



REPUBLIC OF MALAWI

Department of Climate Change and Meteorological Services

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HIGHLIGHTS

- Good rains experienced particularly over the south and north...
- Land preparation, weeding and planting were major agricultural activities...
- Scattered locally heavy rainfall expected during 21 to 31 December 2013...

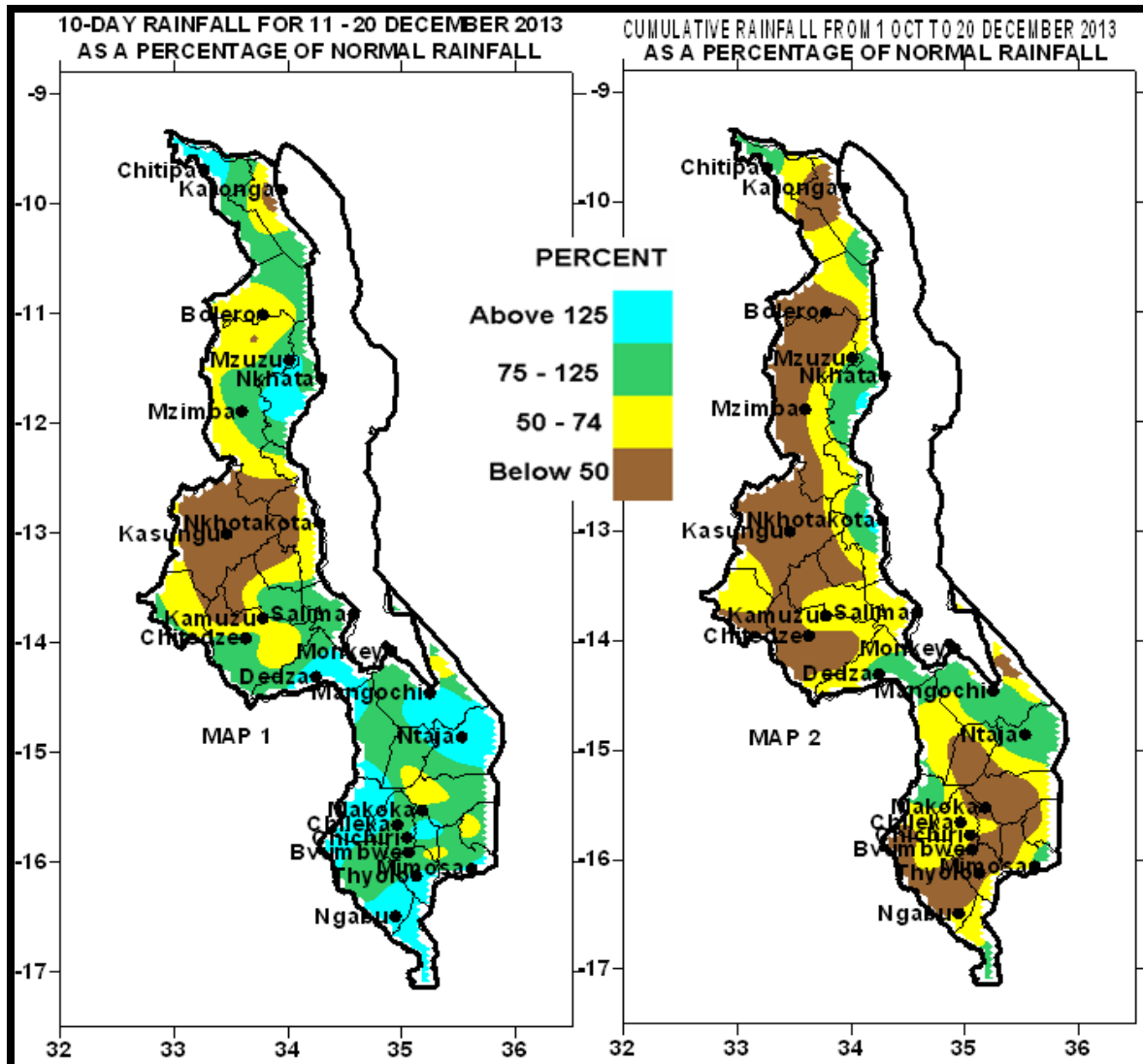


Figure 1: Rainfall Maps for Malawi for 11-20 December 2013

1.0 WEATHER SUMMARY AND IMPACTS

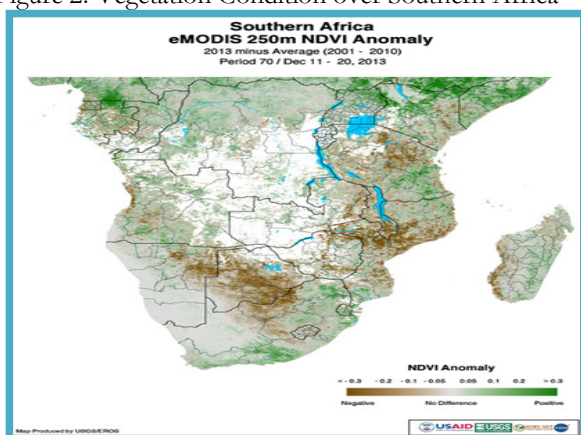
1.1 RAINFALL SITUATION

During the second days of December 2013, Inter Tropical Convergence Zone and shallow Congo Air mass affected Malawi. This had resulted in scattered moderate to locally heavy rains to be experienced over the country. A few areas registered above long term average cumulative rainfall amounts (light blue Colours on Map 1) with an average of six rainy days. Some areas had registered up to eight rainy days. However, stations that recorded more than 120mm of rainfall amounts were confined to southern Malawi and such stations included Chichiri Met, Chiradzulu Agric Lujeri Estate, Mwanza Boma, Neno Agric, Nsanje and Thyolo Met. More details are on Table 1 and Map 1.

Map 2 gives an idea of cumulative rainfall performance for the country since 1 October 2013. From the map, it is clear that so far the rainfall performance has been erratic and poor in most parts of Malawi (brown and yellow colours on Map 2). For other details refer to Table 1.

1.2 VEGETATION CONDITION

Figure 2: Vegetation Condition over Southern Africa



