Malawi 10-Day Rainfall & Agrometeorological Bulletin

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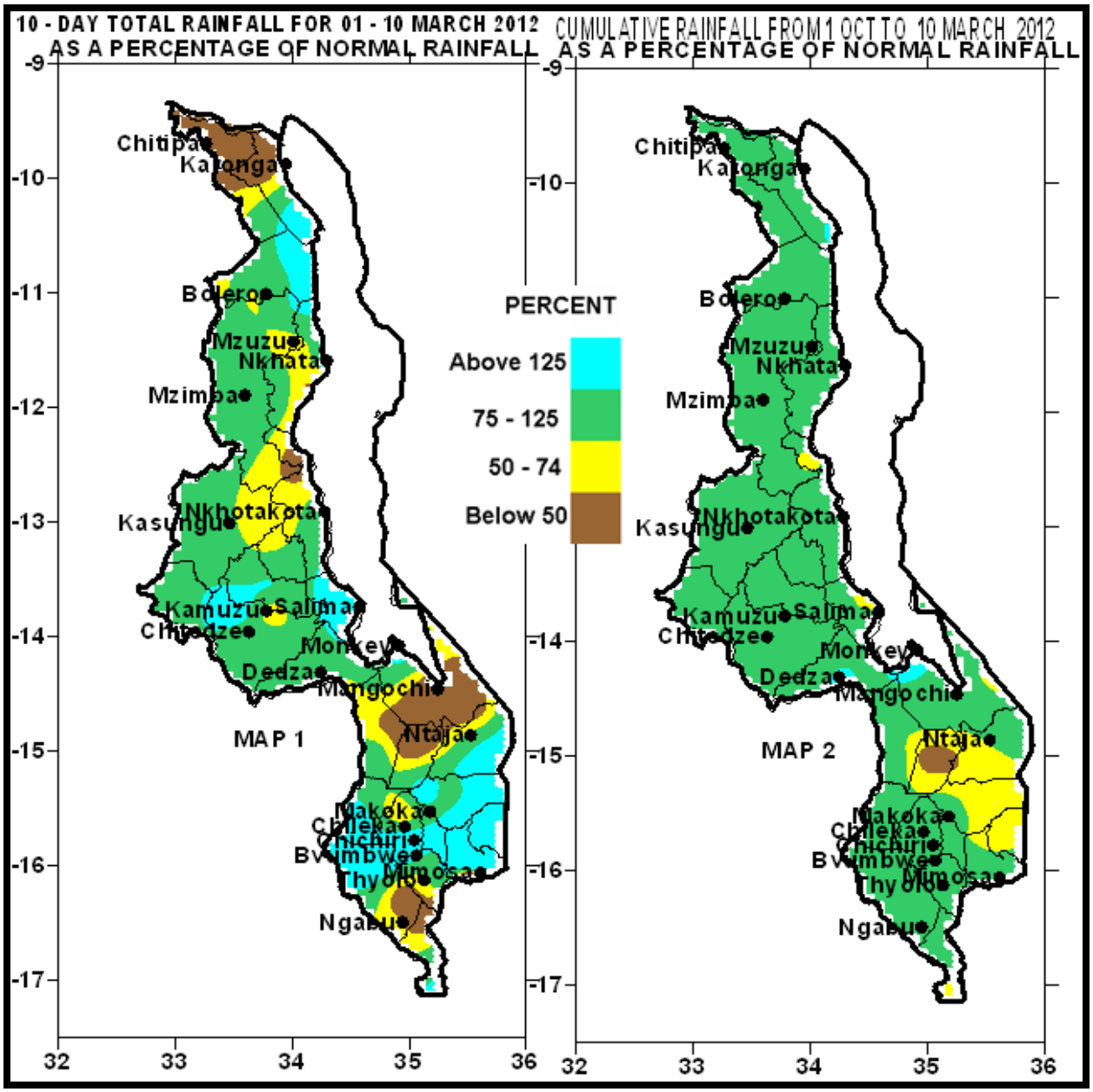
HIGHLIGHTS

- *Malawi experienced slight improvement in rainfall performance…*
- *Prolonged dry spells cause pre-mature drying of crops ….*
- *Good rains expected in the north and generally light rainfall in the south …*



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1.1 RAINFALL SITUATION

During the first ten days of March 2012, there was a slight improvement in rainfall performance over Malawi. Most areas reported moderate to heavy cumulative rainfall amounts (Green and light blue colours on Map 1). High cumulative rainfall amounts in excess of 120mm were reported at Chingale Agric (131mm) in Zomba, Lujeri Estate (155mm) in Mulanje, Kasiya Agric (135mm) in Lilongwe, Lifuwu Research (193mm) in Salima, Salima Met (176mm), Nkhotakota Met (123mm) and Vinthukutu Agric (164mm) in Karonga. On the other hand far below average cumulative rainfall amounts (Brown colour on Map 1) were experienced in some districts particularly Mangochi and Chikwawa in the south and Chitipa and most of Karonga in the north. More details are on Map 1 and Table 1.

