



Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services



Period: 01 – 10 January 2012

Season: 2011/2012

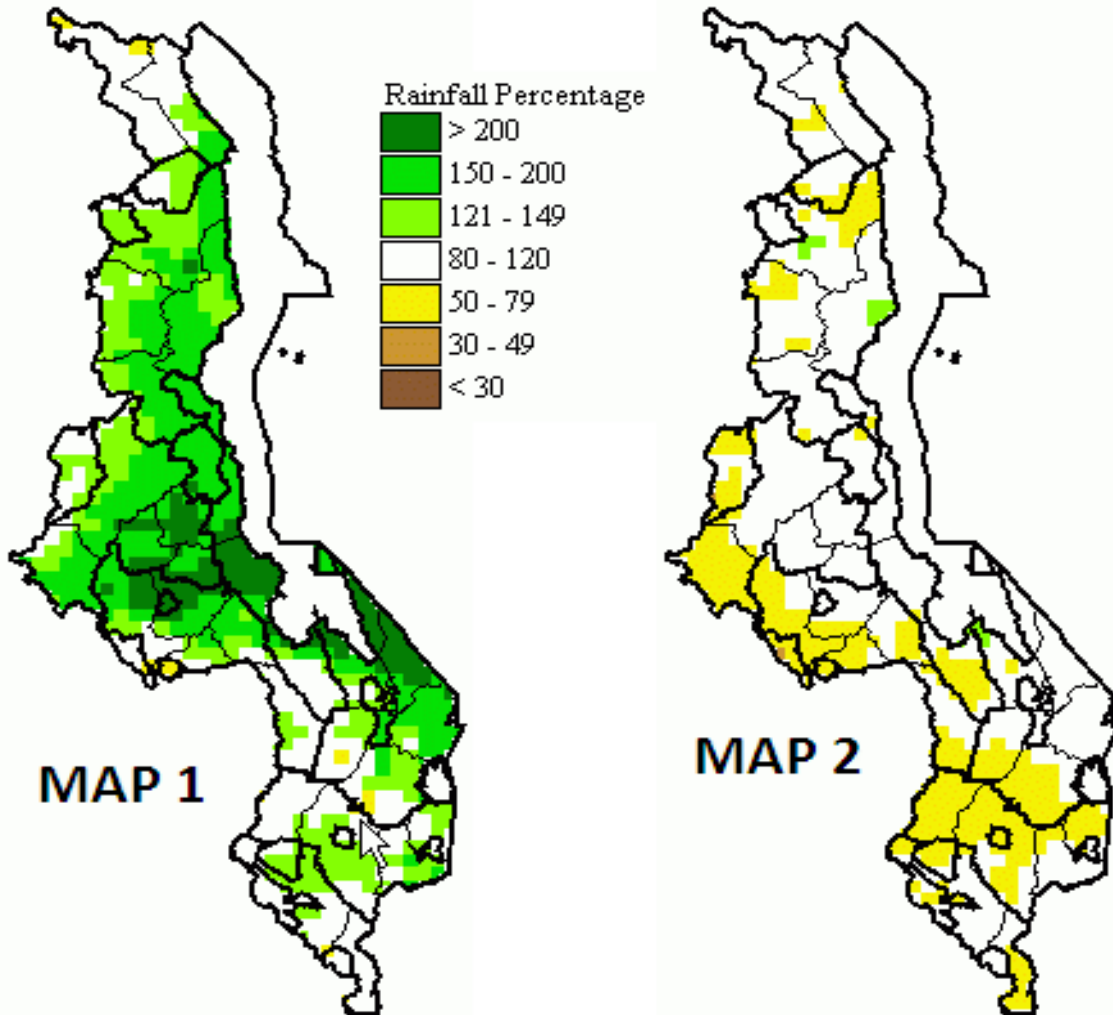
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HIGHLIGHTS

- Widespread moderate to heavy rains received over Malawi during 01 to 10 January 2012...
- Floods were reported in Chikhwawa and Nsanje districts in southern Malawi...
- Widespread locally heavy rains to persist over Malawi during 11 to 20 January 2012...

