REPUBLIC OF MALAWI

Department of Climate Change and Meteorological Services

10-day Weather and Agrometeorological Bulletin

In support of national early warning systems

Period: 21 – 31 March 2013 | Season: 2012/2013 | Issue No.18

Release date: 5th April 2013

HIGHLIGHTS

- **Dry weather experienced in most areas in Malawi …**
- **Maize crop ranged from maturity to drying and harvesting stages…**
- **Mostly dry weather expected during the first ten days of April 2013 …**

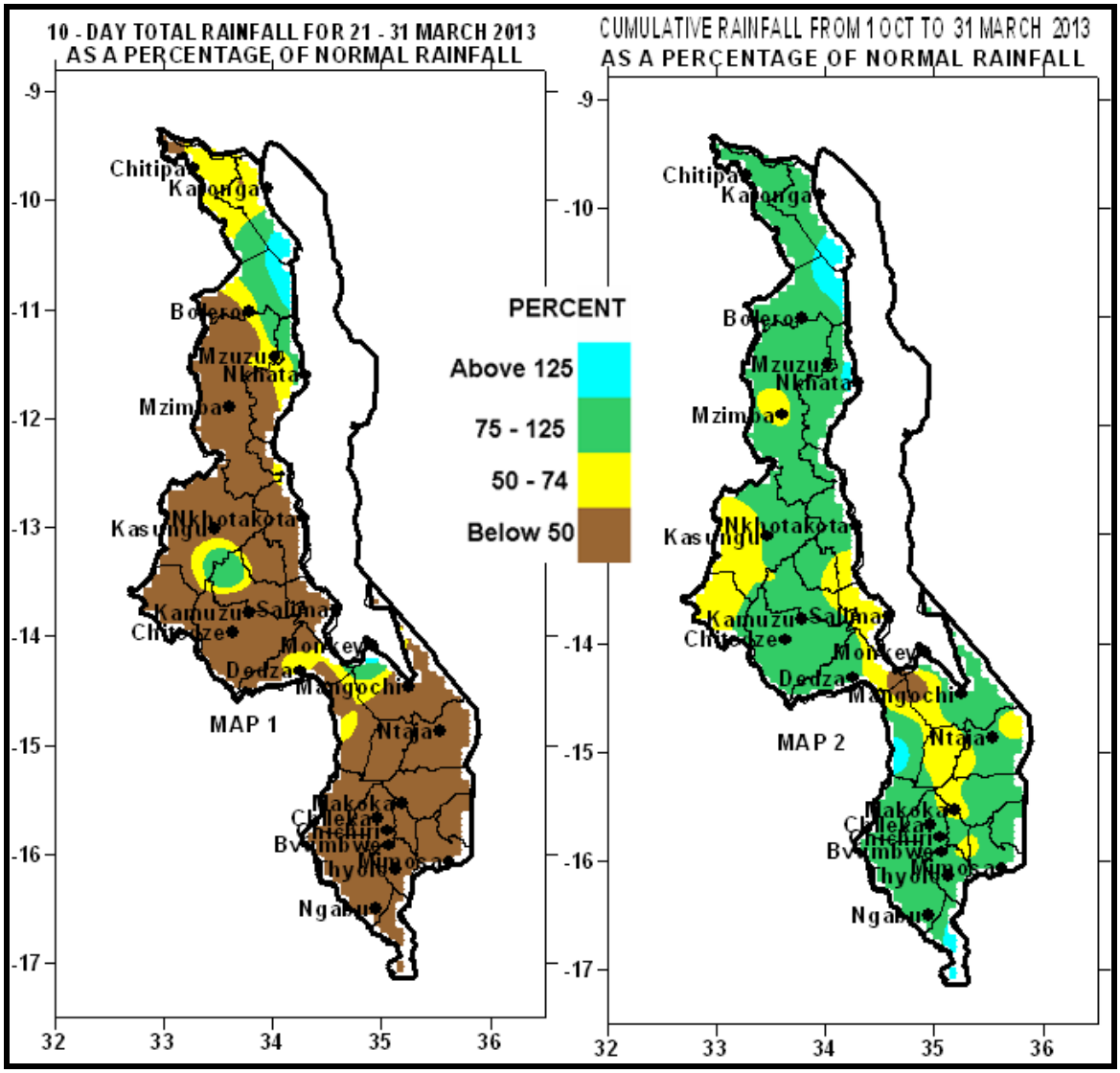

Figure 1: Rainfall Maps for Malawi for 21 – 31 March 2013

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 last 10-days of March 2013 below average cumulative rainfall and dry conditions were experienced over Malawi except for a few areas which which had registered average to above average cumulative rainfall amounts. A few areas that had recorded significant rainfall amounts in excess of 100mm were mostly confined to the north and such areas had included Chintheche Agric 136mm, Nkhata Bay Met 146mm and Vinthukutu Agric 238mm See more details in Table 1 and Map 1.