The cumulative rainfall performance Map 2 showed no major changes by 10th 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, Zomba and Phalombe districts in the south. For more details see Map 2 and Table 1.

1.2 MEAN AIR TEMPERATURE

Malawi continued to enjoy warm to hot temperatures during the first ten days of March 2012. Daily average maximum temperatures ranged from 23°C at Dedza to 34°C at Ngabu in lower Shire. The highest absolute maximum temperature was still reported 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 Chichiri, Chitedze and Mkondezi in Nkhata Bay to 2.0 m/s (7.2Km/hr) at Chileka Airport. More details are in Table 2.

1.5 MEAN RELATIVE HUMIDITY

Humid conditions persisted over most areas in Malawi during the first ten days of March 2012. Daily average relative humidity values at most stations were above 70%. Dedza Met at Chongoni in Dedza with daily relative humidity of 85% reported the highest. More details are on the Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

Most parts of Malawi continued to receive light to moderate rainfall during the first ten days of March 2012. These rains were supportive to 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 when most of the late planted crops were at flowering stage. Heavy rains that were received over some areas helped to replenish soil moisture reserves and facilitated growth and development of roots and tuber crops. The general crop stand in the 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 crop production is expected this season.

Malawi has experienced a wide variation in crop growth stages within the same field and in 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 maturity 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 11 – 20 MARCH 2012

Models for short and medium range weather forecasts suggest that the main rain bearing systems namely the Inter Tropical Convergence Zone and Congo Air mass are likely to be oscillating between southern Tanzania and northern Malawi during the forecast period. Therefore moderate to heavy rains are likely to be confined to northern and a few areas in central Malawi while southern highlands is likely to experience occasional light rainfall due to incursions of moist air from the Indian Ocean.

