



10-day Weather and Agrometeorological Bulletin



Be wise be weather-wise

In support of national early warning systems and food security

Period: 21 – 31 March 2015

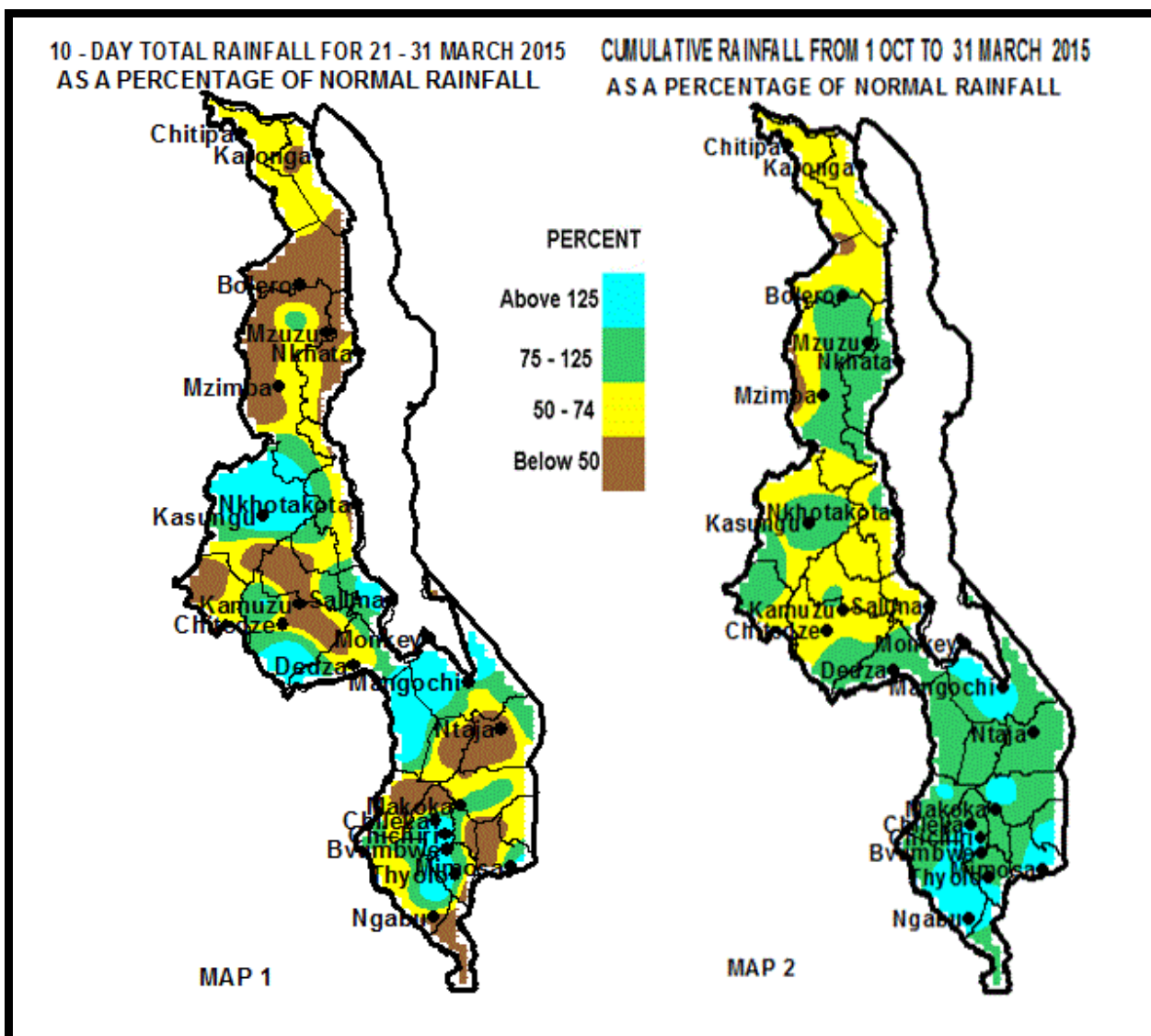
Season: 2014/2015

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HIGHLIGHTS

- More areas experienced improvement in rainfall performance...
- The 2014/15 crops production to drop significantly as dry spells hit many areas...
- Light to moderate rainfall expected over Malawi during 01 to 10 April 2015...



Rainfall Maps for 21 to 31 March 2015

1.0 WEATHER SUMMARY

During the period 21 to 31 March 2015, easterly waves were fairly active over Malawi. As a result the country had experienced significant improvement in rainfall performance particularly over most areas in central and southern Malawi. .

