REPUBLIC OF MALAWI

Department of Climate Change and Meteorological Services

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HIGHLIGHTS

- **Wetter north as dry weather returned to the southern half…**
- **Crops ranged from maturity and drying to harvesting stages …**
- **Mainly dry weather expected during the first ten days of April 2014…**

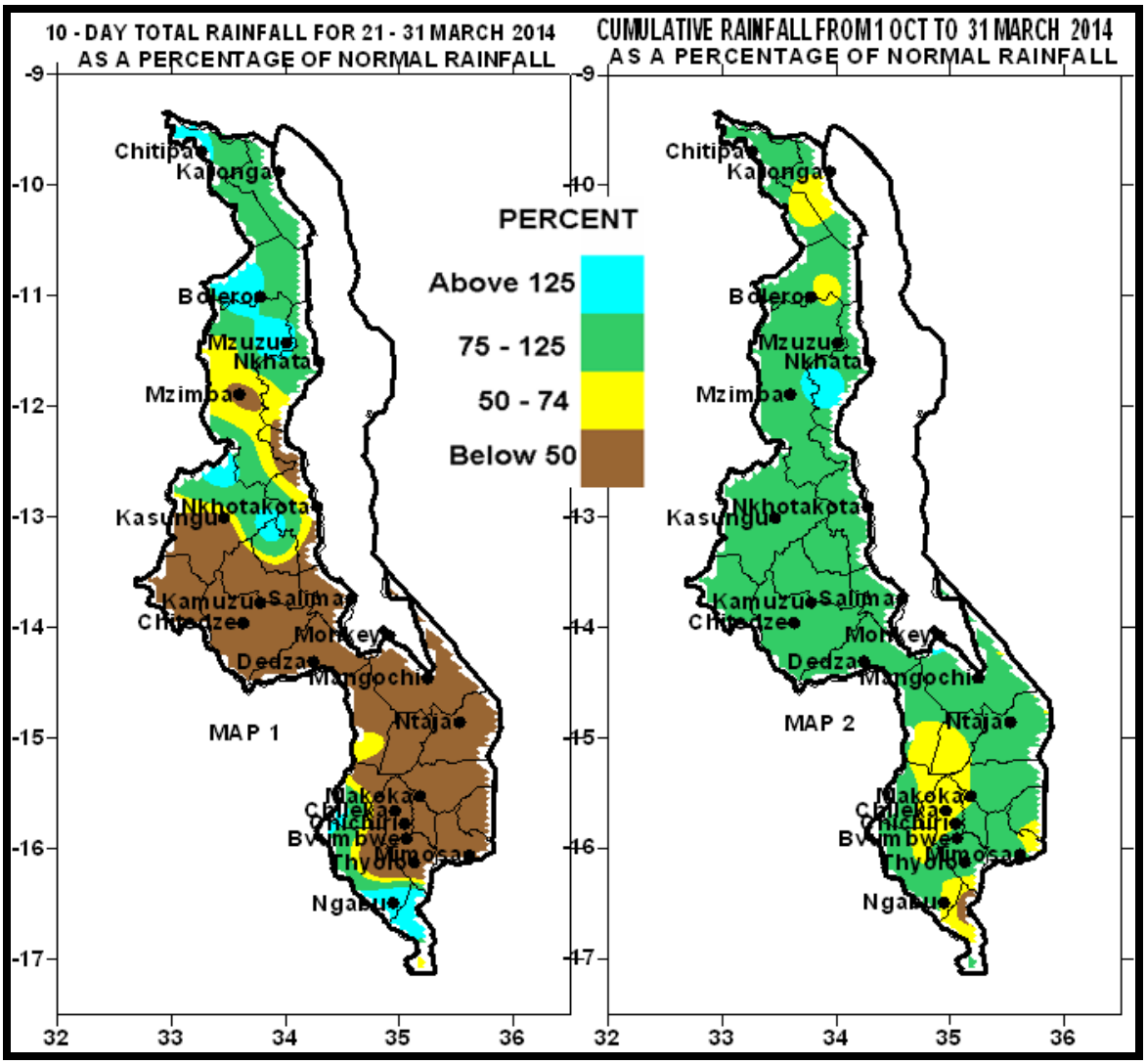

Figure 1: Rainfall Maps for Malawi for 21 to 31 March 2014

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 2014 average to above average cumulative rainfall amounts were recorded over northern Malawi while the rest of the country had experienced below average cumulative rainfall and dry conditions. 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 184mm, Nkhata Bay Met 185mm, Mzuzu Met 111mm, Ekwendeni Agrc and Karonga Met 106mm each and lastly Baka Research station in Karonga recorded 175mm More details are in Table 1 and Map 1.