Map 2 shows the cumulative rainfall performance for the country since the rainfall season started on 1st October 2012 up to 31st March 2013. The map shows that most areas in Malawi have achieved their expected long term average to above average cumulative rainfall amounts (green and light blue colours on Map 2) with a few pockets of below average rainfall (yellow and brown colours) by 31 March 2013. For more details refer to Table 1 and Map 2.

1.2 VEGETATION CONDITION

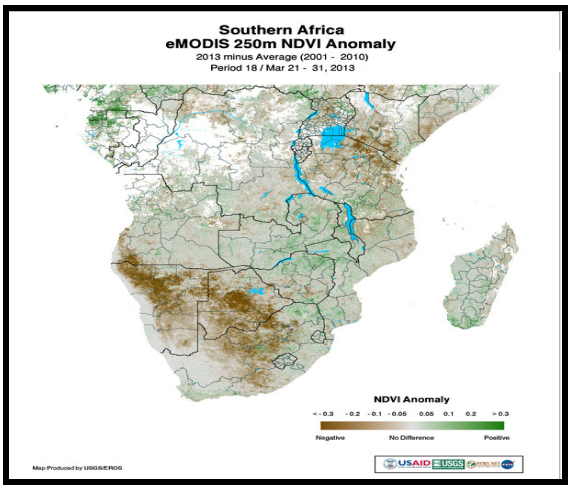

Figure 2: Vegetation Condition over Southern Africa

The vegetation diference from long term average map for Southern Africa for the period 21 to 31 March 2013 showed a mixed pattern over the region. Positive anomalies persisted in most areas that had experienced good rainfall and improved green biomass (Figure2) while pockets of negative anomalies were evident in areas where seasonal vegetation and crops had reached maturity and senescence period.

1.3 AIR TEMPERATURE

During the last ten days of March 2013, warm to hot tempratures persisted over the country. The daily mean maximum temperatures ranged from 23.2°C at Dedza to 32.3°C at Ngabu in Shire Valley. When compared to the previous dekad, generally the temperatures had remained the same. Mean absolute minimum temperatures ranged from around 12.3°C at Dedza to 21.4°C at Monkey Bay Met (Table 2). The highest absolute maximum temperature for the period was about 33.8°C, observed at Ngabu in Shire Valley on 31 March 2013.

1.4 WIND SPEEDS

Daily mean wind speeds at a height of two metres above the ground level ranged from 0.7 to 3.9 metres per second. The lowest mean wind speed was reported at Chitedze Met while the highest mean wind speed was recorded at Chitipa Met. Refer to Table 2.

1.5 RELATIVE HUMIDITY

During the period under review, air over Malawi was generally drier than during the pervious ten day period. Mean daily relative humidity values ranged from 57% to 85%. The lowest mean relative humidity value was reported at Mangochi Meteorological station while the highest relative humidity was experienced at Nkhata Bay Met. See more details in Table 2.

2.0 AGROMETEOROLOGICAL ASSESSMENT

Dry weather conditions had spread to more areas in Malawi during the period under review. The prevailing dry weather had facilitated harvesting and drying of matured crops while moderate to heavy rains that fell in some parts of the country helped to replenish soil moisture reserves and were also supportive to growth and development of roots and tubers as well as the late

planted crops. On the negative note the wet weather had hampered harvesting of matured crops. Maize crop had ranged from maturity and drying to harvesting stages. Crops that had reached physiological maturity and drying stages required more sunshine hours for drying. The following is an assessment by Agriculture Development Division (ADD) in Malawi:

2.1 SHIRE VALLEY ADD

Mostly dry weather had been experienced in the ADD resulting in below average rainfall situation to continue during the period under review. The dry weather that existed in the ADD had facilitated harvesting and drying of crops that had reached physiological maturity stage. Premature drying was observed in the late planted crops. Both water and pasture for livestock were reported readily available and this continued to improve livestock condition in the ADD. Maize crop was reported to be mostly at drying stage. Harvesting of matured crops has improved household food security in the ADD.