Most parts of Southern Africa have by 20th December 2013 experienced an onset of seasonal rains (Figure 2). Rains generally have started on time in most places. Areas which experienced an effective onset during mid-December 2013 include parts of southern Malawi. Due to the low rainfall so far received this season and the poor rainfall performance in previous seasons, vegetation conditions are below normal in many parts of the region, according to satellite imagery (brown colours, Figure 2). Despite the poor seasonal progress observed in several areas mentioned above, it is worth noting that there is still sufficient time left in the season for good production if the remainder of the season performs well.

1.3 AIR TEMPERATURE

Generally warm temperatures were observed over Malawi during the period 11 to 20th December 2013. Mean maximum temperatures over Malawi had ranged from 25.4°C at Dedza to 35.7°C at Ngabu in Chikwawa while mean minimum temperatures had ranged from 15.8°C at Bvumbwe in Thyolo to 26.6°C at Ngabu (Table 2). The highest (absolute)

maximum temperature was still recorded at Ngabu (41.1°C) in Chikwawa while the lowest was 13.9°C recorded at Bvumbwe in Thyolo district. For more details see Table 2.

1.4 WIND SPEEDS

Mean wind speeds at a height of two metres above the ground level had ranged from 0.6 m/s at Kasungu Met to 3.6 m/s at Ngabu Met. For more details refer to Table 2. Higher wind speeds coupled with drier conditions lead to enhanced prospects for occurrences of wind erosion and higher evaporation rates.

1.5 RELATIVE HUMIDITY

During the period under review, air over Malawi had more moisture than in the previous ten day period. Daily average relative humidity values had ranged from 58% at Ngabu to 73% at Dedza while in the previous ten day period the values had ranged from 47% at Kasungu Met to 70% at Mzuzu Met.. The details are on the Table 2. High relative humidity values cause discomfort to communities and also promote fungal diseases.

