REPUBLIC OF MALAWI

Ministry of Natural Resources Energy and Mining
Department of Climate Change and Meteorological Services

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In support of national early warning systems and food security

Be wise be weather-wise

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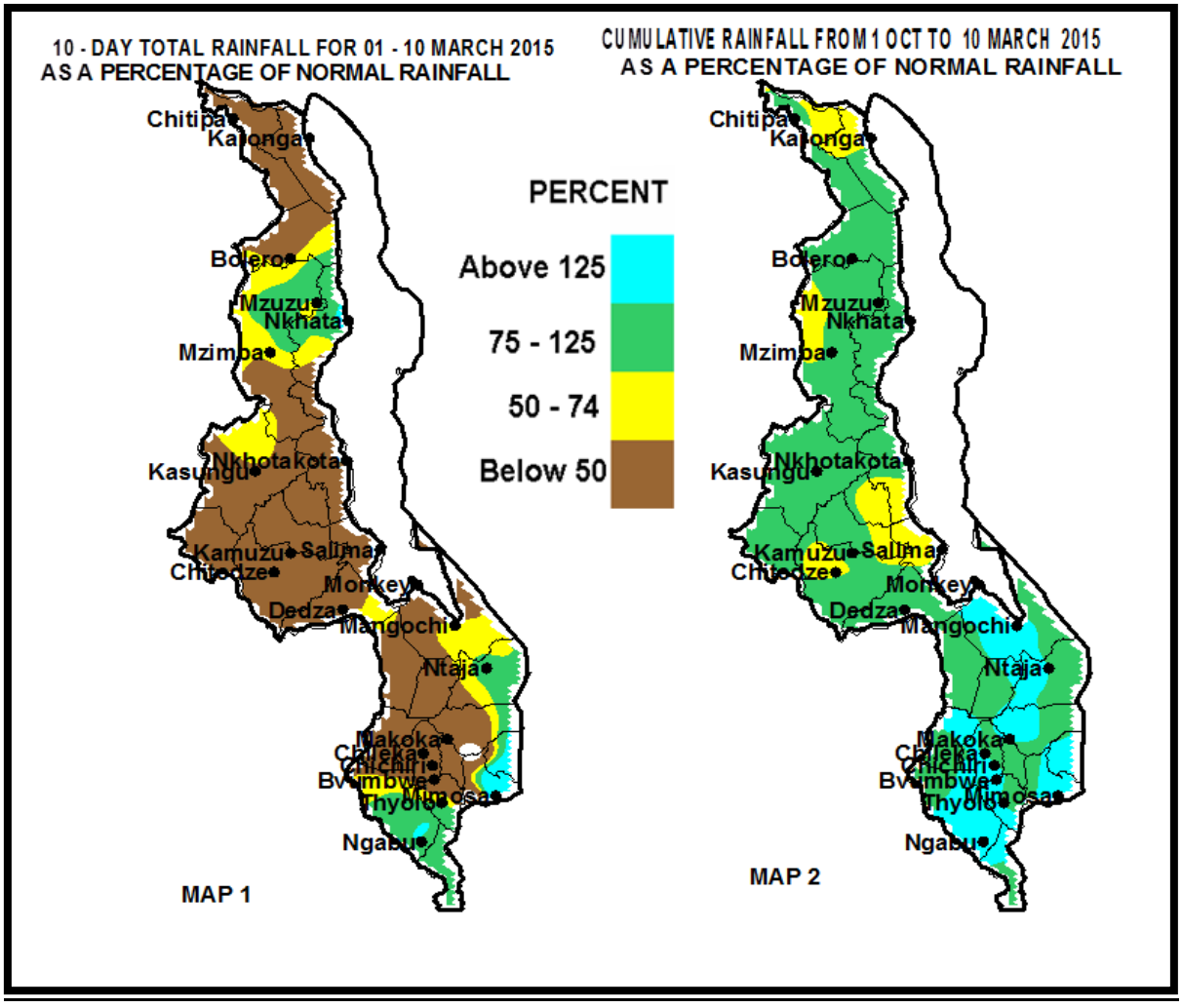
HIGHLIGHTS

- **Dry conditions and below average rainfall performance experienced …**
- **Maize crop ranged from vegetative to maturity stages across Malawi…**
- **Mostly below average rainfall to persist during the period 11 to 20 March 2015...**



Rainfall Maps for 01 to 10 March 2015

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1.0 WEATHER SUMMARY

During the period 01 to March 2015, the main rain bearing systems were not very active over Malawi. As a result light to moderate rainfall was experienced over Malawi. Most areas had reported below average rainfall amounts.