1.1 RAINFALL SITUATION

During the last ten days of March 2015 moderate to locally heavy rainfall was experienced over most parts of Malawi. As a result above average rainfall performance had returned to some parts of central and southern Malawi. Significant rainfall amounts of more than 100mm were accumulated at some stations including Lujeri Tea Estate (208mm), Mimosa Met (280mm), Masambanjati Agric (192mm), Mpemba Agric (102mm), Thyolo Met (146mm), Lifuwu Research (186mm), Mlangeni – Njolomole Agric (114mm) and Nkhata Bay Met (105mm). Otherwise below average rainfall amounts and dry spells had continued in some areas with some stations accumulating nil rainfall throughout the period. Stations which recorded nil rainfall in the south included Makhanga Agric and Makanjira Agric while in the centre nil rainfall was reported at Madisi Agric. More details are on Table 1.

Cumulative rainfall performance over the country since October 2014 up to end of March 2015 shows that most areas in southern Malawi have received normal to above normal rainfall amounts while many areas in the centre and north have had normal to below normal cumulative rainfall amounts. For more details refer to Table 1 and Map 2.

1.2 AIR TEMPERATURE

During the last ten days of March 2015 Malawi had experienced warm to hot temperatures. Mean daily maximum temperatures had ranged from 25°C at Dedza to 34°C at Ngabu. Mean daily minimum temperatures for the same period had ranged from 15°C at Dedza to 24°C at Ngabu. The highest absolute maximum temperature for the period was 37°C still observed at Ngabu. For more details see Table 2.

1.3 WIND SPEEDS

Mean wind speeds at a height of two metres above the ground level had ranged from 1.8 Kilometres per hour at Nkhata Bay to 13.0 Kilometres per hour at Chitipa. For more details refer to Table 2.

1.4 RELATIVE HUMIDITY

Malawi had experienced fairly high values of Relative Humidity during the the last ten days of March 2015. Daily average relative humidity values had ranged from 58% at Bvumbwei to 81% at Nkhata Bay More details are in Table 2.

1.5 SUNSHINE HOURS

During the last ten days of March 2015, Malawi had experienced a slight increase in cloudiness and a slight reduction in hours of bright sunshine. This time around the daily average of sunshine hours had dropped from seven to six hours. Details are on the Table 2.

1.6 VEGETATION CONDITION

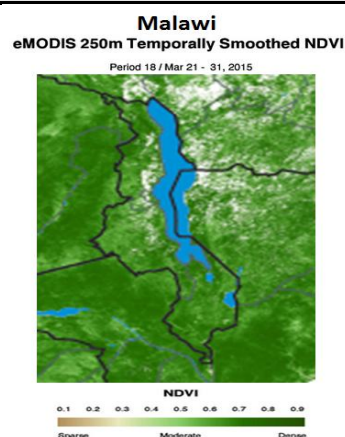


Figure 2: Vegetation Condition over Malawi

The vegetation condition map for Malawi up to 31st March 2015 showed that the country has achieved average greenness despite the late onset of the rains and prolonged dry spells in March (Figure 2). This implies that natural pastures were in good condition.

2.0 AGROMETEOROLOGICAL ASSESSMENT AND IMPACTS

Malawi had experienced a significant improvement in rainfall performance during the last ten days of March 2015. Wet weather had returned to most areas that were negatively affected by soil moisture stress and prolonged dry spells particularly over the southern half. On the other hand, soil moisture stress and prolonged dry spell had persisted over most areas in the northern half. According to field reports, crops had ranged from cob formation and maturity to drying and harvesting stages. However, due to moisture stress and prolonged dry spells that have been experienced in March 2015 crops were reported to be wilting and some drying pre-maturely, raising fears of crop production failure and household food availability problems in the 2015/16 consumption season. The worst affected crops include the late maturing crop varieties that were planted during late December last year. The bulk of this crop had not yet reached maturity stage and required more moisture to mature properly.

Due to March dryness results from the Agrometeorological maize yield forecasting model suggest a national maize production estimate of **3.6 million MT**, but this figure is expected to be revised down due to negative impacts of the flooding, waterlogging, leaching and early tailing off of the rainfall season.

3. OUTLOOK FOR 01 TO 10 APRIL 2015

During the period 01 to 10 April 2015, easterly waves are expected to remain active Malawi. Therefore, light to moderate rainfall is expected over Malawi particularly over the highlands and along the lakeshore. The current rainfall pattern is suggesting that the 2014/15 main rainfall season is tailing off.

4 UPDATED FORECAST FOR 2014/15 RAINFALL SEASON

During March and April 2015 the rainfall outlook for Malawi shows increased chances of normal to below normal rainfall amounts over most parts of Malawi..