2. AGROMETEOROLOGICAL ASSESSMENT

During the second ten days of December 2013, there was a great improvement in rainfall performance particularly over southern Malawi where most areas had experienced effective onset of the rainfall season. However, generally light rainfall was experienced over central Malawi. These rains had facilitated planting of various crops, planting, replanting and germination of various crops and as well as basal fertilizer application. The Maize crop was reported doing well. The crop generally ranged from plating, germination and vegetative stages. The rains had also supported growth and development of pasture and regeneration of the natural vegetation. The major on-farm agricultural activities included land preparation, planting, weeding, basal fertilizer application

3. PROSPECTS FOR 2013/14 RAINFALL SEASON

Reports indicate that by mid-December 2013 most parts of Malawi had experienced effective onset of rainfall and 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.* A copy of the seasonal forecast can be accessed and downloaded at the Department of Climate Change and Meteorological Services website using the link below: http://www.metmalawi.com/forecasts/SEASONAL_FORECAST_2013_2014_Press_release.pdf

4. OUTLOOK FOR 21 – 31 DECEMBER 2013

Models for short and medium range rainfall forecasts indicate that rainfall over Malawi will be influenced by fairly moist Congo Air mass. Hence scattered locally heavy rainfall is expected to occur over Malawi during the last ten days of December 2013

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR 11 to 20 DECEMBER 2013

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	53.2	58.2	91	58.9	197.0	30	5
Bvumbwe Met.	94.3	66.6	142	149.8	274.4	55	6
Chancellor College	62.3	94.3	66	75.0	317.3	24	4
Chichiri Met.	136.3	89.9	152	254.2	473.6	54	8
Chikwawa Boma	40.0	51.2	78	115.6	205.2	56	2
Chileka Airport	37.0	50.6	73	118.6	227.0	52	8
Chingale Agric	46.9	73.5	64	91.7	223.6	41	5
Chiradzulu Agric	124.6	63.1	197	155.8	246.4	63	6
Chizunga Factory	79.2	113.0	70	105.5	376.4	28	6
Lujeri Tea Estate	191.0	126.8	151	612.6	552.9	111	7
Mpilipili (Makanjila)	77.8	62.5	124	101.2	182.4	55	2
Makoka Met	57.4	60.5	95	90.5	225.1	40	4
Mangochi Met.	74.9	41.2	182	140.6	117.3	120	3
Mimosa Met.	118.1	82.5	143	253.0	387.5	65	7
Monkey Bay Met.	47.0	46.3	102	96.7	96.9	100	2
Mwanza Boma	125.3	68.4	183	127.4	266.9	48	4
Namiasi Agric	29.4	51.5	57	67.7	141.1	48	2
Naminjiwa Agric	38.5	61.6	63	100.5	224.8	45	1
Namwera Agric	53.3	61.5	87	95.0	222.9	43	3
Neno Agric	224.4	66.1	339	276.9	247.3	112	7
Ngabu Met.	76.4	52.8	145	101.8	190.0	54	3
Nsanje Boma	181.5	76.6	237	247.1	290.2	85	5
Ntaja Met.	114.5	64.1	179	202.6	189.9	107	7
Phalula Agric	35.0	50.8	69	75.4	215.5	35	2
Thuchila Agric	18.5	53.2	35	32.5	199.6	16	1
Thyolo Met	149.3	71.6	209	210.0	282.1	74	7
Zomba RTC.	56.0	100.5	56	99.2	303.9	33	6
CENTRAL REGION							
Chitedze Met.	56.1	51.6	109	90.3	181.6	50	6
Dedza Met	106.8	66.5	161	158.1	199.0	79	5
Dowa Agric	63.9	66.7	96	102.4	170.2	60	5
Dwangwa	76.8	78.7	98	211.6	247.5	85	4
Dzonzu Forest	69.9	78.8	89	176.6	240.7	73	4
Kaluluma DTC	27.9	67.1	42	27.9	175.7	16	3
K.I.A Met	36.1	52.2	69	103.3	150.6	69	5
Kasiya Agric	27.7	95.7	29	120.2	258.7	46	3
Kasungu Met	25.0	58.8	43	54.7	157.8	35	5
Lisasadzi	6.7	76.4	9	36.8	177.1	21	2
Malomo Agric	17.9	68.2	26	50.7	134.8	38	3
Madisi Agric	23.8	68.5	35	67.7	160.1	42	2
Mkanda Met	53.3	74.0	72	163.7	202.8	81	3
Mlangeni Njolomole	105.3	74.7	141	163.7	221.0	74	4
Mponela Agric	36.7	43.5	84	81.0	161.1	50	5
Nathenje Agric	12.3	63.0	20	53.6	175.5	31	3
Nkhotakota Met	58.7	88.0	67	380.8	220.1	173	4
Ntcheu - Nkhanda	86.4	74.8	116	103.1	231.6	45	6
Ntchisi Boma	57.1	90.9	63	117.9	231.4	51	4
Salima Met	87.6	80.8	108	95.0	185.5	51	4
Dedza RTC	106.8	66.5	161	158.1	199.0	79	5
NORTHERN REGION							
Baka Res. Stn.	15.3	85.0	18	15.3	182.3	8	3
Bolero Met	26.8	45.7	59	51.2	117.2	44	4
Chikangawa forest	92.3	66.6	139	155.1	209.2	74	7
Chitipa Met	107.2	62.3	172	155.0	180.7	86	7
Chintheche Agric	117.6	81.7	144	460.2	286.5	161	3
Euthini Agric.	3.1	50.3	6	51.3	155.6	33	1
Karonga Met.	8.2	63.3	13	51.7	150.4	34	4
Mbawa Res. Stn	37.9	71.4	53	56.6	170.9	33	4
Mzimba Met	56.2	63.1	89	85.4	174.3	49	7
Mzuzu Met.	84.5	55.1	153	168.3	208.1	81	5
NkhataBay Met.	43.4	67.9	64	250.3	243.3	103	4
Rumphu Boma	21.7	44.0	49	21.7	113.9	19	4
Vinthukutu Agric	83.8	68.0	123	204.0	178.4	114	3