1.1 RAINFALL SITUATION

During the first ten day of March 2015 the main rain bearing systems had relaxed over Malawi causing mostly dry conditions and below average rainfall performance over the country. During the entire period under discussion, stations that had accumulated rainfall amounts of at least 100mm were very few and were confined to the south and north. Such stations in the south included Lujeri Tea Estate (143mm) and Masambanjati Agric (164mm) while in the north Nkhata Bay Met reported 170mm. Otherwise most stations had recorded cumulative rainfall amounts of less than 50mm with an average of three rainy days. More details are on Table 1.

Cumulative rainfall performance over the country since 1 October 2014 up to 10th March 2015 shows that most areas in Malawi have achieved their normal seasonal cumulative rainfall amounts with a few pockets (mainly over the centre and north) registering below normal cumulative rainfall amounts. For more details refer to Table 1 and Map 2.

1.2 AIR TEMPERATURE

The period 01 to 10th March 2015 was characterised by warm to hot tempratures over Malawi. Mean daily maximum temperatures had ranged from 23°C at Dedza to 30°C at Ngabu. Mean daily minimum temperatures for the same period had ranged from 13°C at Dedza to 22°C at Dedza. The highest absolute maximum temperature for the period was 33°C 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 2.5 Kilometres per hour at Chitedze to 9.7 Kilometres per hour at Chitipa. For more details refer to Table 2.

1.4 RELATIVE HUMIDITY

The country continued to experience humid conditions during the period 01 to 10th March 2015. Daily average relative humidity values had ranged from 64% at Nkhotakota to 83% at Ngabu. Details are in Table 2.

1.5 SUNSHINE HOURS

Due to low cloudiness mean durations of bright Sunshine hours were slightly higher than during the previous reporting period. This time around more areas had experienced daily average sunshine hours of above six and half hours while during 21 to 28 February most areas had reported less than six and half hours. Details are on the Table 2.

1.6 VEGETATION CONDITION

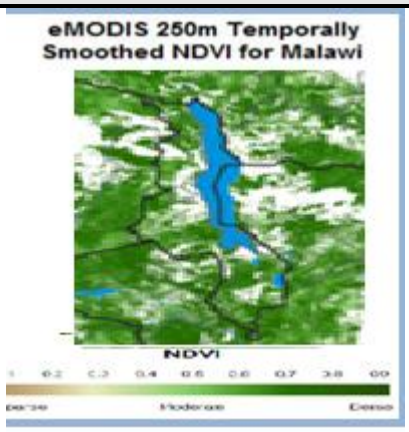

Figure 2: Vegetation Condition over Malawi

The vegetation condition map for Malawi up to 10th March 2015 showed that the country has achieved average greenness conditions despite the late onset of the rains this season (Figure 2). This implies that natural pastures were in good condition.

2.0 AGROMETEOROLOGICAL ASSESSMENT AND IMPACTS

Most parts of Malawi had experienced a light rainfall and a dry spell during the first ten days of March 2015. As a result below average rainfall performance was experienced in most areas and reports had indicated that in some areas crops had started wilting and premature drying. Otherwise in other areas crops were reported to have survived on residual soil moisture. However, due to late start of the season generally most crops were still between vegetative and flowering stages and for this crop to reach maturity; more rains are required at least up to end of March 2015.

Preliminary indications from the Agro meteorological maize yield forecasting model shows despite late start of the season and high intensity rainfall in January 2015, the crop performance in fields has been average to good and only if the good rainfall performance can persist up to end of March 2015 then good harvests this season are possible. By end of February 2015 maize production forecast from the model was estimated at **3,867,123MTs**. However, this figure will be physically revised downwards after an assessment report that will take into account the negative impacts of late start of the season and floods in January and February.

3. OUTLOOK FOR 11 TO 20 MARCH 2015

During the period 11 to 20 March 2015, the Inter Tropical Convergence Zone less active over Malawi. As a result light and mostly below average rainfall will persist over Malawi during the period 11 to 20 March 2015.

