

Land preparation continued in most areas. The rainfall that was received during the previous and this dekad encouraged farmers to continue with land preparations while others started to do so in the wake of rains. In some areas where significant rainfall amounts have been received, farmers have planted and the maize crop has since germinated. Planting has been reported in some Extension Planning Areas (EPAs) in Northern Malawi and a few in the Central and Southern areas.

3. PROSPECTS FOR 2012/13 RAINFALL SEASON

The summary of the 2012/2013 rainfall outlook is that ***"Normal total rainfall amounts are expected over most parts of Malawi during the 2012/2013 rainfall season***". The rainfall outlook indicates that the greater part of the country will experience normal to above normal total rainfall amounts during the period from October 2012 to March 2013.

This forecast covers the rainfall season from October 2012 to March 2013 and is relevant only to seasonal time-scales and relatively large areas. It does not fully account for local and month to month variations in distribution of rainfall such as localised dry spells and flash floods.

The seasonal forecast is issued to users as a planning tool. For day to day operations, users are advised to make use of the available short to medium range forecasts and the 10-day Rainfall and Agrometeorological bulletin issued by the Department.

4. OUTLOOK FOR 11 – 21 NOVEMBER 2012

Models for short and medium range forecasts indicate that air over Malawi will be fairly moist and unstable due to the occasional converging of south-easterly, north-easterly and north-westerly airmasses over the country. This will result in localized thunderstorms and rainshowers starting from the south progressing northwards.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 1 OF NOVEMBER 2012: PERIOD 1ST – 10TH

STATION NAME	DEKADAL TOTAL RAINFALL (mm)	DEKADAL NORMAL RAINFALL (mm)	DEKADAL TOTAL AS PERCENTAGE OF NORMAL	TOTAL TODATE (mm)	NORMAL TODATE (mm)	NORMAL TODATE AS PERCENTAGE OF NORMAL	RAINY DAYS
SOUTHERN REGION							
Bvumbwe Met.	13.3	20.9	**64**	15.7	50.9	**31**	4
Chancellor College	8.0	20.9	**38**	26.0	48.0	**54**	1
Chichiri Met.	1.2	69.5	**2**	36.6	166.5	**22**	1
Chikwawa Boma	14.0	11.5	**122**	14.0	33.6	**42**	1
Chileka Airport	3.2	19.6	**16**	13.7	48.4	**28**	1
Chingale Agric	5.3	17.1	**31**	27.4	31.7	**86**	1
Lujeri Tea Estate	57.0	57.9	**98**	70.6	157.9	**45**	2
Makoka Met	0.1	15.3	**1**	10.8	39.8	**27**	0
Mangochi Met.	17.5	7.3	**240**	31.1	21.2	**147**	1
Mimosa Met.	14.4	33.7	**43**	26.5	95.7	**28**	2
Monkey Bay Met.	0.0	5.9	**0**	8.3	10.0	**83**	0
Mpemba Vet	25.4	25.9	**98**	25.4	63.6	**40**	1
Mulanje Boma	28.2	38.7	**73**	46.8	162.3	**29**	2
Naminjiwa Agric	3.8	14.9	**26**	9.4	43.9	**21**	2
Namwera Agric	2.7	22.0	**12**	2.7	34.3	**8**	1
Nchalo Sucoma	5.1	14.3	**36**	5.1	30.7	**17**	1
Ngabu Met.	0.2	16.7	**1**	0.2	40.0	**1**	0
Nsanje Boma	8.9	32.1	**28**	8.9	84.9	**10**	1
Ntaja Met.	0.0	9.1	**0**	27.6	22.2	**124**	0
Thyolo Met	19.4	35.5	**55**	19.4	74.4	**26**	2
Zomba RTC	19.0	19.1	**99**	19.0	43.8	**43**	2
CENTRAL REGION							
Chitedze Met.	18.9	8.6	**220**	20.2	20.9	**97**	1
Dwangwa	53.1	13.5	**393**	55.6	22.1	**252**	1
K.I.A Met	0.0	9.3	**0**	23.9	20.3	**118**	0
Kasungu Met	3.6	6.1	**59**	3.8	12.8	**30**	1
Lisasadzi	3.8	7.1	**54**	3.8	10.0	**38**	1
Madisi Agric	3.0	7.4	**41**	28.0	13.3	**211**	1
Mkanda Met	10.6	13.0	**82**	10.6	25.1	**42**	2
Mlangeni Njolomole	1.3	17.9	**7**	3.0	43.4	**7**	1
Mponela Agric	10.0	10.5	**95**	24.7	17.7	**140**	1
Mtakataka Airwing	0.0	12.8	**0**	0.0	22.0	**0**	0
Nathenje Agric	12.0	8.9	**135**	12.0	22.1	**54**	1
Nkhotakota Met	53.5	10.1	**530**	74.2	16.4	**452**	1
Salima Met	0.0	6.6	**0**	0.4	14.0	**3**	0
Dedza RTC	15.3	7.3	**210**	15.3	35.8	**43**	1
NORTHEN REGION							
Baka Res. Stn.	8.0	3.2	**250**	8.0	4.6	**174**	1
Bolero Met	17.9	3.8	**471**	22.6	9.9	**228**	2
Chikangawa forest	12.5	16.3	**77**	12.5	28.5	**44**	3
Chitipa Met	37.3	9.7	**385**	63.8	14.3	**446**	1
Chintheche Agric	80.8	23.5	**344**	109.0	39.2	**278**	2
Euthini Agric.	80.3	7.4	**1085**	80.3	14.4	**558**	1
Karonga Met.	10.0	3.4	**294**	10.0	5.2	**192**	2
Lupembe	5.7	4.0	**143**	5.7	5.6	**102**	2
Mbawa Res. Stn	29.0	9.2	**315**	29.0	20.0	**145**	1
Mzimba Met	30.3	9.8	**309**	54.6	15.0	**364**	1
Mzuzu Met.	26.5	12.7	**209**	73.1	48.8	**150**	3
NkhataBay Met.	21.2	16.9	**125**	22.0	30.8	**71**	2
Zombwe Agric	28.0	9.5	**295**	39.0	14.3	**273**	2