2.2 BLANTYRE ADD

Dry weather was experienced in most parts of the ADD during the period under review. The dry weather that existed in the ADD had facilitated harvesting and drying of crops that had reached physiological maturity stage. Maize was mostly between maturity and drying and harvesting stages. Harvesting of crops was in progress in the ADD. This has greatly improved household food security.

2.3 MACHINGA ADD

The ADD had stayed mostly dry during the last ten days of March 2013. Most areas had registered below average rainfall situation during the entire period. The dry weather had facilitated harvesting and drying of matured crops. The Maize crop was reported ranging from maturity to drying and harvesting stages. Harvesting of various crops was in progress in most parts of the ADD.

2.4 LILONGWE ADD

Most Extension Planning Areas (EPAs) in Lilongwe ADD had experienced below average rainfall situation leading to wilting and premature drying of crops. A few areas continued to receive light rains which was good for growth and development of horticultural and roots and tuber crops. The Maize crop was reported at various stages of development ranging from maturity to drying and harvesting stages. Harvesting of greens was in progress in the ADD. This has positively contribed to household food security.

2.5 SALIMA ADD

Salima ADD had experienced dry weather during the last ten days of March 2013. Most areas had registered far below average rainfall amounts which had resulted into wilting and premature drying of some crops. The Maize crop was reported at various stages of development ranging from maturity to drying and harvesting stages. Harvesting of matured crops was in progress in the ADD and this has improved household food security.

2.6 KASUNGU ADD

Dry weather was registered in parts of the ADD during the last ten days of March 2013. All areas had registered below average rainfall situation leading to premature drying of late planted crops during the period. A few areas however had recorded light rains which had supported growth and development roots and tubers. The Maize crop was reported to be at various stages of development ranging from maturity and drying stages. Green harvests were in progress in the ADD. This has positively impacted on household food security.

2.7 MZUZU ADD

Generally most parts of Mzuzu ADD had experienced light rainfall and dry weather conditions during the last ten days of March 2013. The dry weather has caused premature drying of late planted crops and local maize particularly in Rumphi and Mzimba districts. During the entire period more rains were confined tio lakeshore areas. Crops were reported drying prematurely in Rumphi and Mzimba districts. The Maize crop was reported at various stages of development ranging from maturity and drying to harvesting stages.

2.8 KARONGA ADD

There was a slight reduction in rainfall performance in most parts of Karonga ADD during the period under review. Most of the rice growing fields in Kaporo north were still flooded with water. These rains had continued to facilitate growth and development of various crops in the ADD. The Maize crop was reported doing well and had ranged from maturity to drying stages.

3. PROSPECTS FOR 2012/13 RAINFALL SEASON

The summary of the 2012/2013 seasonal rainfall outlook is that ***"Normal total rainfall amounts are expected over most parts of Malawi during the 2012/2013 rainfall season***". The forecast which was reviewed and updated in December 2012 still had maintained that the greater part of the country will still experience normal to above normal total rainfall amounts by end of the summer rainfall season.

4. OUTLOOK FOR 01 – 10 APRIL 2013

Models for short and medium term weather forecasts suggest that the main rains are winding up over most parts of Malawi while some parts of the north will be occasionally affected by easterly waves. Therefore mainly dry weather is expected over Malawi except for the some parts of the north particularly over highlands and along the lakeshore areas during the first ten days of April 2013.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 3 OF MARCH 2013: PERIOD 21 – 31st