4 UPDATED FORECAST FOR 2014/15 RAINFALL SEASON

The recent February-March-April (FMA) rainfall forecast for Malawi shows increased chances of normal to above normal rainfall amounts in the southern half while the northern half is expected to receive normal total rainfall amounts.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR 01 TO 10 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.	37.3	115.8	32	421.0	731.3	58	4
	Chitipa Met	27.2	64.3	42	593.8	761.6	78	4
	Karonga Met.	28.4	73.4	39	386.7	614.8	63	4
	Lupembe	32.5	65.6	50	535.5	558.6	96	2
	Vinthukutu Agric	22.6	76.7	29	397.9	679.0	59	2
MZUZU	Bolero Met	22.2	47.9	46	514.4	538.4	96	4
	Bwengu Agric.	36.5	38.1	96	523.7	615.4	85	4
	Chikangawa forest	69.5	76.1	91	1103.7	810.4	136	6
	Chintheche Agric	50.9	136.1	37	730.1	1011.4	72	1
	Ekwendeni Agric.	46.9	46.3	101	432.5	660.4	65	3
	Euthini Agric.	41.2	52.0	79	366.2	639.7	57	2
	Mbawa Res. Stn	19.1	68.8	28	615.6	688.9	89	3
	Mzimba Met	33.9	71.7	47	528.6	748.9	71	3
	Mzuzu Met.	54.5	81.0	67	705.9	717.1	98	3
	NkhataBay Met.	170.3	97.5	175	756.6	819.2	92	4
	Rumphi Boma	20.0	61.4	33	491.2	600.7	82	4
	Zombwe Agric	51.3	56.5	91	697.9	588.7	119	4
KASUNGU	Dowa Agric	7.7	74.8	10	440.8	748.7	59	2
	Kaluluma DTC	47.4	69.5	68	399.0	686.6	58	3
	Kasungu Met	33.2	64.3	52	621.6	673.4	92	2
	Lisasadzi	25.2	52.9	48	626.9	719.1	87	1
	Malomo Agric	15.3	84.3	18	530.1	714.6	74	1
	Madisi Agric	6.8	66.7	10	413.8	735.3	56	1
	Mchinji Boma	16.2	57.8	28	670.3	851.3	79	2
	Mkanda Met	0.0	60.2	0	723.6	742.4	97	0
	Mponela Agric	0.7	61.2	1	587.3	704.4	83	1
	Mwimba Research	20.2	76.5	26	481.3	771.2	62	2
	Ntchisi Boma	34.5	86.3	40	585.1	991.7	59	3
SALIMA	Dwangwa	0.0	108.4	0	738.5	900.5	82	0
	Lifuwu	12.4	98.7	13	671.9	978.5	69	1
	Nkhotakota Met	16.0	118.2	14	863.0	988.4	87	3
	Salima Met	31.6	98.7	32	593.9	966.2	61	2
LILONGWE	Bunda College	0.0	61.1	0	76.1	760.6	10	0
	Chileka Namitete	0.0	44.7	0	266.4	782.4	34	0
	Chitedze Met.	8.7	67.5	13	516.7	737.0	70	3
	Dedza Met	12.5	68.6	18	702.4	799.9	88	1
	Dzonzi Forest	4.1	82.9	5	758.1	836.3	91	1
	K.I.A Met	6.3	69.1	9	577.4	721.7	80	2
	Kasiya Agric	0.0	83.5	0	592.0	834.1	71	0
	Mlangeni Njolomole	20.3	78.3	26	506.5	816.9	62	2
	Nathenje Agric	10.3	62.7	16	556.8	718.7	77	2
	Ntcheu - Nkhande	5.6	79.3	7	773.4	896.6	86	2
	Dedza RTC	81.9	86.8	94	741.0	851.5	87	2
MACHINGA	Balaka Township	6.4	57.5	11	779.6	736.5	106	1
	Chancellor College	0.0	88.4	0	1156.1	1042.2	111	0
	Chikweo Agric.	41.2	71.6	58	760.4	878.0	87	3
	Chingale Agric	20.2	57.6	35	1199.4	781.1	154	3
	Mpilipili (Makanjila)	0.0	61.5	0	681.3	770.9	88	0
	Makoka Met	6.2	65.1	10	1040.2	825.1	126	1
	Mangochi Met.	39.0	55.1	71	1019.3	586.0	174	4
	Monkey Bay Met.	19.1	42.4	45	898.1	521.9	172	2
	Namiasi Agric	6.1	44.0	14	684.2	659.8	104	2
	Ntaja Met.	55.4	58.0	96	935.5	734.0	127	4
	Phalula Agric	3.4	57.2	6	791.3	720.6	110	1
	Zomba Land Hus.	11.0	76.0	14	1378.7	979.7	141	2
BLANTYRE	Bvumbwe Met.	27.0	70.3	38	1206.1	904.0	133	6
	Chichiri Met.	7.8	24.6	32	1334.0	997.1	134	4
	Chileka Airport	1.6	51.8	3	857.1	736.6	116	2
	Chiradzulu Agric	5.8	73.1	8	837.8	836.9	100	3
	Chizunga Factory	31.0	89.1	35	413.6	1047.3	39	3
	Lujeri Tea Estate	143.0	14.8	966	2401.2	1466.3	164	7
	Masambanjati Agric	164.3	100.3	164	1597.8	1049.0	152	4
	Mimosa Met.	58.6	95.1	62	1704.8	1097.7	155	7
	Mpemba Vet	20.7	77.9	27	1554.9	926.5	168	2
	Mulanje Boma	89.1	119.1	75	2127.6	1328.9	160	7
	Mwanza Boma	19.4	65.8	29	662.3	846.3	78	3
	Naminjiwa Agric	33.3	66.3	50	1197.8	829.3	144	3
	Neno Agric	32.0	79.9	40	1441.3	921.6	156	1
	Satemwa Tea Est. No.1	35.3	73.0	48	1166.2	854.1	137	4
SHIRE VALLEY	Chikwawa Boma	34.8	43.8	79	896.0	647.2	138	4
	Makhanga Met	21.2	48.4	44	843.2	612.5	138	3
	Nchalo Sucoma	39.0	41.0	95	1010.2	559.5	181	5
	Ngabu Met.	58.7	41.8	140	931.5	632.4	147	5
	Nsanje Boma	79.0	81.5	97	826.7	892.9	93	3

