



# Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services



Period: 11 – 20 January 2012

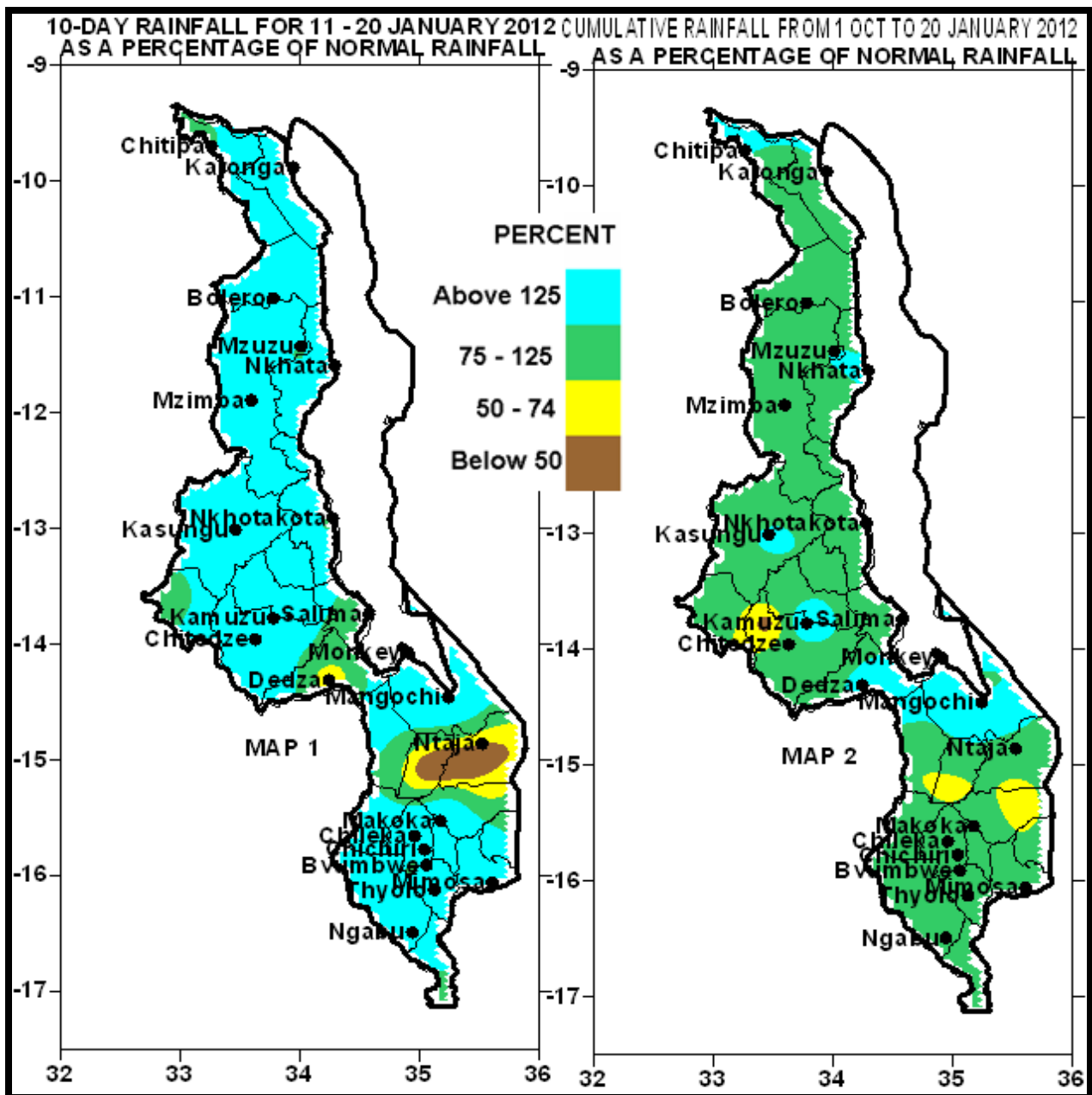
Season: 2011/2012

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## HIGHLIGHTS

- Above average rainfall recorded over Malawi during 11 to 20 January 2012...
- Crops doing fine mostly between vegetative and flowering stages over the country...
- Widespread heavy rains expected over Malawi during 21 to 31 January 2012...



