



REPUBLIC OF MALAWI

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

10-day Weather and Agrometeorological Bulletin

In support of national early warning systems and food security



Be wise be weather-wise

Period: 01 – 10 February 2015

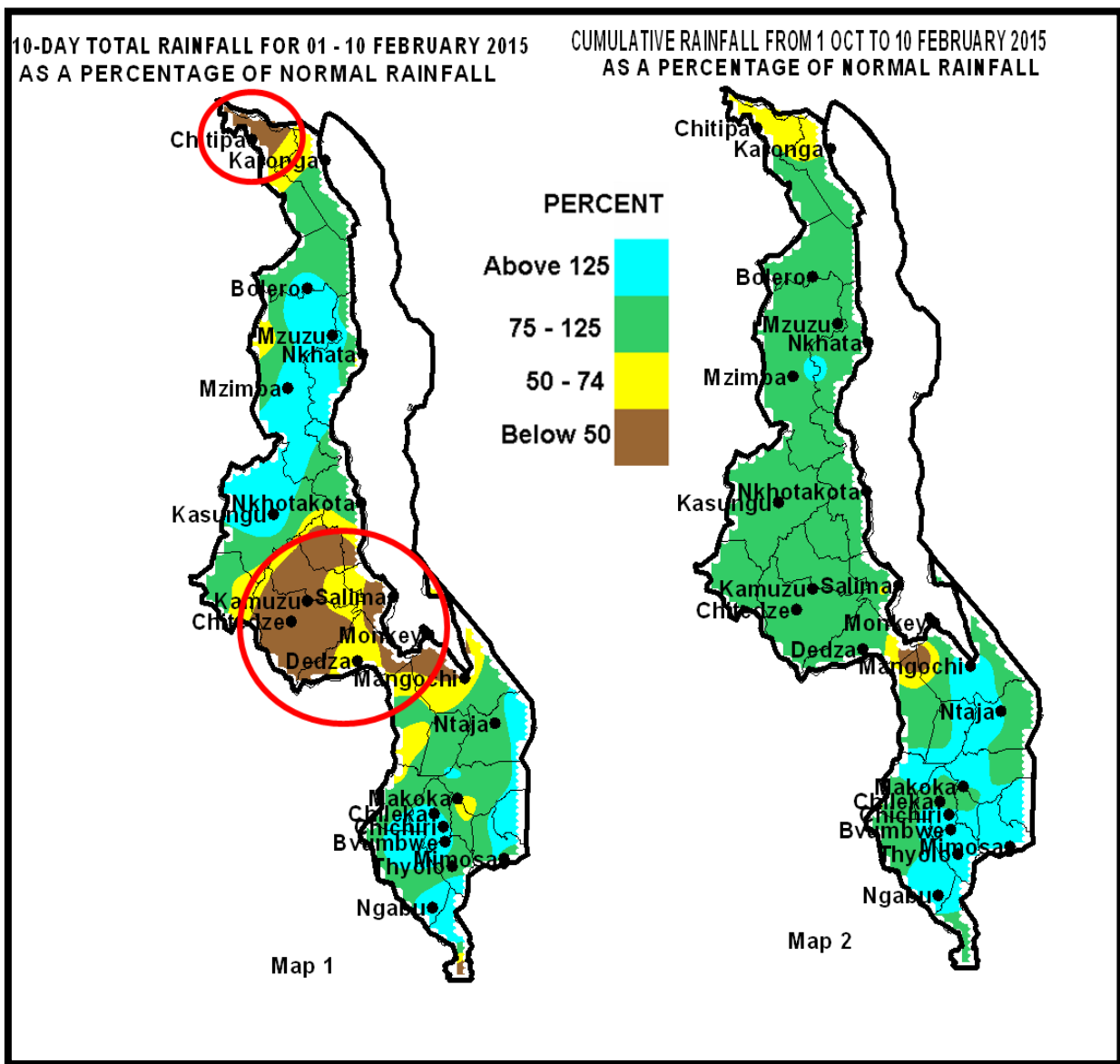
Season: 2014/2015

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HIGHLIGHTS

- Well below average rainfall recorded in central and north tip of Malawi...
- Maize crop ranged from vegetative to cob formation stages across Malawi...
- Scattered to widespread rains to persist during the period 11 to 20 February 2015...