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR THE PERIOD 01 TO 10 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	26.2	17.6	28.0	17.0	6.8	81	2.9	4.6	3.7	6.2
Karonga	29.6	21.1	30.6	20.5	2.9	76	3.7	5.2	4.2	6.7
MZUZU ADD										
Bolero	27.5	17.4	29.9	16.5	3.6	76	6.0	5.7	4.5	8.3
Mzimba	26.6	16.0	28.7	13.6	3.6	71	5.6	5.5	4.4	8.1
Mzuzu	24.8	15.8	26.6	12.6	4.7	81	5.5	5.2	4.1	8.0
Nkhata Bay	29.1	20.2	32.2	18.7	2.9	77	6.5	6.2	4.9	8.6
KASUNGU ADD										
Kasungu	28.1	16.2	29.6	12.0	3.6	72	6.5	5.9	4.6	8.6
LILONGWE ADD										
Dedza	22.6	13.3	25.3	10.6	5.4	74	5.5	5.1	4.0	8.0
Chitedze	26.5	16.2	28.7	12.2	2.5	71	7.0	5.9	4.6	9.0
KIA	25.5	15.3	28.2	12.0	5.0	71	7.2	6.0	4.7	9.1
SALIMA ADD										
Nkhota kota	27.8	21.0	30.1	18.3	6.8	64	5.7	6.4	5.2	8.1
Salima	28.3	20.0	30.5	15.1	6.8	71	7.7	6.8	5.4	9.4
MACHINGA ADD										
Ntaja	27.1	19.7	20.3	17.6	3.6	78	4.0	5.1	4.1	7.0
Makoka	25.6	17.3	27.9	15.8	5.4	75	6.6	5.9	4.6	8.7
Mangochi	29.9	22.0	32.5	18.0	4.0	76	7.5	6.8	5.4	9.3
Monkey Bay	28.0	21.0	30.0	17.0	5.4	75	7.2	6.6	5.2	9.1
BLANTYRE ADD										
Bvumbwe	23.7	16.1	26.9	14.1	5.4	76	5.5	5.3	4.1	8.0
Chichiri	24.7	16.4	28.5	13.5	4.7	77	6.0	5.5	4.3	8.3
Chileka	27.3	18.6	30.2	16.6	9.7	72	7.1	6.6	5.2	9.0
Mimosa	26.8	18.5	30.0	16.7	4.0	80	5.5	5.5	4.3	8.0
SHIRE VALLEY ADD										
Ngabu	30.0	21.4	33.0	19.2	4.3	83	7.7	6.8	5.3	9.4

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) = mpsx3.6