Malawi Percentage of Average Rainfall



1-10 January 2012

1 October 2011 to 10 January 2012

1.1 RAINFALL SITUATION

During the first ten days of January 2012, a low pressure area in the Mozambique Channel had enhanced both Congo Air mass and Inter Tropical Convergence Zone over Malawi. This had resulted in widespread locally heavy rains over the country throughout the period and floods were reported in Chikhwawa and Nsanje districts in Shire Valley. Many areas in the country reported above average cumulative rainfall amounts (green Colours on Map 1). Many areas registered significant cumulative rainfall amounts in excess of 150mm. Such areas in the south included Thyolo Met 238mm, Mulanje Agric 204mm, Mpemba Agric 195mm, Mimosa Met 177mm, and Monkey Bay Met 155mm in the centre Kamuzu International Airport reported 212mm, Kaluluma Agric 159mm, and Mlanjeni-Njolomole 152mm and in the north Bolero with 161mm reported the highest amount. More details are on Table 1.

Map 2 indicates cumulative rainfall performance from 1 October 2011 up to 10 January 2012. Generally the map shows average rainfall performance (white and light green on Map 2) over northern half of Malawi and mostly below average in the south (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 first ten days of January 2012 a general drop in maximum temperatures was observed over Malawi. Daily average maximum temperatures for most places had dropped from 30°C in the previous dekad to around 28°C except over high altitude areas including Bvumbwe, Dedza, Chitedze, KIA, Kasungu, Chitipa, Mzimba and Mzuzu. The highest absolute maximum temperature was 37°C down from 44°C in the previous dekad. Overall, the average daily maximum temperatures ranged from 23°C at Dedza to 34°C at Ngabu while average minimum temperatures ranged from 15°C at Dedza to around 23°C at Mangochi. 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 were light. The Daily average values ranged from 0.4 to 2.8 metres per second or 1.4 – 10.1 Km/hour (see details on Table 2). The highest wind speeds was reported at Chileka (2.8 m/s).

1.5 MEAN RELATIVE HUMIDITY

Humid conditions prevailed over most areas in Malawi during the first ten days of January 2012. Daily average relative humidity values ranged from 57% at Ntaja in Machinga to 89% at Dedza and Nkhata Bay. 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 3.1 at Mzimba to 5.1 at Bvumbwe Met station as shown in Table 2

2. AGROMETEOROLOGICAL ASSESSMENT

Favourable rains for Agricultural production were received in during the first 10-days of January 2012. Good rainfall performance coupled with sunny intervals facilitated growth and development of various crops as well as farm management. The crop stand in most fields especially over the northern half of Malawi looked promising for better yields if good rains persist up to February and March 2012. Maize crop was at various developmental stages. Most of the maize was doing well at vegetative stage and some hybrids that were planted between mid-October and early November were reported to be at flowering stage. Planting of crops was being finalized in the south and some parts of the Centre while was still going on in the north. Planting of crops in the north sometimes continue into January and early February.