STATION NAME	DEKADAL TOTAL RAINFALL mm	DEKADAL NORMAL mm	DEKADAL TOTAL AS PERCENTAGE OF NORMAL	TOTAL TO DATE mm	NORMAL TO DATE mm	NORMAL TODATE AS PERCENTAGE OF NORMAL	RAINY DAYS ≥ 0.3 mm
SOUTHERN REGION							
Balaka Township	0.0	32.8	**0**	390.7	809.5	**48**	0
Bvumbwe Met.	7.0	57.9	**12**	962.5	1016.1	**95**	2
Chancellor College	0.0	75.3	**0**	1025.4	1200.1	**85**	0
Chichiri Met.	16.2	15.3	**106**	1253.7	1028.5	**122**	4
Chikwawa Boma	2.6	33.9	**8**	742.0	714.0	**104**	1
Chikweo Agric.	2.0	55.8	**4**	638.7	1001.1	**64**	1
Chileka Airport	0.0	44.5	**0**	823.4	826.9	**100**	0
Chingale Agric	0.0	30.1	**0**	638.0	863.2	**74**	0
Chiradzulu Agric	1.2	44.5	**3**	756.1	919.5	**82**	1
Chizunga Factory	3.1	71.5	**4**	932.3	1203.3	**77**	1
Kasinthula Res. Stn.	0.0	21.2	**0**	579.7	667.2	**87**	0
Mpilipili (Makanjila)	0.0	35.0	**0**	664.4	845.5	**79**	0
Makoka Met	1.2	32.5	**4**	567.5	904.3	**63**	1
Mangochi Met.	7.8	33.2	**23**	773.5	663.3	**117**	1
Mimosa Met.	21.1	81.3	**26**	1405.0	1268.0	**111**	4
Monkey Bay Met.	25.3	13.4	**189**	758.9	551.6	**138**	1
Mpemba Vet	27.6	52.1	**53**	1127.5	1040.5	**108**	2
Mulanje Boma	2.8	125.0	**2**	1553.5	1524.1	**102**	1
Mwanza Boma	0.0	35.2	**0**	815.8	936.9	**87**	0
Namiasi Agric	0.0	23.5	**0**	652.7	733.0	**89**	0
Naminjiwa Agric	0.0	36.5	**0**	903.9	910.1	**99**	0
Namwera Agric	0.0	51.7	**0**	941.2	972.2	**97**	0
Nchalo Sucoma	1.0	26.6	**4**	530.3	605.4	**88**	1
Neno Agric	22.2	42.6	**52**	1142.0	1011.1	**113**	1
Ngabu Met.	0.5	35.1	**1**	709.5	704.8	**101**	1
Ntaja Met.	7.3	48.6	**15**	687.4	827.2	**83**	1
Phalula Agric	0.0	27.2	**0**	589.5	784.8	**75**	0
Satemwa Tea Est. No.1	7.2	61.2	**12**	559.6	978.4	**57**	2
Thyolo Boma	7.1	52.5	**14**	963.7	1048.8	**92**	1
Thyolo Met	9.4	56.3	**17**	751.0	1107.1	**68**	2
Zomba RTC	0.0	58.2	**0**	928.0	1111.8	**83**	0
CENTRAL REGION							
Bunda College							
Chileka Namitete	3.5	34.6	**10**	740.6	861.6	**86**	1
Chitedze Met.	0.4	41.6	**1**	841.4	829.7	**101**	1
Dedza Met	21.8	36.6	**60**	708.0	879.2	**81**	2
Dowa Agric	0.0	41.3	**0**	657.1	835.4	**79**	0
Dwangwa Sugar Corp.	88.7	143.8	**62**	1120.0	1136.1	**99**	5
Dzonzi Forest	16.5	38.5	**43**	1467.6	931.8	**158**	2
Kaluluma DTC	0.0	27.8	**0**	595.0	764.7	**78**	0
K.I.A Met	2.1	47.3	**4**	795.5	810.8	**98**	1
Kasiya Agric	0.0	36.2	**0**	820.4	909.2	**90**	0
Kasungu Met	5.3	31.1	**17**	559.2	743.2	**75**	1
Lisasadzi	19.4	23.5	**83**	604.3	776.3	**78**	3
Malomo Agric	0.0	30.8	**0**	730.4	792.1	**92**	0
Madisi Agric	35.3	27.5	**128**	595.8	796.4	**75**	2
Mchinji Boma	0.0	50.6	**0**	610.1	948.6	**64**	0
Mkanda Met	0.0	43.7	**0**	537.1	827.4	**65**	0
Mlangeni Njolomole	1.4	44.3	**3**	846.8	915.2	**93**	1
Mponela Agric	15.6	27.9	**56**	657.7	767.4	**86**	2
Mtakataka Airwing	0.0	36.0	**0**	555.5	763.5	**73**	0
Nathenje Agric	14.9	38.5	**39**	896.3	796.3	**113**	2
Natural Res. College	0.0	37.4	**0**	743.1	806.7	**92**	0
Nkhotakota Met	65.1	142.5	**46**	1204.5	1244.6	**97**	5
Ntcheu - Nkhande	37.6	45.0	**84**	1079.2	992.0	**109**	2
Ntchisi Boma	0.0	67.5	**0**	690.2	1141.6	**60**	0
Salima Met	0.0	71.6	**0**	648.8	1123.4	**58**	0
Dedza RTC	4.2	44.3	**9**	762.1	945.0	**81**	1
NORTHERN REGION							
Baka Res. Stn.	97.9	188.6	**52**	884.9	1059.9	**83**	8
Bolero Met	13.0	29.6	**44**	668.0	595.9	**112**	3
Bwengu Agric.	46.8	49.3	**95**	683.0	712.2	**96**	7
Chikangawa forest	0.0	95.2	**0**	820.2	968.7	**85**	0
Chitipa Met	27.3	52.8	**52**	806.2	880.5	**92**	3
Chintheche Agric	135.9	190.0	**72**	1376.6	1325.6	**104**	7
Emfeni Agric	0.0	31.1	**0**	580.1	749.0	**77**	0
Ekwendeni Agric.	49.0	45.3	**108**	529.2	737.6	**72**	2
Euthini Agric.	23.9	44.6	**54**	590.4	725.5	**81**	3
Karonga Met.	63.9	114.0	**56**	944.8	807.7	**117**	7
Lupembe	64.2	89.4	**72**	699.1	710.8	**98**	5
Mbawa Res. Stn	1.1	35.8	**3**	703.2	765.1	**92**	2
Mzimba Met	3.7	48.2	**8**	546.6	838.8	**65**	2
Mzuzu Met.	55.2	100.9	**55**	918.1	876.2	**105**	8
NkhataBay Met.	146.2	167.0	**88**	1592.1	1082.9	**147**	10
Rumphi Boma	31.0	38.4	**81**	567.0	676.8	**84**	3
Vinthukutu Agric	237.9	122.5	**194**	1519.9	881.0	**173**	9
Zombwe Agric	12.0	56.7	**21**	673.0	680.9	**99**	2