Map 2 shows the cumulative rainfall performance for the country since the rainfall season started on 1st October 2013 up to 31st March 2014. The map shows that most areas in Malawi have achieved their expected long term average cumulative rainfall amounts (green and light blue colours on Map 2) with a few pockets of below average cumulative rainfall (yellow colour) by 31 March 2014. For more details refer to Table 1 and Map 2.

1.2 AIR TEMPERATURE

Warm to temperatures had prevailed over Malawi during the last ten days of March 2014. Mean daily maximum temperatures had ranged from 24.1°C at Dedza to 32.7°C at Ngabu. The highest absolute maximum temperature for the period was around 35°C observed at Ngabu while the lowest absolute minimum temperature was around 12°C observed at Bvumbwe For more details see Table 2.

1.3 WIND SPEEDS

Mean wind speeds at a height of two metres above ground level were generally light and from variable direction. The mean daily wind speeds had ranged from 0.2 to 2.9 metres per second. The lowest mean wind speed was observed at Kasungu .while the highest mean wind speed was reported at Chitipa. More details are in Table 2.

1.4 RELATIVE HUMIDITY

During the last ten days of March 2014, the amounts of moisture in the atmosphere over Malawi remained fairly good. The mean daily relative humidity values had ranged from 60% at Chichiri to 85% at Mzuzu Airport. More details are on the Table 2. High relative humidity values promote incidences fungal diseases.

2. AGROMETEOROLOGICAL ASSESSMENT

During the last ten days of March 2014 wet weather was maintained over northern Malawi while below average rainfall amounts and dry spells had returned to central and southern Malawi. The moderate to heavy rains that had persisted over the north were supportive to growth and development of roots and tuber crops as well as the late planted crops while dry conditions had facilitated harvesting and drying of matured crops. The rains had also increased prospects for residual moisture and irrigated farming. On the negative note the wet weather had hampered harvesting of matured crops. Maize crop had ranged from maturity to drying and harvesting stages. Crops that have reached physiological maturity and drying stages require more sunshine hours for drying.

Preliminary indicators from the Agro meteorological maize yield forecasting model show that during the 2013/14 farming season despite the late start of the season, extended periods of low rainfall and dry spells in March 2014 and early cessation of the main rains in southern Malawi, the country will most likely harvest enough maize for local consumption. However, at household level food security in some districts such as Karonga and Rumphi in the north and Balaka in the south has been compromised by extended periods of low rainfall and dry spells and early termination of the main rains. The most affected crops include the late planted and late maturing crop varieties.

3. PROSPECTS FOR 2013/14 RAINFALL SEASON

The rainfall outlook for October 2013 to March 2014 had suggested that ***Malawi would experience normal to above normal total rainfall amounts.*** However, a comparison of observations the period and the 1971 – 2000 climate have shown that overall the country has experienced normal to below normal rainfall and most of the rainfall was concentrated was concentrated in January and February 2014

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4. OUTLOOK FOR 01 TO 10 APRIL2014

Models for short and medium term weather forecasts suggest that the main rains are tailing off over most parts of Malawi. Meanwhile, series of high pressure systems passing through south coast of the sub-continent are expected to maintain easterly waves over the country. As a result occasional rainfall is expected particularly over highlands, along the lakeshore and northern areas during the first ten days of April 2014.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR 21 TO 31 MARCH 2014