Rainfall Maps for 01 to 10 February 2015

1.0 WEATHER SUMMARY

During the first ten day period of 01 to 10 February 2015 a broad equatorial trough had covered Malawi. As a result most areas had recorded moderate to locally heavy rainfall while far below average rainfall was experienced over central and northern tip of Malawi.

1.1 RAINFALL SITUATION

Widespread moderate to locally heavy rains fell over most parts of Malawi during the period 01 to 10 February 2015. However, heavy rainfall amounts in excess of **150mm** were confined at very few stations including Mpemba Agric (175mm) in Blantyre, Makhanga Agric in Nsanje had 167mm, Naminjiwa Agric in Phalombe had accumulated 156mm, and Chikangawa Forest in Mzimba had a total of 152mm. These heavy rainfall amounts had maintained above normal rainfall situation (light blue colour on Map 1). On the other hand, most areas over central and northern tip of Malawi had recorded well below average rainfall for the ten day period with some areas recording less than 50% of the average and less than five rainy days, according to Table 1 and Map 1

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

1.2 AIR TEMPERATURE

Warm temperatures were experienced over Malawi during the period 01 to 10 February 2015. Mean maximum temperatures were in the range of 24 to 33°C. The lowest maximum temperature was observed at Dedza while the highest was recorded at Ngabu. Mean minimum temperatures had ranged from 15°C at Dedza to 23°C at Monkey Bay. The highest absolute maximum temperature for the period was 35°C recorded at Karonga. 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 2.2 Kilometres per hour at Nkhata Bay to 8.6 Kilometres per hour at Chitipa. For more details refer to Table 2.

1.4 RELATIVE HUMIDITY

Humid conditions had persisted over Malawi during the period 01 to 10 February 2015. Daily average relative humidity values had ranged from 69% at Karonga and Mimosa to 84% at Chichiri. Details are in Table 2.

1.5 SUNSHINE HOURS

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

1.6 VEGETATION CONDITION

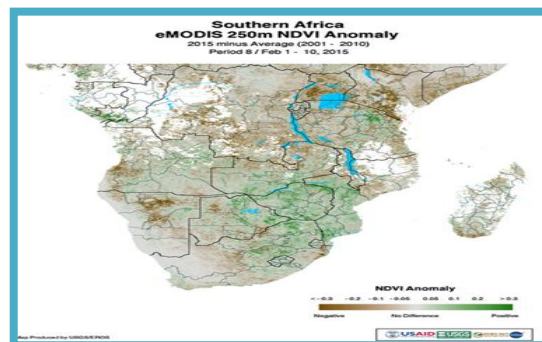


Figure 2: Vegetation Condition over Southern Africa

The vegetation condition map for Southern Africa up to 10 February 2015 showed that although there was a negative anomaly when compared to normal season. This has been due to late start of rainfall season (Figure 2). However, natural pastures were readily available in good condition.

2.0 AGROMETEOROLOGICAL ASSESSMENT AND IMPACTS

During the first ten days of February 2015 most areas in Malawi had experienced moderate to locally heavy rainfall save for some areas in central and northern tip of Malawi. These rains apart from supporting growth and development of crops had also facilitated some farm operations like application of top dressing fertilizer. The heavy rains had 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 tasseling and cob formation stages. The main agricultural activities in the fields included banking and application of top dressing fertilizer. The rainfall season started late in parts of Malawi. The late start could negatively impact harvests if the rainfall season does not extend longer than usual, until at least April 2015. The late onset will however delay the availability of harvests in most affected areas, with consequent food security implications.