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR THE PERIOD 01 TO 10 NOVEMBER 2012

STATION	MAX TEMP (ºC)	MIN TEMP (ºC)	ABS MAX (ºC)	ABS MIN (ºC)	WIND SPEED (m/s)	RH (%)	EVAP (mm)
KARONGA ADD							
Chitipa	28.6	18.3	32.4	16.4	2.5	54	N/A
Karonga	31.8	22.3	36.1	20.5	2.4	56	N/A
MZUZU ADD							
Bolero	29.4	18.8	34.3	15.9	N/A	55	N/A
Mzuzu	25.5	15.0	30.2	12.4	1.6	71	N/A
Mzimba	27.4	16.8	31.0	16.0	1.5	59	N/A
Nkhata Bay	31.1	19.1	35.6	17.1	0.7	67	N/A
KASUNGU ADD							
Kasungu	30.2	18.3	34.6	14.9	2.3	52	N/A
LILONGWE ADD							
KIA	27.6	18.0	32.0	14.5	2.0	56	10.1
Chitedze	29.6	17.6	33.4	14.9	1.2	58	N/A
Dedza	24.4	15.5	28.6	12.1	1.1	59	N/A
SALIMA ADD							
Salima	32.8	22.8	37.0	20.2	2.8	56	N/A
Nkhotakota	30.8	21.7	35.0	20.0	2.2	58	N/A
MACHINGA ADD							
Makoka	29.4	17.5	33.9	11.4	1.5	52	N/A
Ntaja	31.3	20.2	32.6	17.1	2.8	50	N/A
Mangochi	33.6	21.6	38.0	19.0	1.9	52	N/A
Monkey Bay	32.2	23.1	36.3	20.3	2.7	50	N/A
BLANTYRE ADD							
Chileka	31.0	19.7	36.7	20.1	3.6	51	N/A
Chichiri	28.2	16.8	33.6	12.5	2.1	54	N/A
Bvumbwe	27.7	14.9	33.1	10.6	3.3	60	N/A
Mimosa	32.0	16.7	38.8	11.5	1.5	67	6.3
SHIRE VALLEY ADD							
Ngabu	35.8	22.6	42.3	19.1	2.2	48	N/A

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