Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services

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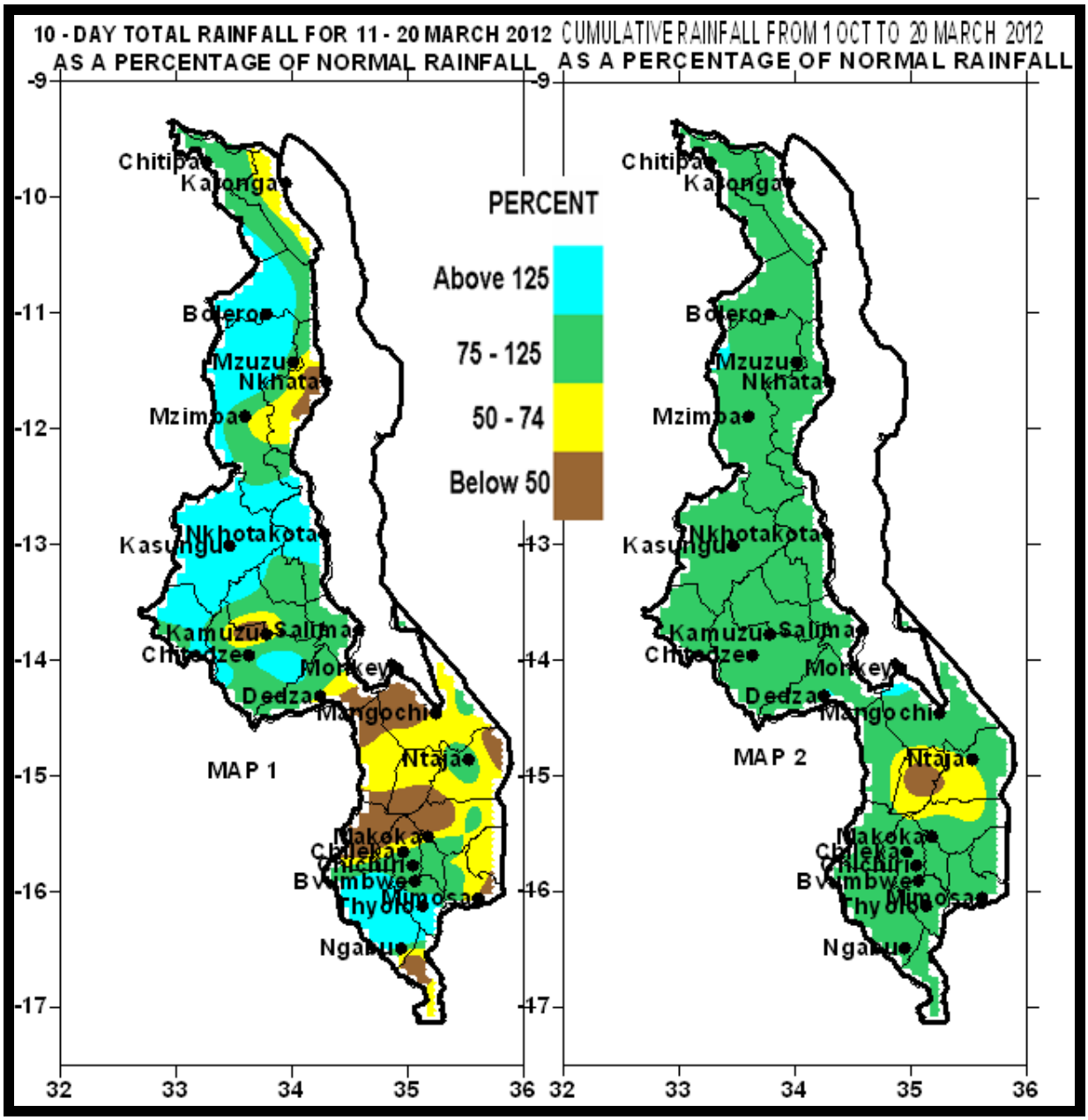
HIGHLIGHTS

