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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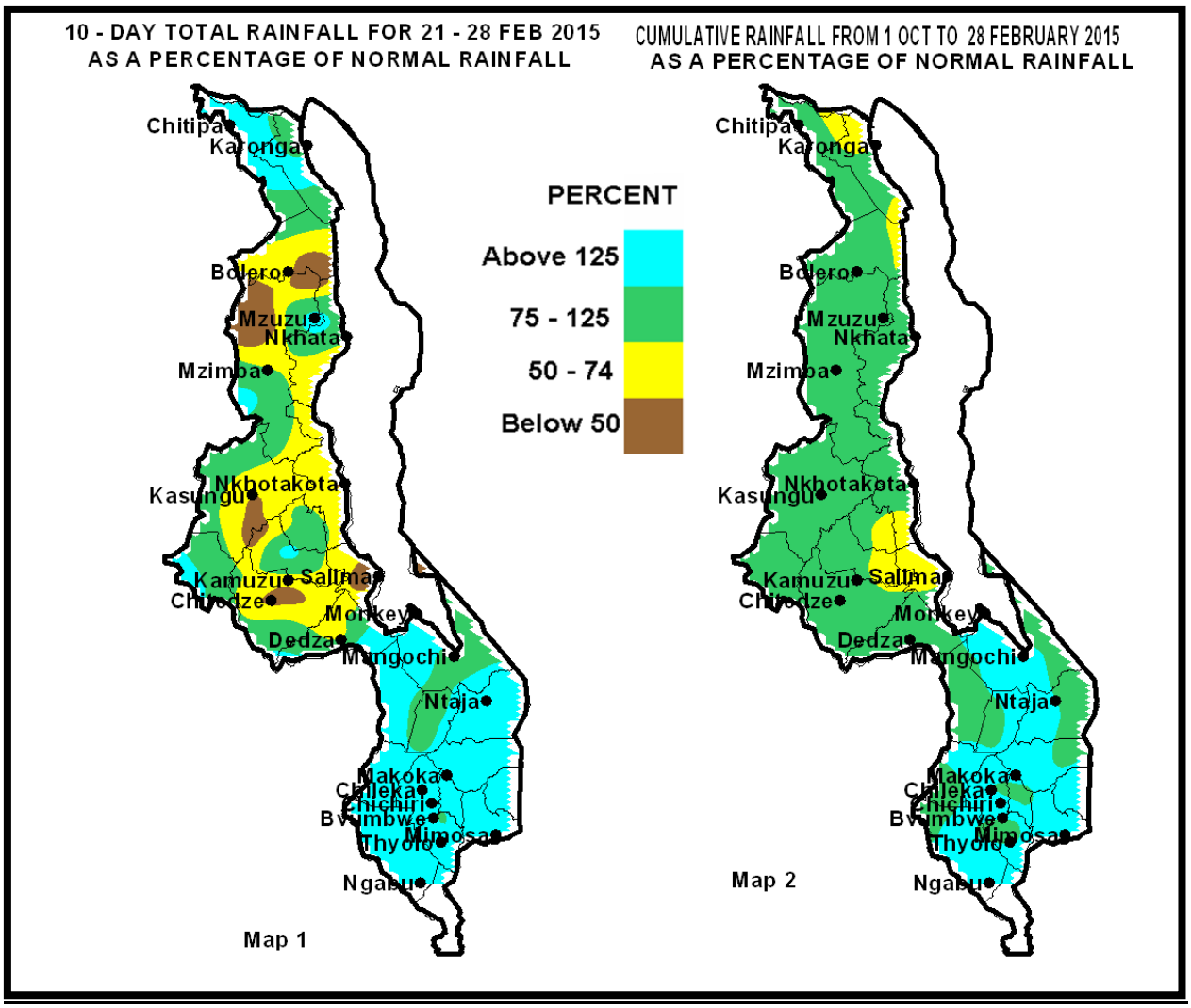
HIGHLIGHTS

- **Below average rainfall recorded in some parts of central and northern Malawi…**
- **Maize crop ranged from vegetative to maturity stages across Malawi…**
- **Scattered to widespread rains to persist during the period 01 to 10 March 2015...**



Rainfall Maps for 21 to 28 February 2015

1.0 WEATHER SUMMARY

During the period 21 to 28 February 2015, weather over Malawi was still influenced by a combined effect of the Inter-Tropical Convergence Zone (ITCZ) and moist and unstable Congo air mass. This caused widespread moderate to locally heavy rainfall to persist particularly over southern and northern tip of Malawi. However, parts of the north and centre had experienced light rainfall which resulted in below average rainfall amounts.

