



REPUBLIC OF MALAWI

Department of Climate Change and Meteorological Services

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Cropping Season: 2013/14

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HIGHLIGHTS

- Further improvement in rainfall distribution experienced in Malawi...
- Maize crop mainly at vegetative stage in most parts of Malawi...
- More rains are expected to over Malawi during 21 to 31st January, 2014...

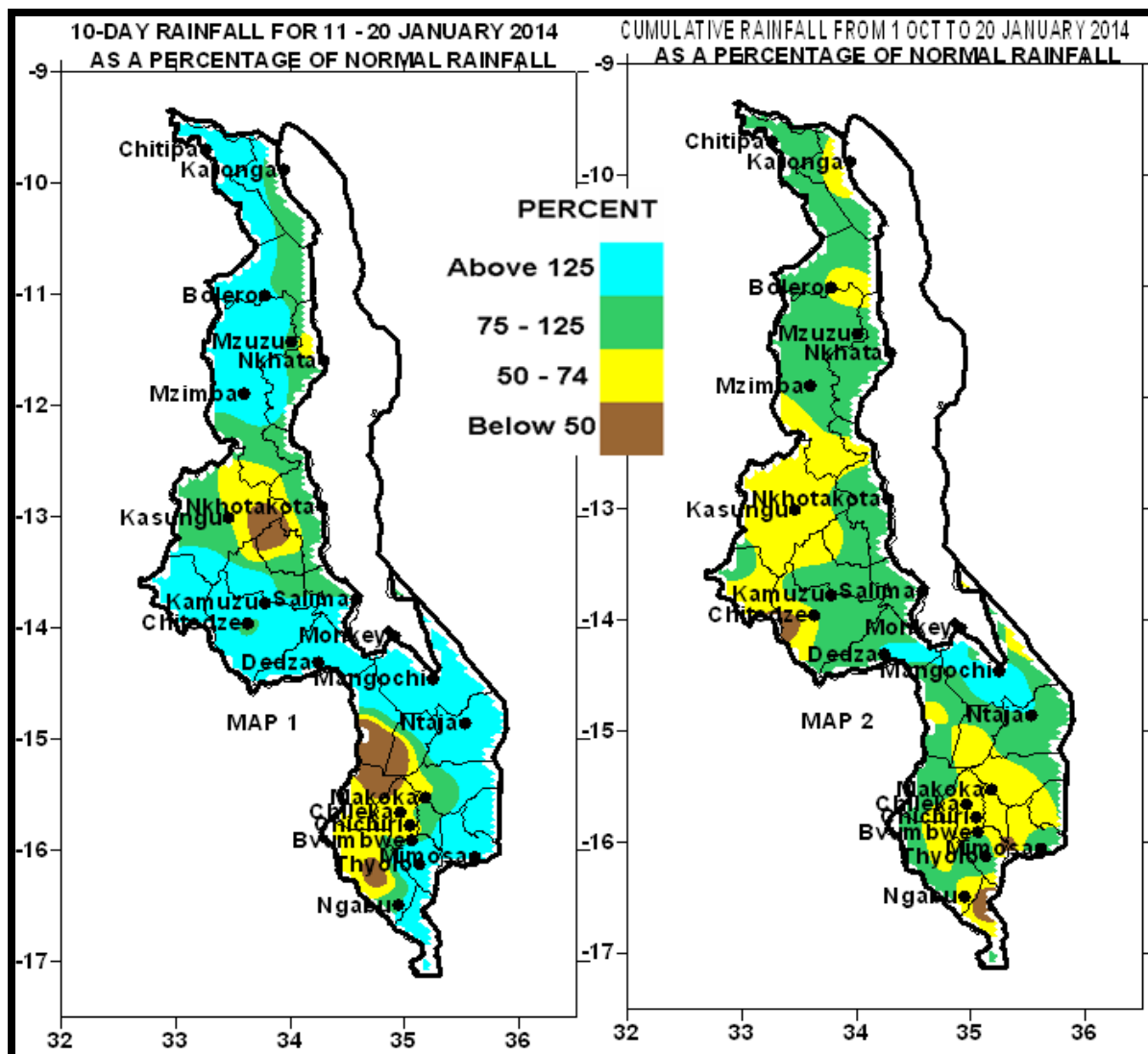


Figure 1: Rainfall Maps for Malawi for 11-20 January 2014

1.0 WEATHER SUMMARY AND IMPACTS

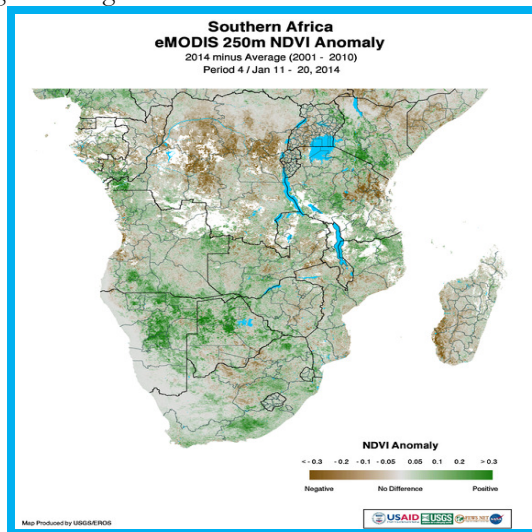
1.1 RAINFALL SITUATION

During second ten days of January 2014, Malawi had experienced an improvement in rainfall distribution and amounts. The improvement in rainfall distribution was due to fairly active Congo Air mass that covered most parts of Malawi and brought above average rainfall amounts to most places (light blue colour on Map 1). Areas that experienced light and far below average rainfall were confined to a few places in the south and central Malawi (yellow and brown Colours on Map 1). During the entire period under review, cumulative rainfall amounts in excess of 200mm were mostly confined to southern and central Malawi and included the following stations: Mangochi Met (287mm), Mulanje Boma (269mm), Ntaja Met (212mm), Satemwa and Thyolo Met (208mm) in the south while in the centre such high amounts were reported at Dedza Residential Training Centre (264mm) and Kasiya Agric (209mm). More details are on Table 1 and Map 1.

Map 2 depicts the situation of cumulative rainfall performance for the country since 1 October 2013. From the map, there has been a significant improvement in cumulative rainfall performance in that more areas in Malawi have experienced average rainfall performance by 20 January 2014 (Green colour on Map 2). For more details also refer to Table 1.