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 TO 20 DECEMBER 2013

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED (m/s)	RH (%)	EVAP (mm)
KARONGA ADD							
Chitipa	29.1	18.5	30.7	17.5	2.2	69	N/A
Karonga	33.0	22.2	34.0	20.8	1.9	60	N/A
MZUZU ADD							
Bolero	31.2	19.7	34.0	18.5	N/A	63	N/A
Mzuzu	27.8	16.6	29.9	15.1	1.4	70	N/A
Mzimba	28.8	18.2	32.9	16.6	0.8	67	N/A
Nkhata Bay	33.2	21.2	35.0	20.6	0.7	70	N/A
KASUNGU ADD							
Kasungu	29.6	N/A	32.6	N/A	0.6	65	N/A
LILONGWE ADD							
KIA	27.7	18.8	30.0	17.0	1.1	72	4.9
Chitedze	29.0	19.3	32.8	17.4	0.8	69	N/A
Dedza	25.4	17.1	27.4	14.7	3.3	73	N/A
SALIMA ADD							
Salima	32.5	23.7	36.0	20.5	1.9	63	N/A
Nkhotakota	30.6	32.5	33.5	20.6	1.8	67	N/A
MACHINGA ADD							
Makoka	30.0	19.6	34.4	18.0	1.4	68	N/A
Ntaja	31.8	21.8	36.1	19.6	1.9	67	N/A
Mangochi	33.3	23.4	37.0	21.5	1.8	66	N/A
Monkey Bay	31.9	24.4	35.7	21.9	2.3	67	N/A
BLANTYRE ADD							
Chileka	30.7	20.7	35.8	18.0	2.3	69	N/A
Chichiri	28.6	19.0	33.0	17.5	1.1	65	N/A
Bvumbwe	27.6	15.8	32.6	13.9	1.7	72	N/A
Mimosa	31.9	20.2	36.0	17.5	1.1	72	5.2
SHIRE VALLEY ADD							
Ngabu	35.7	26.6	41.1	21.8	3.6	58	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