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1.1 RAINFALL SITUATION

Widespread moderate to locally heavy rains continued over most parts of Malawi during the period 21 to 28 February 2015. However, rainfall amounts in excess of **130mm** were recorded mostly in stations in southern Malawi including Chancellor College (199mm), Chingale Agric (173mm),Lujeri Tea Estate (273mm), Mimosa Met (226mm), Mulanje Agric (286mm), Nchalo Illovo (170mm), Zomba Agric (202mm), Mwanza Agric (141mm), Ngabu Met (142mm), Masambanjati Agric (135mm) and Ntcheu-Nkhande Agric (138mm), These heavy rainfall amounts had maintained above normal rainfall situation (light blue colour on Map 1). On the other hand, parts of the north and centre had experienced light rainfall which resulted in well below average rainfall for the period. More details are in Table 1 and Map 1

Cumulative rainfall performance over the country since 1 October 2014 up to 28 February 2015 shows that most areas in Malawi have achieved 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

Warm tempratures were experienced over Malawi during the period 21 to 28 February 2015. Mean maximum temperatures were in the range of 24 to 31 °C. The lowest maximum temperature was observed at Bvumbwe while the highest was recorded at Nkhata Bay. Mean minimum temperatures had ranged from 15°C at Dedza to 23°C at Ngabu. The highest absolutemaximum temperature for the period was 33.2°C recorded at Ngabu. For more details refer to 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 Chitedze to 7.6 Kilometres per hour at Chileka. For more details refer to Table 2.

1.4 RELATIVE HUMIDITY

The country continued to experience humid conditions during the period 21 to 28 February 2015. Daily average relative humidity values had ranged from 72% at Karonga to 91% at Kasungu. Details are in Table 2.

1.5 SUNSHINE HOURS

Due to continued cloudiness mean durations of bright Sunshine hours were low across Malawi. Most areas had experienced daily average sunshine hours of below six and half hours. Details are on the Table 2.

1.6 VEGETATION CONDITION

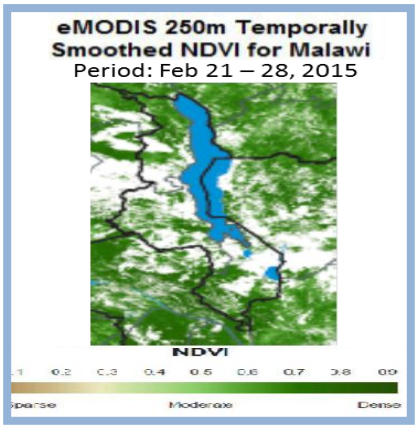

Figure 2: Vegetation Condition over Southern Africa

The vegetation condition map for Malawi up to 28 February 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

During the period 21 to 28 February 2015 most areas in Malawi had experienced moderate to locally heavy rainfall except for some parts of the north and centre which had registered light rainfall that resulted in below average rainfall amounts. These rains apart from supporting growth and development of crops had also facilitated some farm operations like application of top dressing fertilizer. However, in some cases the persistent heavy had hampered farm operations and had also resulted in waterlogging and leaching of soil nutrients as evidenced by yellowing of crops in most fields particularly in southern Malawi.

Maize crop had ranged from vegetative to maturity stages. The main agricultural activities in the fields included banking and application of top dressing fertilizer. The rainfall season started late in most parts of Malawi. The delayed start of effective rains will have negative implications on length of growing season and overall rainfall season quality and may result in farm level crop failure, poor harvests and reduction in tobacco production. The floods that occurred in January will also negatively impact on the final production since some hectarage of cropped fields was washed away.

3. OUTLOOK FOR 01 TO 10 MARCH 2015

During the period 01 to 10 March 2015, the Inter Tropical Convergence Zone will be moving from southern to northern Malawi and Congo air mass will remain active ahead of it. As a result scattered to widespread moderate to locally heavy rains are expected to persist over Malawi.