1.2 VEGETATION CONDITION

Figure 2: Vegetation Condition over Southern Africa



Improvement in vegetation conditions observed in many parts of the region during the second ten days of January 2014. This was due to the significant improvement in rainfall performance experienced in most parts of the region. The vegetation conditions had improved by the beginning of January 2014. Vegetation conditions compared with average (Figure 2) shows that most areas had above average vegetation conditions, including areas where vegetation stress had been observed by end of November 2013. This has positive implications for pasture conditions and development of crops.

1.3 AIR TEMPERATURE

Generally warm to hot temperatures had persisted over the country during the second ten days of January 2014. Mean maximum temperatures ranged from around 23.5°C at Dedza to 33.7°C at Ngabu. Mean minimum temperatures ranged from 14.4°C at Bvumbwe to 22.5°C at Monkey Bay in Mangochi. The highest absolute maximum temperature for the period was about 35.8°C, observed at Ngabu in Shire Valley. For more details see Table 2.

1.4 WIND SPEEDS

Mean wind speeds at a height of two metres above the ground level ranged from 0.4 to 2.1 metres per second. The lowest mean wind speed was reported at Kasungu Met while the highest mean wind speed was recorded at Chileka Airport. For more details refer to Table 2. High wind speeds coupled with dry conditions lead to increased evaporation rates.

1.5 RELATIVE HUMIDITY

During the period under review, air over Malawi was generally still moist. Mean daily relative humidity values ranged from 62% at Ngabu to 85% at Nkhata Bay. More details are on the Table 2. High relative humidity values are favourable for outbreaks of fungal diseases.