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR THE PERIOD 21 TO 31 MARCH 2013

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (ºC)	ABS MIN (°C)	WIND SPEED (m/s)	RH (%)	EVAP (mm)
KARONGA ADD							
Chitipa	26.5	18.0	27.2	17.5	3.9	78	N/A
Karonga	30.1	12.1	31.7	20.0	1.1	75	N/A
MZUZU ADD							
Bolero	28.9	17.5	31.0	15.6	N/A	70	N/A
Mzuzu	24.4	17.1	28.2	15.1	1.1	85	N/A
Mzimba	27.3	16.4	29.0	15.5	1.3	71	N/A
Nkhata Bay	29.6	20.3	31.7	19.1	0.8	85	N/A
Kasungu	29.0	16.3	30.2	14.8	0.9	68	N/A
LILONGWE ADD							
KIA	26.3	15.1	27.5	13.7	1.4	72	5.2
Chitedze	27.3	16.1	28.2	14.2	0.7	73	N/A
Dedza	23.2	14.0	24.4	12.3	1.5	78	N/A
SALIMA ADD							
Salima	30.9	23.2	32.1	21.0	2.7	64	N/A
Nkhotakota	28.8	21.7	29.5	21.0	2.3	67	N/A
MACHINGA ADD							
Makoka	27.8	17.1	30.3	15.9	1.6	79	N/A
Ntaja	28.5	19.8	30.2	19.0	1.6	67	N/A
Mangochi	31.0	21.2	32.5	19.5	1.6	57	N/A
Monkey Bay	31.0	22.3	32.0	21.4	2.0	64	N/A
BLANTYRE ADD							
Chileka	27.4	18.7	28.4	16.5	2.9	70	N/A
Chichiri	27.4	18.3	26.4	15.6	1.8	62	N/A
Bvumbwe	24.3	14.1	25.6	13.2	2.2	78	N/A
Mimosa	29.3	18.2	30.6	16.0	1.0	73	4.9
SHIRE VALLEY ADD							
Ngabu	32.3	N/A	33.8	N/A	1.4	64	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 bserved for a given number of days (calendar month) of a specified period of months (years).
- convert Meters Per Second (mps) to Kilometers per hour (Km/hr) = mpsx3.6