3. OUTLOOK FOR 11 TO 20 FEBRUARY 2015

During the period 11 to 20 February 2015, Congo air mass will remain active over Malawi. As a result scattered to widespread moderate to locally 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 01 TO 10 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.	40.5	51.0	79	289.2	497.5	58	4
	Chitipa Met	28.0	87.6	32	417.3	561.1	74	5
	Karonga Met.	37.2	48.7	76	291.4	436.4	67	4
	Lupembe	49.5	49.8	99	397.0	382.2	104	3
	Vinthukutu Agric	48.7	53.6	91	298.3	494.8	60	4
MZUZU	Bolero Met	75.0	51.2	146	429.1	394.7	109	8
	Bwengu Agric.	80.2	58.8	136	440.1	465.7	95	8
	Chikangawa forest	152.2	69.4	219	901.1	594.8	151	9
	Chintcheche Agric	68.5	76.0	90	543.9	731.7	74	4
	Ekweneni Agric.	40.8	43.2	94	233.7	488.1	48	3
	Euthini Agric.	25.8	62.7	41	111.9	470.8	24	3
	Mbawa Res. Stn	87.2	66.5	131	475.4	507.3	94	8
	Mzimba Met	98.8	67.2	147	443.7	543.5	82	7
	Mzuzu Met.	91.4	51.9	176	548.8	527.9	104	6
	NkhataBay Met.	29.9	65.3	46	511.5	604.3	85	7
	Rumpho Boma	69.3	56.1	124	416.2	429.6	97	6
Zombwe Agric	106.2	48.8	218	480.8	422.2	114	4	
KASUNGU	Dowa Agric	46.8	66.2	71	312.1	552.6	56	5
	Kaluluma DTC	86.6	57.6	150	329.0	517.3	64	5
	Kasungu Met	116.2	72.0	161	443.9	486.2	91	6
	Lisasadzi	102.5	77.8	132	531.8	547.5	97	6
	Malomo Agric	27.2	81.0	34	329.2	515.8	64	3
	Madisi Agric	25.7	72.9	35	325.6	519.0	63	3
	Mchinji Boma	60.9	62.1	98	529.2	648.8	82	7
	Mkanda Agric	52.4	64.6	81	450.7	568.1	79	4
	Mponela Agric	5.4	83.0	7	411.9	510.4	81	5
	Ntchisi Boma	46.2	103.8	45	500.5	739.8	68	6
	SALIMA	Dwangwa Illovo Sugar	71.2	76.7	93	636.8	661.9	96
Lifuwu		63.2	129.0	49	592.1	702.3	84	8
Nkhotakota Met		97.0	84.2	115	709.5	710.9	100	9
Salima Met		42.0	102.3	41	492.9	683.0	72	7
LILONGWE	Chileka Namitete	25.9	76.2	34	137.7	609.0	23	4
	Chitedze Met.	31.0	65.2	48	387.6	544.9	71	4
	Dedza Met	56.6	74.9	76	548.0	582.5	94	6
	Dzonzi Forest	35.0	84.4	41	600.9	636.5	94	5
	K.I.A Met	19.9	72.1	28	459.6	524.2	88	2
	Kasiya Agric	21.5	64.5	33	470.8	605.2	78	2
	Mlangeni Njolomole	66.1	81.5	81	308.0	593.6	52	4
	Mtakataka Airwing	19.4	86.1	23	508.4	489.9	104	5
	Nathenje Agric	18.0	56.4	32	424.1	516.1	82	3
	Ntcheu - Nkhande	110.0	84.6	130	588.7	672.3	88	6
	Dedza RTC	41.5	103.2	40	480.9	653.6	74	7
	MACHINGA	Balaka Township	66.9	79.3	84	680.7	585.2	116
Chancellor College		83.4	106.2	79	823.1	811.1	101	6
Chikweo Agric.		113.5	78.5	145	566.7	673.8	84	6
Chingale Agric		100.2	83.6	120	906.8	601.3	151	7
Mpilipili (Makanjila)		57.7	96.8	60	648.5	588.3	110	5
Makoka Met		57.0	91.7	62	775.5	640.1	121	5
Mangochi Met.		41.5	72.4	57	816.4	418.4	195	5
Monkey Bay Met.		21.0	71.7	29	684.6	399.1	172	4
Namiasi Agric		30.4	92.2	33	574.5	515.2	112	4
Namwera Agric		81.0	83.2	97	524.7	655.3	80	4
Ntaja Met.		69.9	65.8	106	748.5	561.8	133	6
Phalula Agric		86.8	67.3	129	678.0	548.4	124	7
Zomba Agric		59.1	100.2	59	1026.0	767.2	134	6
BLANTYRE	Bvumbwe Met.	115.1	90.3	127	1082.8	697.5	155	7
	Chichiri Met.	117.6	72.9	161	1225.4	867.7	141	7
	Chiradzulu Agric	64.5	98.9	65	743.4	644.3	115	4
	Chizunga Factory	127.0	74.2	171	225.0	811.1	28	5
	Lujeri Tea Estate	102.0	126.3	81	1792.3	1202.4	149	8
	Masambanjati Agric	125.0	87.8	142	1205.8	777.8	155	4
	Mimosa Met.	75.3	95.2	79	1382.0	867.8	159	7
	Mpemba Vet	175.2	84.8	207	1469.3	725.9	202	6
	Mulanje Boma	140.3	109.5	128	1671.7	1067.0	157	6
	Mwanza Boma	99.0	91.2	109	466.2	657.1	71	4
	Naminjiwa Agric	156.3	83.6	187	1032.1	638.2	162	8
	Neno Agric	69.2	107.8	64	1165.7	721.7	162	3
	Satemwa Tea Estate	63.9	87.3	73	981.0	656.5	149	4
	Thyolo Met	73.1	90.3	81	826.1	711.9	116	4
	SHIRE VALLEY	Makhanga Agric	167.1	58.5	286	649.8	478.7	136
Nchalo Illovo		62.6	70.2	89	741.8	434.9	171	4
Ngabu Met.		110.1	69.1	159	711.6	498.4	143	5
Nsanje Boma		35.5	81.8	43	589.5	695.3	85	3

