



Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services



Period: 21 – 31 January 2012

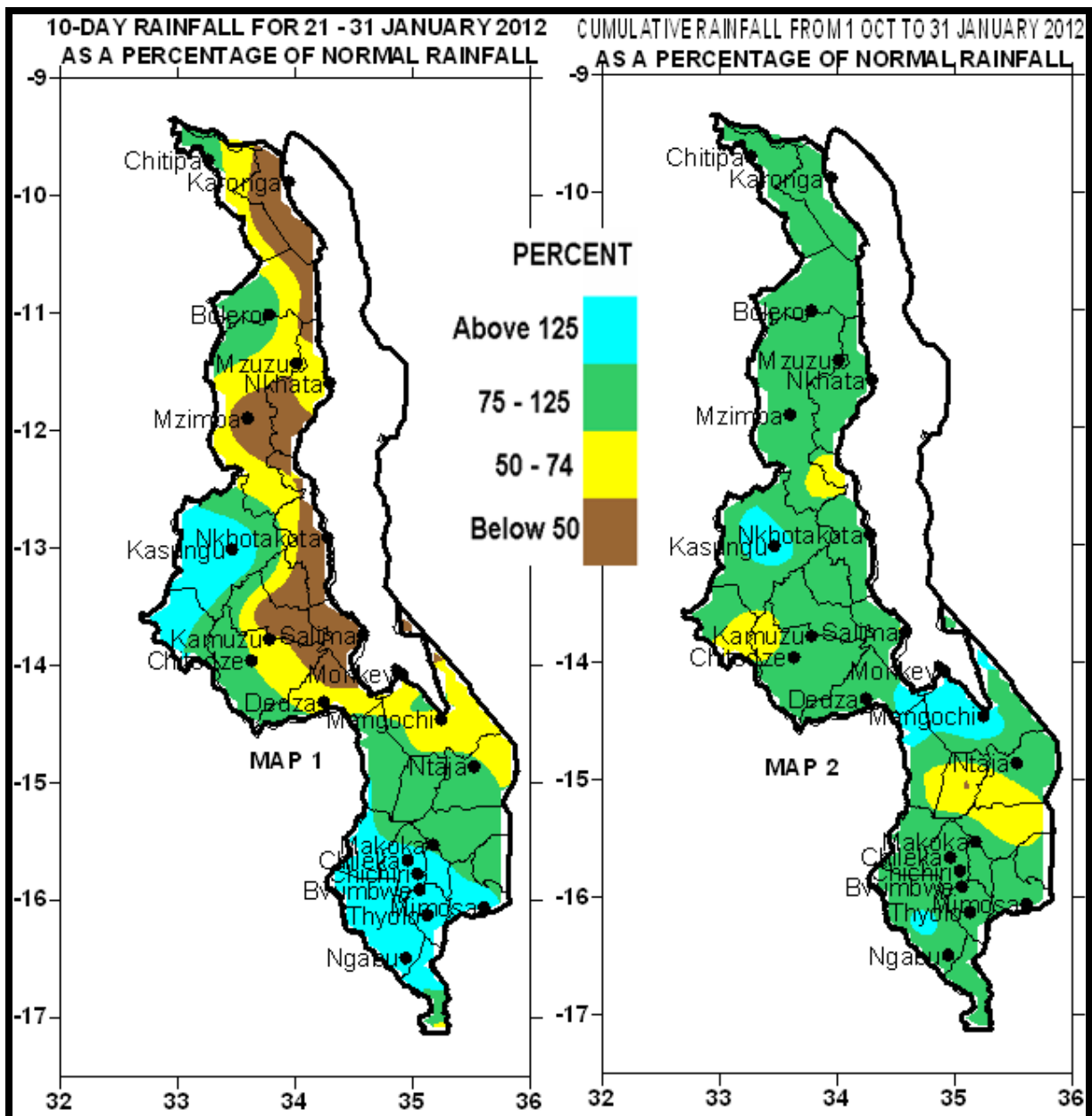
Season: 2011/2012

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HIGHLIGHTS

- Above average rains recorded in the south and light to moderate elsewhere...
- Heavy floods wreck houses, crops and livestock in lower Shire districts...
- Widespread rains are expected over Malawi during first ten days of February 2012...



1.1 RAINFALL SITUATION

During the last ten days of January 2012, shallow Congo Air mass caused light and below average rainfall (yellow and brown colours on Map 1) along the lakeshore and other areas of central and northern Malawi while Tropical cyclone **FUNSO** in Mozambique Channel caused torrential rains particularly over the catchment area of Shire River in southern Malawi, triggering

flooding downstream in the lower Shire districts of Chikhwawa and Nsanje during the first half of the period under review. Many areas in extreme southern Malawi



received above average cumulative rainfall amounts (light blue colour on Map 1). Most places in the south recorded significant cumulative rainfall amounts in excess of 175mm. Such areas included Bvumbwe Met 284mm, Chichiri Met 213mm, Mulanje Agric 194mm, Mimosa Met 186mm and Kasinthula Research Station 177mm. More details are on Table 1.

