REPUBLIC OF MALAWI

Department of Climate Change and Meteorological Services

10-day Weather and Agrometeorological Bulletin

In support of national early warning systems

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HIGHLIGHTS

- **Scattered rainfall activities experienced over Malawi…**
- **Land preparation intensified in most parts…**
- **Wet conditions expected during the first part but it will be dry later…**

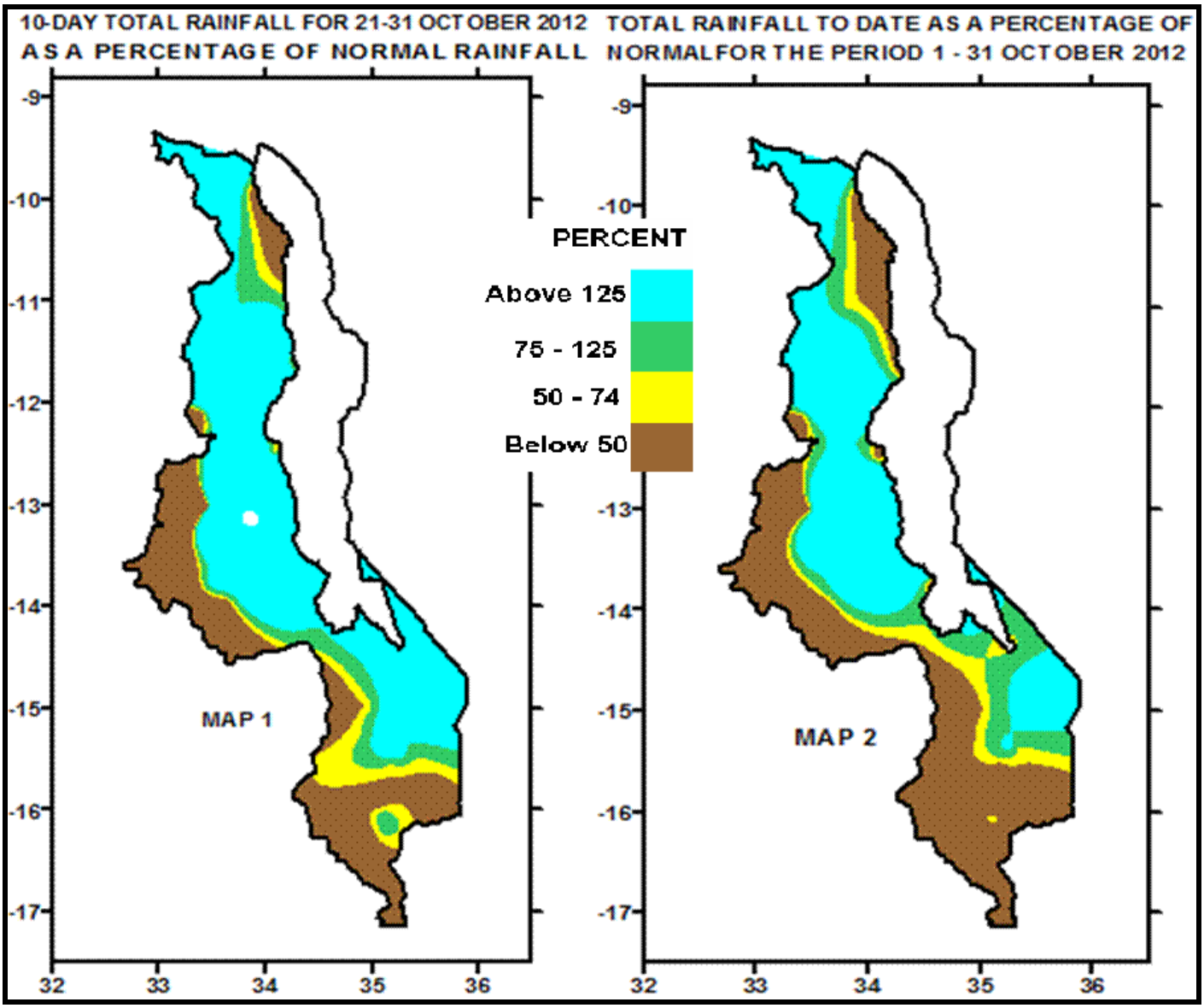

Figure 1: Rainfall Maps for Malawi for 21-31 October 2012

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1.0 WEATHER SUMMARY AND IMPACTS