### 1.1 RAINFALL SITUATION

During the second ten days of January 2012, a Tropical Depression **DANDO** in Mozambique Channel had enhanced both Congo Air mass and Inter Tropical Convergence Zone over Malawi. This had resulted in consistent widespread heavy rains over the country and floods in southern districts of Chikhwawa and Nsanje districts in Shire Valley. Many areas in the country reported more than six rainy days with above average cumulative rainfall amounts (light blue colour on Map 1). Many areas particularly in the south and centre registered significant cumulative rainfall amounts in excess of 150mm. Such areas in the south included Mulanje Agric 187mm, Makoka Met 178mm, Masambanjati Agric 152mm and Mangochi Met 151mm while in the centre Kasungu Met reported 221mm, Kamuzu International Airport reported 199mm, Lifuwu Research Station 156mm and Ntcheu-Nkhanda 155mm. More details are on Table 1.

Map 2 indicates cumulative rainfall performance from 1 October 2011 up to 20 January 2012. Generally the map shows average to above average cumulative rainfall performance (Green and light blue Colours on Map 2) over most parts of Malawi with pockets of below average rainfall confined to a few areas in the south and centre (Yellow colour 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 second ten days of January 2012 cloudy to overcast conditions maintained warm to hot temperatures over Malawi. Daily average maximum temperatures ranged from 34°C at Ngabu in Shire Valley to as low as 25°C over high altitude areas including Mzimba, Mzuzu and Kamuzu International Airport. The highest absolute maximum temperature was reported at Ngabu 38°. 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 continued to be light and variable. Daily average wind speeds ranged from 0.6 to 2.1 metres per second or 2.2 – 7.6 Km/hour (see details on Table 2). The highest wind speeds was reported at Chileka (2.1 m/s).

### 1.5 MEAN RELATIVE HUMIDITY

Humid conditions prevailed over most areas in Malawi during the second ten days of January 2012. Daily average relative humidity values ranged from 69% at Ngabu in Chikhwawa to 84% at Kamuzu International Airport. More details are on the Table 2.

### 1.6 MEAN SUNSHINE HOURS

Malawi experienced mostly cloudy skies during the period under review. Daily average sunshine hours ranged from 3.2 at Mzuzu to 3.5 at Kamuzu International Airport Met station as shown in Table 2

### 2. AGROMETEOROLOGICAL ASSESSMENT

Good rains that started during the first ten days of January had continued into the second ten days of January 2012. However, central and southern areas received high rains which culminated into flooding in prone areas of Chikhwawa and Nsanje districts. Good rainfall performance coupled had facilitated growth and development of most crops as well as farm management. Good crop stand was reported in most fields especially where good crop husbandry has been practiced. Most of the maize was reported to be between vegetative and flowering stages in good condition, with expectation of good production if rains persist through March, 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 21 – 31 JANUARY 2012

Meanwhile, models for medium range forecasts indicate that Malawi will continue to be under active Congo Air mass. Therefore widespread heavy rains are expected to persist during most of the period 21 to 31 January 2012. Persistent heavy rains will maintain flooding particularly in prone areas.