Map 2 indicates cumulative rainfall performance from 1 October 2011 up to 31 January 2012. Generally the map shows that most areas in Malawi have received average cumulative rainfall amounts (Green Colour on Map 2) with pockets of below average rainfall (Yellow colour on Map 2) and above average rainfall (light blue on Map 2). The below average rainfall situation has been largely due to poor and erratic start of the main rainfall season. For more details see Map 2 and Table 1.

1.2 MEAN AIR TEMPERATURE

During the last ten days of January 2012 mostly cloudy conditions moderated daytime temperatures over Malawi. Daily average maximum temperatures ranged from 31°C at Ngabu in Shire Valley to 22°C at Dedza. The highest absolute maximum temperature was reported at Ngabu 36°C. For more details see Table 2.

1.4 MEAN WIND SPEEDS

Average wind speeds recorded at a height of two metres above the ground level remained light. Daily average wind speeds ranged from 0.6 at Chichiri and Nkhata Bay to 2.3 metres per second or 2.2 – 8.3 Km/hour (see details on Table 2). The highest wind speeds was reported at Chileka Airport (2.3 m/s).

1.5 MEAN RELATIVE HUMIDITY

Humid conditions prevailed over most areas in Malawi during the last ten days of January 2012. Daily average

relative humidity values ranged from 69% at Karonga to 87% at Makoka in Zomba. More details are on the Table 2.

1.6 MEAN SUNSHINE HOURS

Malawi experienced cloudy to overcast skies during the period under review. Reports from sampled stations indicate that daily average sunshine hours ranged from 1.1 hours of bright sunshine at Bvumbwe to 4.6 hours at Mzimba Met station.

2. AGROMETEOROLOGICAL ASSESSMENT

Torrential rains which started during the previous ten day period continued over most of southern Malawi during the period under review, maintaining flooding in prone areas of Chikhwawa and Nsanje districts. According to reports crops and livestock have been washed away, households and people face possible food insecurity as well as catching waterborne diseases due to heavy floods that wrecked houses, crops and livestock. Otherwise good rainfall performance in other parts of the country had facilitated growth and development of most crops as well as farm operations.

Overall, despite the erratic start of rains in some parts of Malawi, cropping activities were well underway throughout the country and maize crops were reported to be at various stages ranging from early vegetative to flowering stages. Good crop stand was reported in most fields especially where good crop husbandry has been practiced. Good crop yields are expected if rains persist through March/April 2012 particularly in the north half of Malawi.

3. PROSPECTS FOR 2011/12 RAINFALL SEASON

“Normal total rainfall amounts are expected over most parts of Malawi at the end of March 2012”. The seasonal rainfall forecast indicates that from October to December 2011, the northern half of the country will receive normal to above normal total rainfall amounts while the southern half will experience normal to below normal total rainfall amounts. The greater part of the country will experience normal to above normal total rainfall amounts during January to March 2012.

4. OUTLOOK FOR 01 – 10 FEBRUARY 2012

Models for short and medium range weather forecasts suggest that Malawi will still be under influence of moist and unstable Congo Air mass and Inter Tropical Convergence Zone. Therefore widespread moderate to locally heavy rains are expected over Malawi during the first ten days of February 2012.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 21 –31 JANUARY 2012 AT SELECTED STATIONS