STATION NAME	ACTUAL DEKADAL TOTAL RAINFALL mm	DEKADAL NORMAL (EXPECTED) RAINFALL mm	ACTUAL TOTAL AS PERCENTAGE OF NORMAL (EXPECTED) RAINFALL	TOTAL ACTUAL RAINFALL TO DATE mm	NORMAL (EXPECTED) RAINFALL TO DATE mm	ACTUAL TODATE AS PERCENTAGE OF NORMAL	RAINY DAYS ≥ 0.3 mm
SOUTHERN REGION							
Balaka Township	16.1	32.8	**49**	462.2	809.5	**57**	2
Bvumbwe Met.	6.4	57.9	**11**	871.2	1016.1	**86**	3
Chichiri Met.	3.5	15.3	**23**	814.8	1028.5	**79**	2
Chikwawa Boma	0.0	33.9	**0**	545.3	714.0	**76**	0
Chikweo Agric.	0.0	55.8	**0**	760.0	1001.1	**76**	0
Chileka Airport	1.5	44.5	**3**	589.2	826.9	**71**	1
Chingale Agric	0.0	30.1	**0**	732.5	863.2	**85**	0
Chiradzulu Agric	5.9	44.5	**13**	689.8	919.5	**75**	1
Mpilipili (Makanjila)	4.2	35.0	**12**	537.7	845.5	**64**	1
Makhanga Met	65.7	25.5	**258**	121.7	676.0	**N/A**	4
Makoka Met	3.4	32.5	**10**	657.7	904.3	**73**	1
Mangochi Met.	0.0	33.2	**0**	862.7	663.3	**130**	0
Masambanjati Agric	15.4	64.9	**24**	965.0	1188.6	**81**	2
Mimosa Met.	16.9	81.3	**21**	1004.7	1268.0	**79**	4
Monkey Bay Met.	0.0	13.4	**0**	815.9	551.6	**148**	0
Mpemba Vet	0.0	52.1	**0**	709.7	1040.5	**68**	0
Mulanje Boma	36.4	125.0	**29**	1389.8	1524.1	**91**	5
Mwanza Boma	58.1	35.2	**165**	759.8	936.9	**81**	2
Namiasi Agric	0.0	23.5	**0**	546.5	733.0	**75**	0
Namwera Agric	0.0	51.7	**0**	774.7	972.2	**80**	0
Neno Agric	11.9	42.6	**28**	829.5	1011.1	**82**	1
Ngabu Met.	88.8	35.1	**253**	597.2	704.8	**85**	2
Nsanje Boma	17.6	57.7	**31**	668.5	1000.5	**67**	2
Phalula Agric	6.2	27.2	**23**	387.1	784.8	**49**	1
Satemwa Tea Est. No.1	15.5	61.2	**25**	1279.1	978.4	**131**	3
Thuchila Agric	0.0	40.2	**0**	387.5	815.1	**N/A**	0
Thyolo Boma	32.4	52.5	**62**	774.6	1048.8	**74**	3
Thyolo Met	12.1	56.3	**21**	1155.2	1107.1	**104**	2
Zomba RTC	0.9	58.2	**2**	984.9	1111.8	**89**	1
CENTRAL REGION							
Chileka Namitete	4.0	34.6	**12**	218.0	861.6	**N/A**	2
Chitedze Met.	2.9	41.6	**7**	652.7	829.7	**79**	3
Dedza Met	2.0	36.6	**5**	882.2	879.2	**100**	2
Dowa Agric	0.1	41.3	**0**	704.1	835.4	**84**	0
Dzonzi Forest	27.3	38.5	**71**	560.3	931.8	**60**	1
Kaluluma DTC	48.8	27.8	**176**	151.2	764.7	**N/A**	4
K.I.A Met	5.34	47.3	**11**	701.8	810.8	**876**	2
Kasiya Agric	20.9	36.2	**58**	660.1	909.2	**73**	1
Kasungu Met	11.5	31.1	**37**	726.8	743.2	**98**	3
Malomo Agric	57.3	30.8	**186**	258.5	792.1	**N/A**	6
Madisi Agric	0.0	27.5	**0**	648.6	796.4	**81**	0
Mkanda Met	0.0	43.7	**0**	706.6	827.4	**85**	0
Mlangeni Njolomole	4.6	44.3	**10**	711.0	915.2	**78**	2
Mponela Agric	9.0	27.9	**32**	483.7	767.4	**63**	1
Mtakataka Airwing	0.0	36.0	**0**	304.6	763.5	**N/A**	0
Nathenje Agric	18.6	38.5	**48**	654.5	796.3	**82**	3
Nkhotakota Met	57.7	142.5	**40**	1582.4	1244.6	**127**	8
Ntcheu - Nkhande	1.7	45.0	**4**	631.2	992.0	**64**	2
Ntchisi Boma	16.0	67.5	**24**	404.5	1141.6	**N/A**	3
Salima Met	4.7	71.6	**7**	992.0	1123.4	**88**	1
Dedza RTC	5.7	44.3	**13**	802.3	945.0	**85**	2
NORTHERN REGION							
Baka Res. Stn.	175.0	188.6	**93**	719.0	1059.9	**68**	10
Bolero Met	53.1	29.6	**179**	505.4	595.9	**85**	4
Bwengu Agric.	41.9	49.3	**85**	522.4	712.2	**73**	8
Chikangawa forest	52.1	95.2	**55**	1496.2	968.7	**154**	7
Chitipa Met	68.4	52.8	**130**	792.5	880.5	**90**	5
Chintheche Agric	184.1	190.0	**97**	1518.6	1325.6	**115**	4
Emfeni Agric	37.7	31.1	**121**	295.4	749.0	**N/A**	3
Ekwendeni Agric.	106.0	45.3	**234**	290.6	737.6	**N/A**	6
Euthini Agric.	26.9	44.6	**60**	758.6	725.5	**105**	4
Karonga Met.	106.0	114.0	**93**	670.1	807.7	**83**	11
Mbawa Res. Stn	27.9	35.8	**78**	613.3	765.1	**80**	3
Mzimba Met	17.7	48.2	**37**	845.2	838.8	**101**	4
Mzuzu Met.	111.4	100.9	**115**	915.3	876.2	**104**	7
NkhataBay Met.	185.2	167.0	**111**	1220.4	1082.9	**113**	8
Rumphi Boma	30.0	38.4	**78**	298.5	676.8	**N/A**	4
Vinthukutu Agric	84.1	122.5	**69**	877.9	881.0	**100**	4
Zombwe Agric	61.9	56.7	**109**	769.3	680.9	**113**	4