1.1 RAINFALL SITUATION

During the last ten days of October 2012, most parts of the country continued to be dry except for the the last two days of the dekad. Some areas registered pre-rains especially towards the end of the third dekad of October 2012. Some areas that registered amounts higher than 20 mm include: Chingale, Ntaja and Satemwa in the South; KIA, Malomo, Madisi, Ntchisi, and Nkhota kota in the Centre; while in the north it was Chitipa, Chintheche, Mzimba and Mzuzu that reported 20 mm and above. See Table 1. Map 1 shows how rainfall was distributed across the country. It shows that the extreme western and southern areas continued to be dry whereas the other parts received some rains.

Cumulatively, the western and extreme southern parts show poor performance of rains while the other parts of the country registered better percentage of rainfall performance though it was just received during the last two days of the dekad. Malomo and Ntchisi registered over 1000% of the normal cumulative rainfall.

1.2 VEGETATION CONDITION

Due to dry conditions experienced so far, vegetation condition in Malawi continued to be suppressed across the country.

1.3 AIR TEMPERATURE

Hot to very hot temperatures continued to be experienced across the country during the last ten days of October 2012. Mean maximum temperatures ranged from 28.6°C at Mzuzu to about 36°C at Ngabu while mean minimum temperatures ranged from around 14°C at Mzuzu to around 24°C at Ngabu. For more details see Table 2.

1.4 WIND SPEEDS

Mean wind speeds at a height of two metres above the ground level across the country ranged from 1.0 to 3.9 metres per second (m/s). The lowest and highest wind speeds were reported at Nkhata Bay and Chileka (1.0 and 3.9 m/s, respectively).

1.5 RELATIVE HUMIDITY

During the period under review, air over Malawi was generally dry, except for the last two days of the dekad. Daily average relative humidity values ranged from 45% at Chileka and Kasungu to 56% at Mimosa in the south. Details are in the Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

The main on-farm activity during the last ten days of October 2012 has been land preparation in most parts of the country. However, some farmers started to plant where the amounts were perceived enough for planting.

3. PROSPECTS FOR 2012/13 RAINFALL SEASON

The summary of the 2012/2013 rainfall forecast is that ***"Normal total rainfall amounts are expected over most parts of Malawi during the 2012/2013 rainfall season***". The rainfall forecast 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 and medium range forecasts and the 10-day Rainfall and Agrometeorological bulletin.

4. OUTLOOK 01 – 10 NOVEMBER 2012

Models for short and medium range forecasts indicate that Malawi will be affected by convergence ahead of pressure rises. This will result in rainfall activities over some areas mainly during the first few days of the third dekad. Thereafter warm Easterly airflow will be dominant over Malawi resulting in dry weather conditions.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 3 OF OCTOBER 2012: PERIOD 21 – 31