- *Most parts of Malawi had experienced good rainfall performance…*
- *Prolonged dry spells to cause reduced crop production in most areas.…*
- *Moderate to heavy rains are likely to persist over Malawi during end of March 2012 …*



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1.1 RAINFALL SITUATION

During the second ten days of March 2012, generally the south had received light rainfall while the centre and the north had received moderate to heavy rainfall amounts. Highest cumulative rainfall amounts in excess of 100mm were mostly confined to the Lakeshore and over a few areas in the north. Areas that reported such high rainfall figures included Nkhotakota Met 300mm, Dwangwa Sugar 135mm, Salima Met 103mm and Euthini Agric 120mm. On the other hand received below average cumulative rainfall amounts (Brown colour on Map 1) were confined to southern Malawi particularly Mangochi, Balaka, Nsanje, some parts of Machinga and Zomba districts and along the lakeshore districts of Karonga and Nkhata bay in the north. More details are on Map 1 and Table 1.

The cumulative rainfall performance (Map 2) showed no major changes by 20th March 2012. The larger part of Malawi had received average cumulative rainfall amounts (Green Colour on Map 2) and a pocket of below average rainfall (Yellow colour on Map 2) persisted around Balaka and some parts of Machinga in the south. For more details see Map 2 and Table 1.

1.2 MEAN AIR TEMPERATURE

Malawi continued to experience warm to hot temperatures during the second ten days of March 2012. Daily average maximum temperatures ranged from 24°C at Dedza to 36°C at Ngabu in lower Shire. The highest absolute maximum temperature was still recorded at Ngabu (38°C). For more details see Table 2.

1.4 MEAN WIND SPEEDS

Wind speeds at two meters height above the ground level continued to be light. Daily average wind speeds ranged from 0.5 m/s (1.8Km/hr) at Chitedze to 2.3 m/s (8.3Km/hr) at Chileka Airport. More details are in Table 2.

1.5 MEAN RELATIVE HUMIDITY

Humid conditions continued over most areas in Malawi during the second ten days of March 2012. Daily average relative humidity values at most stations were above 70% except over most areas in the south including Chichiri, Chileka, Ntaja, Mimosa and Ngabu. Mzuzu Airport in the north with a value of 82% reported the highest daily relative humidity. More details are on the Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

Most parts of Malawi continued to receive light to moderate rainfall during the second ten days of March 2012. These rains supported crop growth and development particularly in the late planted fields where crops were pre-maturely drying due to prolonged dry spells. Although some crops recovered from soil moisture stress, generally southern Malawi will again realize lower crop production due to erratic start of the main rains and prolonged dry spells that have been experienced during the month of February. The most affected were the late planted crops that had reached flowering stage. Heavy rains that were received continued to replenish soil moisture reserves and facilitated growth and development of roots and tuber crops. The crop stand in most fields has been hampered by erratic rains and prolonged dry spells hence reduced crop yields are inevitable particularly in the south. Most areas in central and northern Malawi however have experienced relatively better seasonal rainfall performance and near-normal to normal crop production is expected this season.

Malawi has experienced a wide variation in crop growth stages within the same field and across the country due to multiple planting dates as a result of erratic and poor onset of the main rains. Maize crop ranged from flowering to drying and drying stages. More rains are still required to support crops that that were planted late while the other crop that has reach physiological maturity stage required more sunshine for drying.

3. PROSPECTS FOR 2011/12 RAINFALL SEASON

La Niña conditions in the tropical Pacific have been at weak to moderate levels since around October 2011. Model forecasts and expert interpretation suggest that the La Niña is near its maximum strength and hence is likely to slowly decline over the coming months. However, beyond May, there is some uncertainty over the expected state of the Pacific Ocean, with no particular preference for El Niño, La Niña or neutral conditions. The situation in the tropical Pacific will continue to be carefully monitored.

As the main rainfall season winds up, most parts of Malawi are expected to receive average rainfall amounts during the period March to May 2012.

