



10-day Weather and Agrometeorological Bulletin



Produced in support of national early warning systems

Period: 21 – 28 February 2014

Cropping Season: 2013/14

Issue No.15

Release date: 7th March 2014

HIGHLIGHTS

- Above average rainfall was experienced over most parts of Malawi ...
- Maize crop ranges from vegetative and maturity and drying stages...
- Mainly dry weather expected during the first ten days of March 2014...

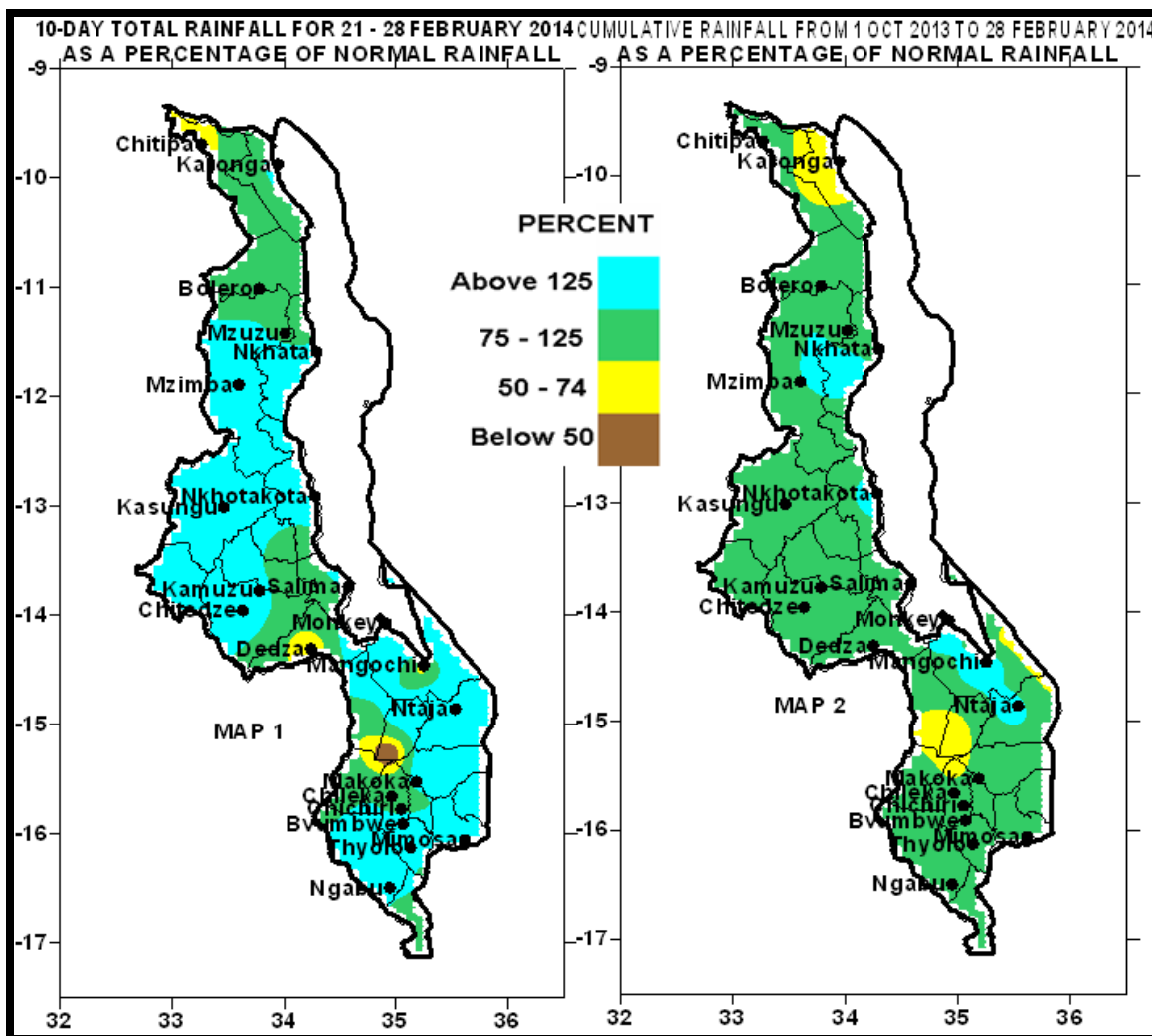


Figure 1: Rainfall Maps for Malawi for 21 to 28 February 2014

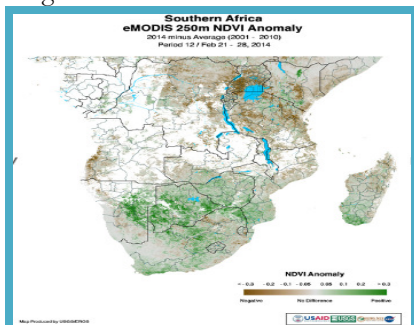
1.0 WEATHER SUMMARY AND IMPACTS

1.1 RAINFALL SITUATION

During the days of February 2014 moist and unstable Congo air mass had persisted over Malawi resulting in moderate to heavy rainfall intensities to be experienced over most areas. Most areas reported above average rainfall performance with many areas accumulating rainfall amounts of more than 100mm. Notable rainfall amounts of at least 140mm were mostly confined to stations in southern and central areas of Malawi. Such rainfall stations in southern Malawi included Chikweo (148mm) and Ntaja Agric stations in Machinga, Satemwa (227mm) and Thyolo Met (197mm) in Thyolo, Zomba Agric (185mm) in Zomba while in central Malawi Dwangwa in Nkhhotakota had received 180mm of rainfall, Lifuwi in Salima had 166mm, Nkhhotakota mEt had 242mm and in the north Chintcheche reported 161mm. More details are on Table 1. Areas that still recorded below average rainfall amounts were limited to very few places mainly in the south and extreme north (yellow and brown Colours on Map 1). Map 2 shows cumulative rainfall performance over the country from 1 October 2013 to 28th February 2014. The map shows that most parts of Malawi have received their long term average rainfall amounts (green colour on Map 2) except for a few areas particularly around Balaka in the south and Karonga in the north where below average (yellow and brown colours on map 2) cumulative rainfall performance still exist. Other details are on Table 1.

1.2 VEGETATION CONDITION

Figure 2: Vegetation Condition over Southern Africa



The vegetation difference from long term average map for Southern Africa for the period 11 to 28 February 2014 continued to show improvement in most areas. (Figure2). This has positive implications for pasture conditions and availability for communal grazing of livestock.

1.3 AIR TEMPERATURE

Due to increased cloudiness generally warm to hot temperatures were experienced over Malawi during the days of February 2014. Mean daily maximum temperatures had ranged from around 22°C at Dedza to 32°C at Ngabu. Mean daily minimum temperatures for the same period had ranged from 14.9°C at Bvumbwe to 23.4°C at Ngabu in Chikhwawa and Monkey Bay in Mangochi. The highest absolute maximum temperature for the period was 34.0°C