STATION NAME	DEKADAL	DEKADAL	DEKADAL	TOTAL	NORMAL	TOTAL	RAINY
	TOTAL	NORMAL	TOTAL	TO	TO	TO DATE	DAYS
	RAINFALL		AS %	DATE	DATE	AS %	
SOUTHERN REGION	mm	mm	NORMAL	mm	mm	NORMAL	≥ 0.3mm
Balaka Township	58.0	102.2	57	209.0	505.9	41	5
Bvumbwe Met.	284.1	106.7	266	705.8	607.2	116	6
Chichiri Met.	212.6	53.8	395	684.4	794.8	86	5
Chikweo Agric.	59.4	98.7	60	611.9	595.3	103	4
Chileka Airport	109.6	81.3	135	566.9	498.0	114	4
Chiradzulu Agric	92.9	99.6	93	506.4	545.4	93	4
Kasinthula Res. Stn.	176.5	62.5	282	482.2	387.3	125	4
Liwonde Township	116.2	71.4	163	211.7	426.5	50	5
Makhanga Met	108.9	51.9	210	522.7	420.2	124	3
Makoka Met	105.3	89.6	118	682.8	548.4	125	5
Mangochi Met.	23.8	70.7	34	621.9	346.0	180	4
Mimosa Met.	186.2	117.1	159	979.5	772.6	127	6
Monkey Bay Met.	29.5	74.0	40	624.2	327.4	191	6
Mulanje Boma	193.8	145.4	133	1131.4	957.5	118	5
Mwanza Boma	134.5	94.4	142	683.7	565.9	121	5
Namiasi Agric	76.7	75.1	102	502.1	423.0	119	5
Namwera Agric	59.9	100.3	60	271.2	572.1	47	5
Nchalo Sucoma	120.4	50.7	237	506.9	364.7	139	5
Ngabu Met.	77.8	61.2	127	424.1	429.3	99	4
Nsanje Boma	62.1	84.8	73	465.5	613.5	76	3
Ntaja Met.	78.8	91.4	86	447.0	496.0	90	4
Thyolo Boma	146.2	91.2	160	487.2	606.3	80	5
Zomba RTC	78.3	107.3	73	378.8	667.0	57	7
CENTRAL REGION							
Chileka Namitete	88.2	86.9	101	436.8	532.8	82	5
Chitedze Met.	57.6	79.2	73	424.4	479.7	88	7
Dedza Met	60.2	102.1	59	639.9	507.6	126	9
Dowa Agric	38.9	92.4	42	533.2	486.4	110	3
Dwangwa Illovo Sugar	40.5	84.7	48	387.5	585.2	66	3
Dzonzi Forest	114.8	80.8	142	497.7	552.1	90	5
Kaluluma DTC	59.7	75.7	79	536.8	459.7	117	6
K.I.A Met	42.2	69.5	61	717.6	452.1	159	5
Kasungu Met	136.5	70.0	195	600.6	414.2	145	7
Lifuwu	21.7	100.7	22	452.7	573.3	79	5
Mlangeni Njolomole	85.1	73.6	116	809.0	512.1	158	8
Mponela Agric	17.0	77.2	22	439.8	427.4	103	4
Nkhotakota Met	13.0	97.8	13	634.5	626.7	101	4
Salima Met	15.2	99.2	15	394.8	580.7	68	7
NORTHERN REGION							
Baka Res. Stn.	9.5	63.6	15	473.3	446.5	106	4
Bolero Met	60.1	53.3	113	415.8	343.5	121	5
Chitipa Met	65.4	75.3	87	566.0	473.5	120	5
Karonga Met.	9.7	56.0	17	447.6	387.7	115	6
Lupembe	1.2	56.7	2	206.5	332.4	62	1
Mzimba Met	21.1	68.6	31	360.1	476.3	76	3
Mzuzu Met.	33.7	68.9	49	556.2	476.0	117	7
NkhataBay Met.	43.2	64.2	67	653.7	539.0	121	5
Rumphi Boma	41.0	70.0	59	390.5	373.5	105	5

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 21 – 31 JANUARY 2012

STATION	MAX TEMP	MIN TEMP	ABS MAX	ABS MIN	WIND SPEED	RH
	(°C)	(°C)	(°C)	(°C)	m/s	%
BOLERO	28.2	17.9	31.0	16.5	N/A	73
BVUMBWE	23.2	13.3	26.9	15.0	1.7	81
CHICHIRI	25.8	17.6	28.0	16.5	0.6	76
CHILEKA	27.1	19.5	30.2	17.8	2.3	79
CHITEDZE	26.1	18.0	30.4	15.4	0.8	79
CHITIPA	27.1	17.2	29.4	15.2	1.2	77
DEDZA	21.9	15.0	25.0	13.9	1.3	78
K I A	25.6	16.7	29.0	15.2	1.5	84
KARONGA	31.1	21.7	32.5	20.6	1.1	69
KASUNGU	27.3	17.7	29.8	16.3	1.6	77
MAKOKA	27.7	20.1	28.7	15.3	2.0	87
MANGOCHI	28.7	22.2	31.1	19.9	1.1	78
MIMOSA	27.4	19.5	31.8	16.0	1.4	80
MONKEY BAY	28.3	22.1	30.4	20.8	1.7	74
MZIMBA	26.3	16.5	28.6	14.0	1.3	74
MZUZU	22.8	16.4	30.5	13.9	1.6	76
NGABU	31.1	20.8	35.7	20.2	0.8	77
NKHATA BAY	30.3	20.4	31.7	19.7	0.6	77
NKHOTAKOTA	28.1	21.6	30.2	20.9	1.6	77
NTAJA	26.3	21.6	30.6	19.4	1.1	78
SALIMA	28.4	21.6	30.9	20.8	1.3	77

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