The current rainfall pattern seems to suggest an early cessation of the main rains particularly over southern Malawi.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 01 – 10 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	17.5	57.5	**30**	270.6	736.5	**37**	4
Bvumbwe Met.	25.6	70.3	**36**	896.1	904.0	**99**	5
Chancellor College	59.5	88.4	**67**	690.6	1042.2	**66**	5
Chichiri Met.	114.9	24.6	**467**	921.5	997.1	**92**	4
Chikwawa Boma	72.5	43.8	**166**	492.6	647.2	**76**	5
Chikweo Agric.	35.3	71.6	**49**	829.5	878.0	**94**	4
Chileka Airport	13.0	51.8	**25**	697.3	736.6	**95**	2
Chingale Agric	130.5	57.6	**227**	657.1	781.1	**84**	3
Chiradzulu Agric	48.7	73.1	**67**	612.2	836.9	**73**	4
Kasinthula Res. Stn.	112.7	87.2	**129**	813.7	616.4	**132**	4
Liwonde Township	36.4	62.4	**58**	289.6	686.8	**42**	2
Lujeri Tea Estate	154.5	14.8	**1044**	1901.2	1466.3	**130**	5
Mpilipili (Makanjila)	27.4	61.5	**45**	787.3	770.9	**102**	5
Makhanga Met	17.8	48.4	**37**	549.5	612.5	**90**	3
Makoka Met	67.6	*65.1*	**104**	813.9	825.1	**99**	6
Mangochi Met.	2.6	55.1	**5**	727.7	586.0	**124**	2
Mimosa Met.	68.1	95.1	**72**	1323.2	1097.7	**121**	5
Monkey Bay Met.	71.2	42.4	**168**	805.2	521.9	**154**	9
Mulanje Boma	61.4	119.1	**52**	1427.4	1328.9	**107**	4
Mwanza Boma	113.9	65.8	**173**	930.8	846.3	**110**	3
Namwera Agric	25.8	71.1	**36**	546.5	851.2	**64**	3
Nchalo Sucoma	13.5	41.0	**33**	615.3	559.5	**110**	5
Neno Agric	83.4	79.9	**104**	958.8	921.6	**104**	6
Ngabu Met.	21.0	41.8	**50**	568.6	632.4	**90**	4
Ntaja Met.	60.3	58.0	**104**	555.5	734.0	**76**	4
Satemwa Tea Est. No.1	57.1	73.0	**78**	949.1	854.1	**111**	5
Thyolo Met	59.8	70.3	**85**	1027.2	992.2	**104**	4
Zomba RTC	48.8	76.0	**64**	681.2	979.7	**70**	6
CENTRAL REGION							
Chitedze Met.	62.6	67.5	**93**	691.7	737.0	**94**	6
Dedza Met	69.6	68.6	**101**	1051.1	799.9	**131**	5
Dwangwa Sugar	33.6	108.4	**31**	658.9	900.5	**73**	6
Dzonzi Forest	85.6	82.9	**103**	888.1	836.3	**106**	3
K.I.A Met	39.3	69.1	**57**	863.0	721.7	**120**	5
Kasiya Agric	134.9	83.5	**162**	808.5	834.1	**97**	6
Kasungu Met	52.0	64.3	**81**	758.1	673.4	**113**	7
Lifuwu	193.0	98.7	**196**	645.7	978.5	**66**	7
Malomo Agric	41.1	84.3	**49**	704.4	714.6	**99**	5
Madisi Agric	63.8	66.7	**96**	580.9	735.3	**79**	4
Mchinji Boma	57.5	57.8	**99**	880.7	851.3	**103**	4
Mkanda Met	63.5	60.2	**105**	789.1	742.4	**106**	4
Mlangeni Njolomole	62.4	78.3	**80**	1019.9	816.9	**125**	5
Mponela Agric	87.0	61.2	**142**	635.8	704.4	**90**	4
Mtakataka Airwing	63.0	63.7	**99**	640.1	675.1	**95**	6
Nathenje Agric	42.5	62.7	**68**	628.9	718.7	**88**	4
Natural Res. College	57.8	47.2	**122**	N/A	717.9	**N/A**	4
Nkhotakota Met	123.4	118.2	**104**	990.7	988.4	**100**	5
Ntcheu - Nkhande	32.8	79.3	**41**	756.7	896.6	**84**	2
Salima Met	176.4	98.7	**179**	717.3	966.2	**74**	9
Dedza RTC	41.9	86.8	**48**	966.0	851.5	**113**	4
NORTHERN REGION							
Baka Res. Stn.	32.7	115.8	**28**	740.9	731.3	**101**	2
Bolero Met	37.5	47.9	**78**	592.8	538.4	**110**	6
Bwengu Agric.	53.5	38.1	**140**	594.3	615.4	**97**	6
Chikangawa forest	94.9	76.1	**125**	689.8	810.4	**85**	6
Chitipa Met	18.1	64.3	**28**	812.5	761.6	**107**	3
Chintheche Agric	42.4	136.1	**31**	889.5	1011.4	**88**	5
Euthini Agric.	49.9	52.0	**96**	751.9	639.7	**118**	3
Karonga Met.	47.9	73.4	**65**	711.9	614.8	**116**	6
Lupembe	62.5	65.6	**95**	576.2	558.6	**103**	1
Mbawa Res. Stn	84.7	68.8	**123**	717.1	688.9	**104**	6
Mzimba Met	84.2	71.7	**117**	643.3	748.9	**86**	6
Mzuzu Met.	47.8	81.0	**59**	725.9	717.1	**101**	5
NkhataBay Met.	93.5	97.5	**96**	890.4	819.2	**109**	7
Rumphi Boma	43.4	61.4	**71**	520.1	600.7	**87**	6
Vinthukutu Agric	163.5	76.7	**213**	893.2	679.0	**132**	6
Zombwe Agric	40.1	56.5	**71**	544.6	588.7	**93**	7

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 01 – 10 MARCH 2012

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
BOLERO	27.0	18.0	30.6	16.1	N/A	76
BVUMBWE	25.9	17.2	29.5	16.1	1.5	75
CHICHIRI	26.6	18.6	30.0	17.6	0.5	77
CHILEKA	29.0	19.9	32.6	18.8	2.0	75
CHITEDZE	26.1	18.2	28.9	17.3	0.5	82
CHITIPA	26.1	16.9	28.8	14.9	1.0	74
DEDZA	23.1	15.2	25.9	14.3	0.7	85
K I A	25.9	16.7	28.8	15.6	1.1	79
KARONGA	30.3	20.4	33.5	18.3	0.9	72
KASUNGU	27.4	18.0	29.5	17.1	1.0	75
MAKOKA	27.4	17.4	31.0	17.0	1.3	76
MANGOCHI	30.6	20.6	33.1	21.0	1.4	78
MIMOSA	30.0	19.8	35.0	18.0	0.9	82
MONKEY BAY	28.9	22.1	30.5	21.0	1.5	77
MZIMBA	25.0	17.2	27.5	16.5	0.9	82
MZUZU	25.7	16.9	28.8	16.5	1.3	78
NGABU	33.5	20.1	37.8	19.0	0.7	71
NKHATA BAY	29.9	21.0	31.7	20.3	0.5	83
NKHOTAKOTA	28.0	21.7	30.1	20.1	1.6	82
NTAJA	29.6	21.1	32.5	20.1	1.2	72
SALIMA	28.7	21.3	31.2	20.0	1.5	75

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