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 21 TO 28 FEBRUARY 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.	64.9	54.6	119	383.7	615.5	62	5
	Chitipa Met	93.1	58.7	159	566.6	697.3	81	5
	Karonga Met.	39.1	55.9	70	358.3	541.4	66	6
	Lupembe	77.0	52.4	147	503	493	102	3
	Vinthukutu Agric	45.0	48.9	92	375.3	602.3	62	4
MZUZU	Bolero Met	20.8	35.1	59	492.2	490.5	100	3
	Bwengu Agric.	2.8	45.4	6	487.2	577.3	84	1
	Chikangawa forest	46.8	63.9	73	1034.2	734.3	141	4
	Chintheche Agric	27.9	66.2	42	679.2	875.3	78	3
	Ekwendeni Agric.	40.0	47.4	84	385.6	614.1	63	4
	Mbawa Res. Stn	70.4	46.8	150	596.5	620.1	96	4
	Mzimba Met	38.1	54.4	70	494.7	677.2	73	3
	Mzuzu Met.	68.2	42.9	159	651.4	636.1	102	6
	NkhataBay Met.	44.4	55.3	80	586.3	721.7	81	5
	Rumphi Boma	7.8	44.5	18	471.2	539.3	87	1
	Zombwe Agric	41.1	47.4	87	646.6	532.2	121	3
KASUNGU	Dowa Agric	58.8	64.9	91	433.1	673.9	64	5
	Kasungu Met	28.6	59.6	48	588.4	609.1	97	4
	Malomo Agric	38.8	48.8	80	514.8	630.3	82	3
	Madisi Agric	24.4	73.7	33	407	668.6	61	2
	Mchinji Agric	112.1	70	160	654.1	793.5	82	5
	Mkanda Agric	66.6	59	113	723.6	682.2	106	3
	Mponela Agric	88.7	61.3	145	586.6	643.2	91	4
	Ntchisi Agric	50.1	75.3	67	550.6	905.4	61	7
SALIMA	Lifuwu	41.7	86.4	48	659.5	879.8	75	3
	Nkhotakota Met	36.7	85.7	43	847	870.2	97	4
	Salima Met	18.9	92.8	20	562.3	867.5	65	3
LILONGWE	Chileka Namitete	34.6	60.4	57	266.4	737.7	36	4
	Chitedze Met.	26.3	66.9	39	508	669.5	76	4
	Dedza Met	55.6	74.1	75	689.9	731.3	94	5
	Dzonzi Forest	85.4	46	186	754	753.4	100	5
	K.I.A Met	35.8	66.5	54	571.1	652.6	88	5
	Kasiya Agric	59.4	81.8	73	592	750.6	79	4
	Mlangeni Njolomole	110.2	57.8	191	486.2	738.6	66	5
	Mtakataka Airwing	61.0	59.3	103	615.9	611.4	101	2
	Nathenje Agric	35.9	66.5	54	546.5	656	83	5
	Ntcheu - Nkhande	138.4	69.3	200	767.8	817.3	94	4
	Dedza RTC	74.7	42.3	177	659.1	764.7	86	3
MACHINGA	Balaka Township	36.1	47.2	76	773.2	679	114	2
	Chancellor College	198.6	68	292	1156.1	953.8	121	6
	Chikweo Agric.	102.6	67.5	152	719.2	806.4	89	3
	Chingale Agric	173.9	54	322	1179.2	723.5	163	6
	Mpilipili (Makanjila)	21.7	58.4	37	681.3	709.4	96	2
	Makoka Met	127.9	56.8	225	1034	760	136	4
	Mangochi Met.	47.5	47.5	100	980.3	530.9	185	3
	Monkey Bay Met.	59.6	33.7	177	879	479.5	183	2
	Namiasi Agric	62.4	50	125	678.1	615.8	110	3
	Ntaja Met.	100.2	57.5	174	880.1	676	130	5
	Phalula Agric	45.6	57.6	79	787.9	663.4	119	4
	Zomba Agric	202.1	66.1	306	1367.7	903.7	151	6
BLANTYRE	Bvumbwe Met.	64.3	62.4	103	1179.1	833.7	141	3
	Chichiri Met.	64.2	52.5	122	1326.2	972.5	136	4
	Chileka Airport	103.6	47.9	216	855.5	684.8	125	5
	Chiradzulu Agric	67.2	53.3	126	832	763.8	109	4
	Chizunga Factory	102.0	60.7	168	382.6	958.2	40	5
	Lujeri Tea Estate	273.0	110.3	248	2258.2	1451.5	156	5
	Masambanjati Agric	135.2	75.6	179	1433.5	948.7	151	4
	Mimosa Met.	225.5	62.9	359	1646.2	1002.6	164	6
	Mulanje Agric	286.0	55.9	512	2038.5	1209.8	168	5
	Mwanza Agric	141.0	57.4	246	642.9	780.5	82	4
	Naminjiwa Agric	55.0	53.5	103	1164.5	763	153	5
	Satemwa Tea Est.	89.0	48.5	184	1130.9	781.1	145	4
	Thyolo Boma	55.3	52.6	105	501.2	833.9	60	3
	Thyolo Met	94.6	136.2	69	973.7	921.9	106	4
SHIRE VALLEY	Chikwawa Agric	112.3	32.8	342	861.2	603.4	143	3
	Makhanga Agric	102.4	33.4	307	822	564.1	146	3
	Nchalo	170.0	37.2	457	971.2	518.5	187	3
	Ngabu Met.	142.2	40.9	348	872.8	590.6	148	5
	Nsanje Agric	105.7	43.6	242	747.7	811.4	92	4