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR 21 TO 31 MARCH 2015

ADD	RAINFALL STATION	ACTUAL DEKADAL TOTAL RAINFALL (mm)	DEKADAL NORMAL (EXPECTED) RAINFALL (mm)	ACTUAL TOTAL AS PERCENTAGE OF NORMAL (EXPECTED) RAINFALL	ACTUAL TOTAL RAINFALL TODATE (mm)	NORMAL (EXPECTED) RAINFALL TODATE (mm)	ACTUAL TODATE AS PERCENTAGE OF NORMAL (EXPECTED) RAINFALL	RAINY DAYS ≥ 0.3 mm	
KARONGA	Baka Res. Stn.	51.5	188.6	27	495.1	1059.9	47	4	
	Chitipa Met	39.8	52.8	75	636.3	880.5	72	5	
	Karonga Met.	62.8	114.0	55	468.6	807.7	58	4	
	Lupembe	61.5	89.4	69	636.0	710.8	89	2	
	Vinthukutu Agric	48.9	122.5	40	566.3	881.0	64	7	
MZUZU	Bolero Met	1.4	29.6	5	520.5	595.9	87	3	
	Bwengu Agric.	11.4	49.3	23	540.4	712.2	76	3	
	Chikangawa forest	68.9	95.2	72	1222.3	968.7	126	8	
	Chelinda (Nyika)	50.0	89.1	56	451.9	1071.7	42	2	
	Chintheche Agric	51.0	190	27	844.7	1325.6	64	5	
	Embangweni R.L	16.0	37.2	43	264.5	761.7	35	1	
	Ekwendeni Agric.	15.0	45.3	33	447.5	737.6	61	2	
	Euthini Agric.	5.2	44.6	12	374.0	725.5	52	1	
	Mbawa Res. Stn	3.6	35.8	10	671.4	765.1	88	1	
	Mzimba Met	24.1	48.2	50	565.7	838.8	67	1	
	Mzuzu Met.	41.0	100.9	41	769.0	876.2	88	6	
KASUNGU	Dowa Agric	38.3	41.3	93	481.0	835.4	58	5	
	Kasungu Met	57.3	31.1	183	762.3	743.2	103	5	
	Malomo Agric	38.7	30.8	126	570.0	792.1	72	6	
	Madisi Agric	0.0	27.5	0	460.8	796.4	58	0	
	Mchinji Boma	24.6	50.6	49	750.4	948.6	79	4	
	Mkanda Met	15.0	43.7	34	752.8	827.4	91	2	
	Mponela Agric	0.4	27.9	1	605.2	767.4	79	1	
	Mwimba Research	28.0	30.3	92	509.3	840.4	61	1	
	Ntchisi Boma	31.5	67.5	47	619.8	1141.6	54	6	
	Dowa Agric	38.3	41.3	93	481.0	835.4	58	5	
	Dwangwa Sugar Corp.	53.7	143.8	37	835.7	1136.1	74	5	
SALIMA	Lifuwu Rice scheme	186.1	71.7	260	863.6	1128.9	76	3	
	Nkhotakota Met	38.1	142.5	27	973.7	1244.6	78	4	
	Salima Met	107.7	71.6	150	702.1	1123.4	62	4	
	Chileka Namitete	22.8	34.6	66	428.9	861.6	50	1	
LILONGWE	Chitedze Met.	10.4	41.6	25	548.6	829.7	66	2	
	Dedza Met	20.4	36.6	56	796.5	879.2	91	3	
	Dzonzi Forest	90.9	38.5	236	849.0	931.8	91	3	
	K.I.A Met	11.7	47.3	25	597.8	810.8	74	2	
	Kasiya Agric	51.0	36.2	141	666.0	909.2	73	1	
	Mlangeni Njolomole	113.9	44.3	257	620.4	915.2	68	3	
	Mtakataka Airwing	82.8	36.0	230	710.8	763.5	93	4	
	Nathenje Agric	7.0	38.5	18	578.3	796.3	73	1	
	Ntcheu - Nkhande	67.7	45.0	150	842.8	992.0	85	3	
	Balaka Township	16	32.8	49	795.6	809.5	98	2	
	Chancellor College	85.9	75.3	114	1242.0	1200.1	103	4	
	Chikweo Agric.	61.9	55.8	111	825.8	1001.1	82	2	
	Chingale Agric	16.9	30.1	56	1229.6	863.2	142	4	
Mpilipili (Makanjila)	0.0	35.0	0	694.6	845.5	82	0		
Makoka Met	31.4	32.5	97	1071.6	904.3	119	5		
Mangochi Met.	38.5	33.2	116	1059.6	663.3	160	4		
Monkey Bay Met.	16.5	13.4	123	917.5	551.6	166	2		
Namiasi Agric	93.4	23.5	397	777.6	733.0	106	5		
Namwera Agric	50.4	51.7	97	720.2	972.2	74	5		
Ntaja Met.	2.3	48.6	5	937.8	827.2	113	2		
Phalula Agric	16.8	27.2	62	808.1	784.8	103	2		
Zomba - Agric	99.8	58.2	171	1478.5	1111.8	133	7		
BLANTYRE	Bvumbwe Met.	14.6	57.9	25	1234.2	1016.1	121	3	
	Chichiri Met.	64.2	15.3	420	1415.7	1028.5	138	4	
	Chileka Airport	14.6	44.5	33	877.3	826.9	106	4	
	Chiradzulu Agric	6.4	44.5	14	844.2	919.5	92	2	
	Chizunga Factory	93.0	71.5	130	506.6	1203.3	42	5	
	Lujeri Tea Estate	208.2	131.2	159	2698.4	1744.0	155	8	
	Masambanjati Agric	191.6	64.9	295	1789.4	1188.6	151	5	
	Mimosa Met.	279.8	81.3	344	2041.3	1268.0	161	5	
	Mpemba Vet	102.4	52.1	197	1740.3	1040.5	167	4	
	Mulanje Boma	80.2	125.0	64	2258.8	1524.1	148	6	
	Mwanza Boma	28.0	35.2	80	690.3	936.9	74	2	
	Naminjiwa Agric	11.0	36.5	30	1213.3	910.1	133	2	
	Neno Agric	2.5	42.6	6	1443.8	1011.1	143	1	
	Satemwa Tea Estate	74.4	61.2	122	1242.1	978.4	127	5	
	Chikwawa Boma	24.7	33.9	73	920.7	714.0	129	4	
	SHIRE VALLEY	Makhanga Met	0.0	25.5	0	843.2	676.0	125	0
		Nchalo Sucoma	38.6	26.6	145	1052.1	605.4	174	3
Ngabu Met.		16.3	35.1	46	993.1	704.8	141	1	