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 21 TO 31 MARCH 2014

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED (m/s)	RH (%)	EVAP (mm)
KARONGA ADD							
Chitipa	26.4	17.8	27.5	16.2	2.5	79	N/A
Karonga	28.3	20.1	31.0	19.3	0.9	78	N/A
Bolero	28.2	18.6	29.8	16.0	N/A	76	N/A
Mzuzu	24.2	17.1	25.5	16.1	1.1	85	N/A
Mzimba	26.6	16.5	27.7	15.1	0.8	76	N/A
Nkhata Bay	29.4	20.8	30.6	20.1	0.8	84	N/A
Kasungu	28.3	N/A	29.8	N/A	0.2	70	N/A
KIA	26.6	16.3	27.9	14.7	1.3	71	6.0
Chitedze	27.6	16.9	28.8	15.7	0.7	71	N/A
Dedza	24.1	14.1	24.6	12.6	1.7	74	N/A
SALIMA ADD							
Salima	29.7	22.4	31.0	19.0	2.5	70	N/A
Nkhotakota	28.6	21.2	29.8	19.5	2.0	74	N/A
MACHINGA ADD							
Makoka	26.7	17.5	28.1	15.7	1.2	76	N/A
Ntaja	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mangochi	30.1	21.7	31.5	20.3	1.7	72	N/A
Monkey Bay	30.0	22.1	31.8	20.6	1.9	68	N/A
BLANTYRE ADD							
Chileka	27.8	18.8	29.0	17.5	2.9	75	N/A
Chichiri	27.4	17.2	28.1	15.1	1.9	60	N/A
Bvumbwe	24.6	13.7	25.3	12.3	2.2	73	N/A
Mimosa	27.5	18.4	30.3	16.1	1.0	72	4.8
SHIRE VALLEY ADD							
Ngabu	32.7	22.1	34.8	21.0	1.3	69	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