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR THE PERIOD 21 TO 28 FEBRUARY 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	28.2	18.0	30.1	16.5	5.8	78	6.9	6.3	5.0	9.0
Karonga	30.1	21.3	32.0	20.0	4.3	72	7.0	6.8	5.4	9.1
MZUZU ADD										
Bolero	27.9	18.6	29.6	17.3	3.6	82	7.0	6.2	4.8	9.0
Mzimba	26.9	17.1	29.1	15.8	2.9	77	6.5	5.9	4.6	8.7
Mzuzu	26.2	17.5	28.4	16.0	4.3	82	5.0	5.3	4.2	7.7
Nkhata Bay	31.2	21.5	33.0	20.5	2.2	81	5.6	6.0	4.8	8.1
KASUNGU ADD										
Kasungu	27.9	18.1	29.0	17.0	3.2	91	6.5	5.8	4.5	8.7
LILONGWE ADD										
Dedza	24.4	14.7	25.6	13.5	4.7	77	5.0	5.1	4.0	7.7
Chitedze	17.4	16.6	28.6	18.1	1.8	82	6.5	5.0	3.8	8.7
KIA	26.3	17.8	27.5	14.9	4.0	80	6.3	5.8	4.5	8.6
SALIMA ADD										
Nkhota kota	28.5	22.1	30.0	21.2	6.1	78	4.9	6.1	4.9	7.7
Salima	29.1	21.3	31.1	20.0	5.0	76	7.0	6.5	5.2	9.0
MACHINGA ADD										
Ntaja	27.5	21.1	28.8	19.9	3.2	83	6.0	5.9	4.6	8.3
Makoka	26.4	18.5	28.4	16.9	5.0	81	6.0	5.7	4.5	8.3
Mangochi	30.0	22.0	31.2	21.0	2.2	81	6.0	6.1	4.9	8.3
Monkey Bay	29.2	22.2	30.5	21.3	4.7	82	5.7	6.0	4.8	8.1
BLANTYRE ADD										
Bvumbwe	23.7	18.0	25.8	16.6	4.7	86	6.5	5.6	4.3	8.6
Chichiri	25.8	18.1	28.0	17.0	2.5	83	4.9	5.1	4.0	7.6
Chileka	27.5	20.1	29.2	18.9	7.6	81	5.1	5.7	4.5	7.7
Mimosa	28.2	19.9	30.4	18.3	3.2	86	5.5	5.6	4.4	8.0
SHIRE VALLEY ADD										
Ngabu	30.0	23.0	33.2	20.8	4.7	83	6.0	6.2	5.0	8.3

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