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR THE PERIOD 21 TO 31 MARCH 2015

ADD/ STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED Km/hour	RH %	SUN SHINE HOURS	Eo mm per day	Et mm per day	RAD- TION calcm ⁻² p/day
KARONGA ADD										
Chitipa	26.9	18.4	28.8	17.6	13.0	77	6.1	6.2	4.9	8.3
Karonga	31.1	21.7	30.5	20.5	7.6	67	8.0	7.4	6.0	9.6
BOLERO ADD										
Bolero	28.9	18.6	29.9	16.4	5.4	67	6.9	6.3	5.0	8.7
Mzimba	27.4	17.8	29.8	15.8	4.0	73	7.5	6.2	4.8	9.1
Mzuzu	25.5	17.3	27.3	14.6	3.6	78	7.5	5.9	4.6	9.0
Nkhata Bay	30.6	20.7	32.4	19.3	1.8	81	7.0	6.3	4.9	8.7
KASUNGU ADD										
Kasungu	28.6	15.5	30.2	15.5	5.8	74	6.5	5.8	4.6	8.4
LILONGWE ADD										
Chitedze	28.0	18.3	29.2	17.2	2.5	76	8.5	6.5	5.1	9.8
Dedza	24.5	15.4	25.4	15.0	8.6	75	6.5	5.7	4.5	8.5
K I A	26.6	17.7	28.6	16.0	6.1	73	8.7	6.6	5.2	9.9
SALIMA ADD										
Nkhota kota	29.4	22.2	30.5	20.9	5.4	74	8.2	7.2	5.7	9.6
Salima	30.9	21.3	33.0	19.5	4.0	70	8.4	7.0	5.5	9.7
MACHINGA ADD										
Makoka	28.3	19.2	28.9	18.4	4.0	76	8.1	6.6	5.2	9.6
Mangochi	32.4	22.0	33.6	21.0	2.9	73	8.5	8.4	6.9	9.8
Monkey Bay	31.7	23.5	33.0	21.9	6.1	67	8.8	7.8	6.2	10.0
Ntaja	30.7	21.0	32.6	19.9	5.0	72	7.7	6.9	5.5	6.0
BLANTYRE ADD										
Chichiri	28.2	18.8	30.0	17.9	4.7	70	6.5	6.1	4.8	8.5
Mimosa	30.4	19.8	32.3	18.6	4.0	63	6.6	6.4	5.1	8.6
Bvumbwe	26.5	18.4	28.7	17.0	6.1	58	6.8	6.3	5.0	8.7
SHIRE VALLEY ADD										
Ngabu	34.4	23.6	37.3	22.6	6.5	70	8.0	7.8	6.3	9.5

Glossary of some terms on this table

- Eo = Potential Evaporation, Et = Potential Evapotranspiration and 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) = mps x 3.6