observed at Ngabu on 21st February 2014. For more details see Table 2.

1.4 WIND SPEEDS

Light and variable winds were reported over Malawi during the period under discussion. At a height of two metres above the ground level the mean wind speeds had ranged from 0.4 to 2.1 metres per second. The lowest mean wind speed was reported at Chitedzei in Lilongwe district while the highest mean wind speed was recorded at Chileka Airport. For more details refer to Table 2.

1.5 RELATIVE HUMIDITY

During the period under review, moist air had persisted over Malawi. Most stations had recorded mean daily relative humidity values of at least 75% except at Chichiri and Nkhhotakota. The highest mean daily relative humidity was reported at Salima and Chitedze (89%). More details are on the Table 2. High relative humidity values promote outbreaks of fungal diseases.

2. AGROMETEOROLOGICAL ASSESSMENT

Good rainfall for agricultural production had continued during the days of February 2014. This rains continued to satisfy daily crop water requirements, to improve water resources and soil moisture reserves and pasture availability for communal grazing of livestock. In most parts of the country, the maize crop was reported to be doing well particularly where good crop husbandry practices and fertilizer have been applied. If rainfall continues performing well up to at least end of March then most farmers will have good harvests this season. Preliminary indications from the Agro meteorological maize yield forecasting model show if good rains persist up to end of March then Malawi is likely to produce **3,993,980 Metric Tonnes** of maize during the 2013/14 farming season. This would be more than enough for national consumption. However, this is not the official estimate figure. For official agricultural production estimates please contact Ministry of Agriculture and Food Security.

3. PROSPECTS FOR 2013/14 RAINFALL SEASON

The rainfall outlook for January to March 2014 suggests that **Malawi is likely to experience normal to above normal total rainfall amounts.**

4. OUTLOOK FOR 01 TO 10 MARCH 2014

Models for medium range weather forecast show that the main rain bearing systems will not be active over Malawi during the first ten days of March 2014. Therefore most parts of Malawi will be generally hot and dry weather with few sporadic rains during the first ten days of March 2014.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR 21 TO 28 FEBRUARY 2014