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR THE PERIOD 01 TO 10 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	27.3	18.0	29.4	17.1	8.6	75	5.4	6.0	4.7	8.1
Karonga	31.8	21.8	34.5	20.0	4.3	69	3.9	5.9	4.8	7.1
MZUZU ADD										
Bolero	29.0	18.9	30.6	17.9	5.4	78	6.0	6.1	4.9	8.5
Mzimba	27.6	17.2	29.4	16.5	3.6	74	4.6	5.4	4.3	7.5
Mzuzu	26.9	17.8	29.0	16.5	5.4	76	4.0	5.2	4.2	7.2
Nkhata Bay	31.4	21.6	34.1	20.7	2.2	80	4.2	5.6	4.5	7.3
KASUNGU ADD										
Kasungu	28.8	17.8	30.7	17.0	6.5	70	5.0	5.9	4.7	7.8
LILONGWE ADD										
Dedza	24.4	15.4	27.1	14.7	8.3	75	4.0	5.1	4.1	7.1
Chitedze	38.2	19.0	30.8	17.2	2.5	78	5.4	6.5	5.2	8.0
KIA	27.7	17.8	29.0	14.4	6.8	71	5.3	5.9	4.7	8.0
SALIMA ADD										
Nkhota kota	28.2	21.9	29.7	20.7	5.4	80	5.4	6.3	5.0	8.1
Salima	28.9	20.8	30.5	19.0	5.8	77	5.1	5.9	4.7	7.8
MACHINGA ADD										
Makoka	27.2	19.0	28.5	18.1	5.8	77	4.4	5.4	4.3	7.4
Mangochi	30.2	23.4	32.0	21.5	4.0	78	4.7	5.9	4.8	7.6
Monkey Bay	29.2	23.4	30.6	20.5	6.8	76	4.7	6.1	4.9	7.6
Nfaja	28.3	21.1	30.1	19.6	4.7	82	4.5	5.5	4.4	7.4
BLANTYRE ADD										
Bvumbwe	26.4	18.0	30.9	17.4	5.8	80	4.6	5.3	4.2	7.5
Chichiri	27.2	18.4	32.0	18.1	2.9	84	5.2	5.4	4.3	7.9
Mimosa	30.9	19.8	32.7	18.8	4.0	69	4.5	5.8	4.7	7.4
SHIRE VALLEY ADD										
Ngabu	32.5	32.7	34.0	21.0	5.0	75	5.0	7.1	5.8	7.8

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