**TABLE 1: DEKADAL RAINFALL SUMMARY FOR 11 – 20 JANUARY 2012 AT SELECTED STATIONS**

STATION NAME	DEKADAL TOTAL RAINFALL	DEKADAL NORMAL	DEKADAL TOTAL AS % NORMAL	TOTAL TO DATE	NORMAL TO DATE	TOTAL TO DATE AS % NORMAL	RAINY DAYS ≥ 0.3mm
<b>SOUTHERN REGION</b>							
Balaka Township	37.5	70.2	53	151.0	403.7	37	4
Bvumbwe Met.	94.6	84.0	113	421.7	500.5	84	7
Chancellor College	84.6	89.4	95	336.6	601.5	56	6
Chichiri Met.	85.5	74.8	114	471.8	741.0	64	7
Chikweo Agric.	62.5	107.3	58	552.5	496.6	111	7
Chileka Airport	119.6	63.9	187	457.3	416.7	110	6
Chingale Agric	90.3	64.4	140	392.3	427.0	92	6
Chiradzulu Agric	130.1	60.3	216	413.5	445.8	93	7
Kasinthula Res. Stn.	134.5	33.3	404	305.7	324.8	94	5
Liwonde Township	10.5	63.0	17	95.5	355.1	27	3
Makoka Met	178.4	79.4	225	577.5	458.8	126	8
Mangochi Met.	150.9	64.6	234	598.1	275.3	217	9
Masambanjati Agric	152.4	82.2	185	489.8	596.1	82	6
Mimosa Met.	148.4	93.8	158	793.3	655.5	121	6
Monkey Bay Met.	109.0	54.0	202	594.7	253.4	235	8
Mpemba Vet	130.4	88.8	147	559.7	545.3	103	5
Mulanje Boma	187.0	109.7	170	793.9	812.1	98	6
Neno Agric	141.2	95.7	148	518.0	510.9	101	7
Ngabu Met.	95.8	55.8	172	346.3	368.1	94	6
Nsanje Boma	98.6	97.8	101	403.4	528.7	76	6
Ntaja Met.	34.6	75.2	46	368.2	404.6	91	8
Phalula Agric	39.9	61.9	64	234.1	407.0	58	5
Thyolo Boma	115.6	56.6	204	341.0	515.1	66	5
<b>CENTRAL REGION</b>							
Chitedze Met.	131.0	79.5	165	366.8	400.5	92	7
Dedza Met	37.1	69.3	54	579.7	405.5	143	7
Dowa Agric	141.6	82.0	173	494.3	394.0	125	7
K.I.A Met	199.0	87.2	228	675.4	382.6	177	9
Kasiya Agric	149.7	53.9	278	238.0	473.4	50	6
Kasungu Met	220.9	62.3	355	464.1	344.2	135	10
Lifuwu	155.9	128.0	122	431.0	472.6	91	6
Mkanda Met	57.5	83.3	69	410.7	432.5	95	6
Mponela Agric	117.8	68.1	173	422.8	350.2	121	7
Mtakataka Airwing	111.7	59.2	189	389.7	343.6	113	5
Natural Res. College	92.3	71.7	129	163.8	415.3	39	6
Nkhotakota Met	107.9	105.9	102	621.5	528.9	118	7
Ntcheu - Nkhanda	155.4	97.6	159	364.1	503.1	72	8
Salima Met	110.2	117.2	94	379.6	481.5	79	6
<b>NORTHERN REGION</b>							
Bolero Met	112.7	52.0	217	355.7	290.2	123	7
Chitipa Met	81.6	65.9	124	500.6	398.2	126	7
Karonga Met.	90.0	55.3	163	437.9	331.7	132	7
Mzimba Met	97.4	71.1	137	339.0	407.7	83	9
Mzuzu Met.	83.7	69.3	121	522.5	407.1	128	9
NkhataBay Met.	103.5	65.6	158	610.5	474.8	129	8

**TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 – 20 JANUARY 2012**

STATION	MAX TEMP  (°C)	MIN TEMP  (°C)	ABS MAX  (°C)	ABS MIN  (°C)	WIND SPEED  m/s	RH  %	SUN SHINE HOURS	Eo mm per day	Et mm per day	RAD- TION cal cm <sup>-2</sup> p/day
BOLERO	26.3	18.7	29.8	17.3	N/A	80	N/A	N/A	N/A	N/A
CHICHIRI	26.1	18.1	29.0	17.1	0.6	75	N/A	N/A	N/A	N/A
CHILEKA	28.5	20.1	32.0	18.9	2.1	77	N/A	N/A	N/A	N/A
CHITEDZE	25.6	18.3	28.4	17.4	0.9	83	N/A	N/A	N/A	N/A
CHITIPA	26.7	17.4	29.7	16.8	0.8	80	N/A	N/A	N/A	N/A
K I A	25.3	17.0	26.8	16.1	1.6	84	3.5	4.8	3.8	6.9
KARONGA	29.8	21.9	31.9	19.9	1.1	75	N/A	N/A	N/A	N/A
KASUNGU	27.2	17.7	29.0	16.8	1.9	78	N/A	N/A	N/A	N/A
MAKOKA	27.8	18.7	29.9	17.9	1.3	77	N/A	N/A	N/A	N/A
MANGOCHI	29.2	22.1	31.0	20.2	1.0	81	N/A	N/A	N/A	N/A
MIMOSA	29.9	18.9	33.8	16.4	1.2	73	N/A	N/A	N/A	N/A
MONKEY BAY	28.0	22.5	29.2	20.9	1.8	83	N/A	N/A	N/A	N/A
MZIMBA	24.7	16.9	27.7	16.5	1.5	82	3.4	4.7	3.8	6.8
MZUZU	25.2	17.3	28.0	16.6	1.9	80	3.2	4.8	3.8	6.6
NGABU	34.3	21.1	37.9	20.0	0.9	69	N/A	N/A	N/A	N/A
NKHATA BAY	29.4	20.6	31.8	20.1	0.7	82	N/A	N/A	N/A	N/A
NKHOTAKOTA	28.1	21.7	30.9	20.3	1.6	80	N/A	N/A	N/A	N/A
NTAJA	28.1	21.2	30.0	20.6	1.3	81	N/A	N/A	N/A	N/A
SALIMA	28.5	21.9	30.9	23.3	1.9	73	N/A	N/A	N/A	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