STATION NAME	ACTUAL DEKADAL TOTAL RAINFALL mm	DEKADAL NORMAL (EXPECTED) RAINFALL mm	ACTUAL TOTAL AS PERCENTAGE OF NORMAL (EXPECTED) RAINFALL	TOTAL ACTUAL RAINFALL TO DATE mm	NORMAL (EXPECTED) RAINFALL TO DATE mm	ACTUAL TODATE AS PERCENTAGE OF NORMAL	RAINY DAYS ≥ 0.3 mm
SOUTHERN REGION							
Balaka Township	65.0	47.2	138	426.8	679.0	63	4
Bvumbwe Met.	125.8	62.4	202	833.5	833.7	100	7
Chichiri Met.	31.2	52.5	59	768.0	972.5	79	6
Chikweo Agric.	147.8	67.5	219	640.1	806.4	79	5
Chileka Airport	67.1	47.9	140	539.4	684.8	79	7
Chingale Agric	101.0	54.0	187	673.5	723.5	93	6
Chiradzulu Agric	38.5	53.3	72	659.3	763.8	86	6
Mangochi Met.	31.3	47.5	66	850.3	530.9	160	4
Mimosa Met.	78.1	62.9	124	881.0	1002.6	88	8
Monkey Bay Met.	111.3	33.7	330	719.2	479.5	150	5
Mpemba Vet	87.9	54.7	161	621.4	848.6	73	7
Mulanje Agric	82.9	55.9	148	1223.3	1209.8	101	3
Mwanza Agric	52.5	57.4	91	609.9	780.5	78	3
Namwera Agric	137.2	63.1	217	516.3	780.1	66	5
Neno Agric	50.0	51.2	98	735.8	841.7	87	3
Ngabu Met.	53.5	40.9	131	482.0	590.6	82	6
Nsanje Agric	54.7	43.6	125	622.4	811.4	77	4
Ntaja Met.	141.9	57.5	247	974.5	676.0	144	8
Phalula Agric	0.0	57.6	0	377.4	663.4	57	0
Satemwa	226.6	48.5	467	1133.2	781.1	145	7
Thyolo Met	196.8	136.2	144	1123.3	921.9	122	7
Zomba RTC	185.2	66.1	280	854.1	903.7	95	8
CENTRAL REGION							
Chitedze Met.	110.8	66.9	166	627.7	669.5	94	7
Dedza Met	37.2	74.1	50	870.7	731.3	119	5
Dowa Agric	70.1	64.9	108	598.7	673.9	89	6
Dwangwa	180.6	70.1	258	714.0	792.1	90	6
Dzonzi Forest	43.8	46.0	95	486.5	753.4	65	5
K.I.A Met	96.5	66.5	145	669.6	652.6	103	7
Lifuwu	166.3	86.4	192	237.8	879.8	27	6
Madisi Agric	113.0	73.7	153	599.2	668.6	90	4
Mkanda Met	96.3	59.0	163	655.1	682.2	96	6
Mlangeni Njolomole	74.4	57.8	129	664.5	738.6	90	3
Nkhotakota Met	242.0	85.7	282	1288.4	870.2	148	6
Ntchisi Boma	46.7	75.3	62	296.5	905.4	33	6
Salima Met	103.8	92.8	112	801.6	867.5	92	7
NORTHERN REGION							
Bolero Met	26.6	35.1	76	414.1	490.5	84	6
Chitipa Met	35.8	58.7	61	614.0	697.3	88	8
Chintheche Agric	161.1	66.2	243	1108.8	875.3	127	4
Emfeni Agric	101.8	50.8	200	235.1	613.7	38	6
Karonga Met.	78.5	55.9	140	289.1	541.4	53	3
Mbawa Res. Stn	115.4	46.8	247	566.9	620.1	91	4
Mzimba Met	110.4	54.4	203	782.9	677.2	116	5
Mzuzu Met.	45.1	42.9	105	684.8	636.1	108	6
Nkhata Bay Met.	73.3	55.3	133	854.7	721.7	118	6
Rumphi Agric	50.4	44.5	113	237.0	539.3	44	3
Zombwe Agric	60.2	47.4	127	661.9	532.2	124	6

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 21 TO 28 FEBRUARY 2014

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED (m/s)	RH (%)	EVAP (mm)
KARONGA ADD							
Chitipa	26.7	18.0	28.2	17.4	1.6	80	N/A
Karonga	30.1	21.1	31.9	19.6	0.8	76	N/A
MZUZU ADD							
Bolero	28.0	19.2	29.0	18.1	N/A	75	N/A
Mzuzu	25.3	18.1	26.7	17.5	0.9	81	N/A
Mzimba	26.0	17.8	28.4	15.9	0.5	80	N/A
Nkhata Bay	29.5	21.4	31.7	20.8	0.5	85	N/A
KASUNGU ADD							
Kasungu	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LILONGWE ADD							
KIA	25.5	18.0	27.3	16.0	1.0	88	N/A
Chitedze	25.5	18.9	27.5	18.4	0.4	89	N/A
Dedza	22.0	15.9	24.1	15.4	1.9	87	N/A
SALIMA ADD							
Salima	28.1	21.3	29.5	20.5	1.3	89	N/A
Nkhotakota	27.1	21.5	29.0	20.6	1.2	74	N/A
MACHINGA ADD							
Ntaja	26.9	21.2	29.2	20.2	0.7	86	N/A
Mangochi	29.2	22.5	N/A	N/A	0.8	80	N/A
Monkey Bay	28.2	23.4	29.6	21.3	1.1	83	N/A
BLANTYRE ADD							
Chileka	27.4	20.5	29.0	19.6	2.1	82	N/A
Chichiri	26.2	18.9	29.1	17.5	0.9	62	N/A
Bvumbwe	24.9	14.9	27.9	14.3	1.4	85	N/A
Mimosa	29.5	20.1	32.7	18.8	0.9	84	3.6
SHIRE VALLEY ADD							
Ngabu	32.4	23.4	34.0	22.6	1.4	77	N/A

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