4. OUTLOOK FOR 21 – 31 MARCH 2012

Models for short and medium range weather forecasts suggest that both the Inter Tropical Convergence Zone and Easterly waves will still be active over Malawi during the forecast period. Therefore moderate to heavy rains are likely to continue over Malawi particularly along the lakeshore and over the eastern sector of southern Malawi.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 11 – 20 MARCH 2012 AT SELECTED STATIONS

STATION NAME	DEKADAL TOTAL RAINFALL	DEKADAL NORMAL	DEKADAL TOTAL AS %	TOTAL TO DATE	NORMAL TO DATE	TOTAL TO DATE AS %	RAINY DAYS
SOUTHERN REGION	mm	mm	NORMAL	mm	mm	NORMAL	≥0.3 mm
Balaka Township	25.6	40.2	**64**	296.2	776.7	**38**	1
Bvumbwe Met.	35.3	54.2	**65**	931.4	958.2	**97**	2
Chancellor College	64.6	82.6	**78**	755.2	1124.8	**67**	2
Chichiri Met.	22.5	16.1	**140**	944.0	1013.2	**93**	2
Chikweo Agric.	19.1	67.3	**28**	848.6	945.3	**90**	2
Chileka Airport	26.2	45.8	**57**	723.5	782.4	**92**	3
Chingale Agric	2.8	52.0	**5**	659.9	833.1	**79**	2
Chiradzulu Agric	28.0	38.1	**73**	640.2	875.0	**73**	1
Kasinthula Res. Stn.	57.1	29.6	**193**	870.8	646.0	**135**	3
Liwonde Township	20.5	41.5	**49**	310.1	728.3	**43**	1
Lujeri Tea Estate	59.0	146.5	**40**	1960.2	1612.8	**122**	2
Makoka Met	39.0	46.7	**84**	852.9	871.8	**98**	2
Mangochi Met.	23.9	44.1	**54**	751.6	630.1	**119**	2
Mimosa Met.	48.4	89.0	**54**	1371.6	1186.7	**116**	1
Monkey Bay Met.	6.0	16.3	**37**	811.2	538.2	**151**	1
Mpemba Vet	66.0	61.9	**107**	992.7	988.4	**100**	3
Mulanje Boma	34.5	70.2	**49**	1461.9	1399.1	**104**	1
Mwanza Boma	4.1	55.4	**7**	934.9	901.7	**104**	1
Namiasi Agric	21.5	49.7	**43**	616.9	709.5	**87**	3
Namwera Agric	62.4	69.3	**90**	608.9	920.5	**66**	3
Nchalo Sucoma	105.2	19.3	**545**	720.5	578.8	**124**	2
Ngabu Met.	14.0	37.3	**38**	582.6	669.7	**87**	2
Nsanje Boma	29.2	49.9	**59**	647.3	942.8	**69**	1
Ntaja Met.	44.1	44.6	**99**	599.6	778.6	**77**	2
Satemwa Tea Est. No.1	19.0	63.1	**30**	968.1	917.2	**106**	2
Thyolo Met	20.1	58.6	**34**	1047.3	1050.8	**100**	2
CENTRAL REGION							
Chileka Namitete	81.4	44.6	**183**	640.6	827.0	**77**	3
Chitedze Met.	27.7	51.1	**54**	719.4	788.1	**91**	3
Dedza Met	29.0	42.7	**68**	1080.1	842.6	**128**	5
Dowa Agric	39.9	45.4	**88**	739.8	794.1	**93**	5
Dwangwa Sugar Corp.	134.5	91.8	**147**	793.4	992.3	**80**	3
Dzonzi Forest	38.7	57.0	**68**	926.8	893.3	**104**	3
K.I.A Met	18.0	41.8	**43**	881.0	763.5	**115**	2
Kasiya Agric	12.0	38.9	**31**	820.5	873.0	**94**	1
Kasungu Met	49.1	38.7	**127**	807.2	712.1	**113**	7
Lisasadzi	87.9	33.7	**261**	N/A	752.8	**N/A**	5
Malomo Agric	50.9	46.7	**109**	755.3	761.3	**99**	5
Madisi Agric	44.4	33.6	**132**	625.3	768.9	**81**	3
Mchinji Boma	32.6	46.7	**70**	913.3	898.0	**102**	1
Mkanda Met	73.3	41.3	**177**	862.4	783.7	**110**	5
Mlangeni Njolomole	6.5	54.0	**12**	1026.4	870.9	**118**	2
Mtakataka Airwing	39.8	52.4	**76**	679.9	727.5	**93**	4
Nathenje Agric	66.0	39.1	**169**	694.9	757.8	**92**	5
Natural Res. College	75.2	51.4	**146**	488.0	769.3	**63**	5
Nkhotakota Met	300.1	113.7	**264**	1290.8	1102.1	**117**	6
Ntcheu - Nkhande	42.3	50.4	**84**	854.2	947.0	**90**	4
Ntchisi Boma	53.8	82.4	**65**	495.7	1074.1	**46**	4
Salima Met	102.7	85.6	**120**	820.0	1051.8	**78**	3
Dedza RTC	18.5	49.2	**38**	984.5	900.7	**109**	1
NORTHERN REGION							
Baka Res. Stn.	58.3	140.0	**42**	799.2	871.3	**92**	4
Bolero Met	70.8	27.9	**254**	663.6	566.3	**117**	4
Bwengu Agric.	70.7	47.5	**149**	665.0	662.9	**100**	6
Chikangawa forest	40.9	63.1	**65**	730.7	873.5	**84**	5
Chitipa Met	68.5	66.1	**104**	881.0	827.7	**106**	4
Chintheche Agric	39.6	124.2	**32**	929.1	1135.6	**82**	2
Euthini Agric.	119.7	41.2	**291**	871.6	680.9	**128**	3
Karonga Met.	44.7	78.9	**57**	756.6	693.7	**109**	5
Mbawa Res. Stn	57.0	40.4	**141**	774.1	729.3	**106**	5
Mzimba Met	22.6	41.7	**54**	665.9	790.6	**84**	5
Mzuzu Met.	37.6	58.2	**65**	763.5	775.3	**98**	5
NkhataBay Met.	48.3	96.7	**50**	938.7	915.9	**102**	5
Vinthukutu Agric	45.0	79.5	**57**	938.2	758.5	**124**	5
Zombwe Agric	91.0	35.5	**256**	635.6	624.2	**102**	5