2. AGROMETEOROLOGICAL ASSESSMENT

During the second ten days of January 2014, there was a further improvement in rainfall distribution and amounts in most areas in the country. This rainfall had helped to replenish soil moisture reserves and supported growth and development of most crops. The good rainfall performance has contributed to improved pasture availability for animal production and growth and development of most crops. The general crop stand in the fields particularly for maize has been reported encouraging and high yields are expected this season if the good rains will persist up to February and March 2014. Maize crop was reported to be at varying stages of development ranging from germination to vegetative and tasselling stages. On farm activities ranged from planting and weeding to application of basal and top dressing fertilizers.

3. PROSPECTS FOR 2013/14 RAINFALL SEASON

The rainfall outlook for December 2013 to February 2014 suggests that *Malawi is likely to experience normal to above normal total rainfall amounts. However, it should be noted that the forecast does not address the timing of the rains, but only rainfall totals, summed over the three-month period from December to February 2014.*

4. OUTLOOK FOR 21 TO 31 JANUARY 2014

Medium range forecast suggest that most areas in Malawi will experience good rainfall distribution and amounts during the last ten days of January 2014. The rains will be due to the presence of active Congo Air mass and Inter Tropical Convergence Zone. These rains will support growth and development of most crops.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR 11 TO 20 JANUARY 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	5.2	70.2	7	226.8	403.7	56	2
Bvumbwe Met.	71.6	84.0	85	349.9	500.5	70	6
Chancellor College	105.8	89.4	118	387.7	601.5	64	5
Chichiri Met.	41.8	74.8	56	445.3	741.0	60	5
Chikweo Agric.	157.4	107.3	147	327.5	496.6	66	5
Chileka Airport	45.0	63.9	70	273.4	416.7	66	6
Chingale Agric	72.6	64.4	113	334.8	427.0	78	4
Chiradzulu Agric	65.1	60.3	108	358.0	445.8	80	5
Mpilipili	59.9	65.9	91	239.9	412.6	58	4
Makoka Met	58.0	79.4	73	294.2	458.8	64	5
Mangochi Met.	287.5	64.6	445	554.6	275.3	201	7
Masambanjati Agric	175.8	82.2	214	570.2	596.1	96	2
Mimosa Met.	140.2	93.8	149	525.5	655.5	80	5
Monkey Bay Met.	160.4	54.0	297	360.8	253.4	142	6
Mulanje Boma	268.5	109.7	245	908.9	812.1	112	6
Namiasi Agric	159.7	78.3	204	319.0	347.9	92	5
Naminjiwa Agric	137.4	84.8	162	237.9	458.1	52	4
Namwera Agric	118.9	86.6	137	287.3	471.8	61	7
Nchalo Sucoma	21.7	58.1	37	179.6	314.0	57	1
Neno Agric	50.0	95.7	52	565.6	510.9	111	3
Ngabu Met.	72.9	55.8	131	274.5	368.1	75	2
Ntaja Met.	212.2	75.2	282	493.0	404.6	122	7
Phalula Agric	12.7	61.9	21	235.3	407.0	58	4
Satemwa	208.0	61.5	338	574.6	478.9	120	6
Thuchila Agric	118.6	67.6	175	269.3	399.1	67	8
Thyolo Boma	145.8	56.6	258	380.6	515.1	74	6
Thyolo Met	208.3	84.0	248	656.0	517.7	127	5
Zomba RTC	48.2	90.7	53	334.4	559.7	60	6
CENTRAL REGION							
Chileka Namitete	119.3	61.3	195	142.8	445.9	32	4
Chitedze Met.	58.6	79.5	74	269.2	400.5	67	6
Dedza Met	190.7	69.3	275	527.9	405.5	130	7
Dowa Agric	67.9	82.0	83	299.1	394.0	76	6
Dwangwa	67.5	81.6	83	314.1	500.5	63	8
Dzonzi Forest	25.0	81.9	31	219.9	471.3	47	4
K.I.A Met	155.1	87.2	178	405.4	382.6	106	7
Kasiya Agric	208.6	53.9	387	463.6	473.4	98	5
Kasungu Met	46.8	62.3	75	262.3	344.2	76	8
Lifuwu	71.5	128.0	56	71.5	472.6	15	5
Lisasadzi	58.1	67.7	86	182.8	388.8	47	6
Malomo Agric	14.3	125.7	11	111.4	379.7	29	5
Madisi Agric	54.1	81.5	66	203.3	371.8	55	6
Mkanda Met	114.0	83.3	137	355.9	432.5	82	4
Mlangeni Njolomole	150.9	82.4	183	457.6	438.5	104	5
Mponela Agric	137.5	68.1	202	335.1	350.2	96	8
Nathenje Agric	180.6	57.7	313	420.6	368.9	114	7
Nkhotakota Met	152.6	105.9	144	660.9	528.9	125	9
Ntcheu - Nkhande	39.4	97.6	40	221.4	503.1	44	5
Ntchisi Boma	83.0	98.2	85	221.3	532.7	42	5
Salima Met	171.3	117.2	146	379.0	481.5	79	5
Dedza RTC	264.4	87.2	303	548.6	434.1	126	8
NORTHERN REGION							
Bolero Met	72.2	52.0	139	212.7	290.2	73	8
Bwengu Agric.	84.2	59.2	142	213.8	332.9	64	5
Chikangawa forest	144.0	83.5	172	497.8	452.3	110	8
Chitipa Met	152.0	65.9	231	474.1	398.2	119	6
Chintheche Agric	81.9	83.1	99	710.5	564.1	126	5
Euthini Agric.	165.4	52.6	314	294.0	349.2	84	6
Karonga Met.	47.7	55.3	86	170.5	331.7	51	5
Mbawa Res. Stn	48.4	59.4	81	190.5	377.6	50	6
Mzimba Met	188.0	71.1	264	510.7	407.7	125	9
Mzuzu Met.	35.7	69.3	52	324.7	407.1	80	7
NkhataBay Met.	52.9	65.6	81	471.8	474.8	99	7
Rumphu Boma	61.7	57.9	107	103.8	303.5	34	3
Vinthukutu Agric	69.0	69.0	100	365.9	382.4	96	4
Zombwe Agric	123.2	54.0	228	324.4	319.2	102	7