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							
Balaka Township	9.0	16.0	56	9.0	27.3	33	1
Bvumbwe Met.	2.4	17.2	14	2.4	30.0	8	2
Chancellor College	18.0	19.3	93	18.0	27.1	66	2
Chichiri Met.	14.8	39.1	38	35.4	97.0	36	1
Chileka Airport	10.5	16.5	64	10.5	28.8	36	1
Chingale Agric	22.1	6.5	340	22.1	14.6	151	1
Lujeri Tea Estate	9.6	42.1	23	13.6	100.0	14	1
Makoka Met	10.7	12.8	84	10.7	24.5	44	1
Mangochi Met.	13.6	6.0	227	13.6	13.9	98	2
Masambanjati Agric	13.9	15.9	87	13.9	37.2	37	1
Mimosa Met.	12.1	32.3	37	12.1	62.0	20	3
Monkey Bay Met.	8.3	2.6	319	8.3	4.1	202	1
Mulanje Boma	18.6	62.2	30	18.6	123.6	15	3
Mwanza Boma	17.2	22.9	75	17.2	44.7	38	2
Namiasi Agric	2.1	1.6	131	2.1	6.5	32	1
Naminjiwa Agric	5.6	20.3	28	5.6	29.0	19	2
Nchalo Sucoma	0.0	9.7	0	0.0	16.4	0	0
Ngabu Met.	0.0	13.5	0	0.0	23.3	0	0
Ntaja Met.	27.6	7.9	349	27.6	13.1	211	1
Phalula Agric	12.7	14.3	89	12.7	27.6	46	1
Satemwa	21.3	21.0	101	21.3	36.4	59	3
CENTRAL REGION							
Chitedze Met.	1.3	7.9	16	1.3	12.3	11	1
Dedza Met	4.8	4.6	104	4.8	11.0	44	1
Dwangwa	2.5	3.9	64	2.5	8.6	29	1
K.I.A Met	23.9	8.2	291	23.9	11.0	217	2
Kasiya Agric	17.9	8.7	206	17.9	23.4	76	1
Kasungu Met	0.2	5.4	4	0.2	6.7	3	0
Malomo Agric	56.5	1.6	3531	56.5	3.6	1569	1
Madisi Agric	25.0	4.4	568	25.0	5.9	424	1
Mlangeni Njolomole	1.7	16.3	10	1.7	25.5	7	1
Mponela Agric	14.7	5.7	258	14.7	7.2	204	1
Nkhotakota Met	20.7	3.5	591	20.7	6.3	329	1
Ntchisi Boma	61.5	2.4	2563	61.5	5.6	1098	1
Salima Met	0.4	2.7	15	0.4	7.4	5	1
NORTHEN REGION							
Baka Res. Stn.	0.0	0.6	0	0.0	1.4	0	0
Bolero Met	4.7	4.0	118	4.7	6.1	77	1
Chitipa Met	26.5	3.6	736	26.5	4.6	576	2
Chintheche Agric	28.2	9.0	313	28.2	15.7	180	2
Karonga Met.	0.0	1.3	0	0.0	1.8	0	0
Mbawa Res. Stn	0.0	8.5	0	0.0	10.8	0	0
Mzimba Met	24.3	3.6	675	24.3	5.2	467	1
Mzuzu Met.	46.6	10.7	436	46.6	36.1	129	3
NkhataBay Met.	0.8	5.2	15	0.8	13.9	6	1
Zombwe Agric	11.0	3.1	355	11.0	4.8	229	1

TABLE 1: AGROMETEOROLOGICAL PARAMETERS FOR THE PERIOD 11 – 20 OCTOBER 2012

STATION	MAX TEMP (ºC)	MIN TEMP (ºC)	ABS MAX (ºC)	ABS MIN (ºC)	WIND SPEED (m/s)	RH (%)	EVAP (mm)
KARONGA ADD							
Chitipa	31.8	19.3	33.4	17.6	3.7	47	N/A
Karonga	33.6	23.0	35.5	22.1	2.0	48	N/A
MZUZU ADD							
Bolero	32.9	20.5	35.3	17.9	N/A	N/A	N/A
Mzuzu	28.6	14.9	31.7	12.5	1.9	61	N/A
Mzimba	30.6	19.2	33.2	17.0	2.2	47	N/A
Nkhata Bay	34.5	19.0	37.6	16.6	1.0	57	N/A
KASUNGU ADD							
Kasungu	32.5	19.1	35.1	16.0	3.0	45	N/A
LILONGWE ADD							
KIA	29.8	16.1	32.6	12.4	3.2	53	10.1
Chitedze	31.4	17.6	33.8	15.6	1.4	48	N/A
Dedza	25.9	15.9	28.7	14.0	1.3	54	N/A
SALIMA ADD							
Salima	34.2	23.4	36.5	22.7	3.5	49	N/A
Nkhotakota	32.4	23.2	35.6	21.6	2.8	51	N/A
MACHINGA ADD							
Makoka	30.3	17.6	32.9	15.3	1.4	48	N/A
Ntaja	33.2	20.6	37.2	19.1	3.0	46	N/A
Mangochi	35.3	22.2	38.6	20.5	2.4	48	N/A
Monkey Bay	33.9	23.8	36.7	22.6	3.0	47	N/A
BLANTYRE ADD							
Chileka	32.5	20.5	37.0	17.9	3.9	45	N/A
Chichiri	32.7	19.8	33.7	13.4	1.2	48	N/A
Bvumbwe	28.2	15.6	32.6	13.0	3.0	53	N/A
Mimosa	33.3	17.9	38.2	15.4	1.6	56	7.0
SHIRE VALLEY ADD							
Ngabu	36.0	22.8	41.4	20.5	2.0	44	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