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 – 20 MARCH 2012

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
BOLERO	28.9	17.7	30.0	16.8	n/a	76
BVUMBWE	27.0	16.6	29.9	15.3	1.8	72
CHICHIRI	28.0	18.1	30.2	16.2	0.8	66
CHILEKA	30.4	19.4	36.2	18.0	2.3	68
CHITEDZE	27.6	17.5	29.9	16.7	0.5	77
CHITIPA	27.8	17.6	29.4	16.4	1.1	73
DEDZA	24.1	15.6	26.4	13.9	1.0	76
K I A	26.9	16.3	29.0	15.3	1.2	76
KARONGA	30.7	20.9	32.3	19.8	0.9	74
KASUNGU	28.4	18.1	30.6	16.6	1.1	79
MANGOCHI	32.0	21.8	33.4	20.9	1.3	70
MIMOSA	32.5	18.6	35.0	16.7	1.0	67
MONKEY BAY	30.5	22.6	31.8	21.9	1.4	77
MZIMBA	27.6	16.8	29.5	14.7	0.8	77
MZUZU	26.3	16.1	27.3	12.1	1.2	82
NGABU	36.4	19.5	38.2	18.1	0.8	62
NKHATA BAY	30.5	20.4	31.9	19.2	0.6	79
NKHOTAKOTA	27.9	19.5	29.4	20.6	1.5	78
NTAJA	30.1	20.9	32.0	19.1	1.9	65
SALIMA	30.1	22.3	31.5	20.8	1.4	77

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