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 TO 20 JANUARY 2014

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED (m/s)	RH (%)	EVAP (mm)
KARONGA ADD							
Chitipa	26.1	17.5	28.2	16.7	1.6	81	N/A
Karonga	30.2	20.8	32.5	19.6	1.4	74	N/A
MZUZU ADD							
Bolero	27.5	19.0	30.0	17.8	N/A	77	N/A
Mzuzu	25.5	17.1	26.8	16.2	1.3	82	N/A
Mzimba	25.5	17.0	28.1	15.9	0.7	80	N/A
Nkhata Bay	29.3	21.0	31.9	20.0	0.5	85	N/A
KASUNGU ADD							
Kasungu	25.9	N/A	29.6	N/A	0.4	82	N/A
LILONGWE ADD							
KIA	26.0	16.1	28.0	16.0	1.1	72	5.2
Chitedze	26.9	18.5	29.4	16.7	0.6	81	N/A
Dedza	23.5	15.7	25.4	13.9	1.2	79	N/A
SALIMA ADD							
Salima	29.3	22.3	31.8	21.5	1.7	81	N/A
Nkhotakota	27.3	21.2	29.5	20.0	0.9	81	N/A
MACHINGA ADD							
Ntaja	28.9	20.7	31.2	19.6	0.7	78	N/A
Mangochi	30.9	21.7	33.2	20.0	0.9	75	N/A
Monkey Bay	28.7	22.5	30.8	20.7	1.3	79	N/A
BLANTYRE ADD							
Chileka	28.5	19.9	31.0	14.3	2.1	70	N/A
Chichiri	26.2	17.9	28.5	16.0	1.1	60	N/A
Bvumbwe	25.7	14.4	28.1	13.1	1.6	75	N/A
Mimosa	30.2	19.3	32.0	17.2	1.1	74	5.0
SHIRE VALLEY ADD							
Ngabu	33.7	22.3	35.8	22.6	1.9	62	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