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 11 – 20 JANUARY 2012

Meanwhile, models for medium range forecasts indicate that Malawi will continue to be under active Congo Air mass and Inter Tropical Convergence Zone. Therefore widespread locally heavy rains are expected to persist during 11 to 20 January 2012. These rains will continue support most farm operations including growth and development of most crops.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 01 – 10 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
SOUTHERN REGION							
Balaka Township	9.9	84.1	12	103.5	333.5	31	2
Bvumbwe Met.	130.8	80.2	163	327.1	416.5	79	7
Chancellor College	64.9	100.5	65	252.0	512.1	49	6
Chichiri Met.	130.3	88.2	148	386.3	666.2	58	6
Chileka Airport	61.4	68.1	90	337.7	352.8	96	6
Chingale Agric	28.1	70.4	40	302.0	362.6	83	4
Chiradzulu Agric	102.9	66.4	155	283.4	385.5	74	6
Kasinthula Res. Stn.	116.7	62.9	186	171.2	291.5	59	5
Makhanga Met	61.0	62.2	98	199.9	320.6	62	3
Makoka Met	34.8	76.4	46	397.9	379.4	105	3
Mangochi Met.	93.5	54.2	173	447.2	210.7	212	7
Mimosa Met.	176.6	97.7	181	644.9	561.7	115	7
Monkey Bay Met.	154.5	49.1	315	485.7	199.4	244	8
Mpemba Vet	196.0	87.5	224	429.3	456.5	94	5
Mulanje Boma	203.6	107.1	190	596.8	702.4	85	6
Naminjiwa Agric	78.9	76.2	104	396.2	373.3	106	5
Nchalo Sucoma	69.7	53.1	131	223.4	255.9	87	4
Ngabu Met.	53.0	61.3	86	250.5	312.3	80	5
Ntaja Met.	120.5	70.1	172	333.6	329.4	101	8
Phalula Agric	84.5	72.7	116	194.2	345.1	56	3
Thyolo Met	238.0	80.2	297	474.5	433.7	109	7
CENTRAL REGION							
Chitedze Met.	79.9	68.9	116	235.8	321.0	73	5
Dedza Met	112.9	82.5	137	542.6	336.2	161	7
Dowa Agric	85.8	70.6	122	352.7	312.0	113	8
Kaluluma DTC	159.2	59.1	269	327.9	307.1	107	9
K.I.A Met	211.5	72.7	291	476.4	295.4	161	9
Kasungu Met	79.7	70.1	114	243.2	281.9	86	7
Lifuwu	148.9	85.3	175	275.1	344.6	80	10
Mkanda Met	91.8	67.6	136	353.2	349.2	101	7
Mlangeni Njolomole	152.2	70.8	215	552.9	356.1	155	8
Nathenje Agric	65.5	72.1	91	329.6	311.2	106	6
Nkhotakota Met	125.7	108.8	116	513.6	423.0	121	7
Salima Met	95.3	94.8	101	269.4	364.3	74	8
Dedza RTC	100.8	75.4	134	500.6	346.9	144	6
NORTHERN REGION							
Bolero Met	161.7	62.6	258	243.0	238.2	102	8
Bwengu Agric.	106.8	63.8	167	241.6	273.7	88	7
Chitipa Met	61.9	71.2	87	419.0	332.3	126	7
Emfeni Agric	78.0	77.0	101	322.6	313.2	103	7
Karonga Met.	98.8	63.0	157	347.9	276.4	126	6
Mzimba Met	93.9	92.7	101	241.6	336.6	72	9
Mzuzu Met.	108.4	66.6	163	438.8	337.8	130	9
NkhataBay Met.	90.1	89.9	100	507.0	409.2	124	9
Rumphu Boma	145.3	64.5	225	259.1	245.6	105	9

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 01 – 10 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 ⁻² p/day
BOLERO	28.2	19.0	31.0	18.4	N/A	79	N/A	N/A	N/A	N/A
BVUMBWE	24.8	17.5	26.8	15.8	1.5	81	5.1	5.4	4.3	8.0
CHILEKA	28.4	20.9	30.1	20.0	2.8	82	N/A	N/A	N/A	N/A
CHITEDZE	27.0	19.2	28.9	17.4	0.7	80	N/A	N/A	N/A	N/A
CHITIPA	26.9	18.2	28.4	17.2	0.9	81	N/A	N/A	N/A	N/A
DEDZA	23.4	14.9	24.8	14.1	0.9	89	N/A	N/A	N/A	N/A
K I A	26.0	17.6	27.3	16.3	1.2	82	3.6	4.9	3.9	6.9
KARONGA	30.0	22.0	32.6	20.0	1.0	76	N/A	N/A	N/A	N/A
KASUNGU	27.0	19.1	29.1	18.1	1.6	74	N/A	N/A	N/A	N/A
MAKOKA	26.9	19.3	28.7	18.2	1.4	78	N/A	N/A	N/A	N/A
MANGOCHI	29.8	23.1	31.6	22.2	1.2	82	N/A	N/A	N/A	N/A
MIMOSA	29.1	20.4	32.1	19.1	0.9	86	N/A	N/A	N/A	N/A
MONKEY BAY	28.1	22.8	30.6	21.7	1.4	83	N/A	N/A	N/A	N/A
MZIMBA	25.4	17.8	27.6	16.9	1.1	82	3.1	4.7	3.7	6.6
MZUZU	25.9	17.7	28.4	17.1	1.5	83	3.2	4.8	3.8	6.6
NGABU	34.1	21.0	37.3	17.7	0.9	68	N/A	N/A	N/A	N/A
NKHATA BAY	30.1	21.6	31.2	20.9	0.5	89	N/A	N/A	N/A	N/A
NKHOTAKOTA	27.7	21.8	29.6	21.1	1.5	85	N/A	N/A	N/A	N/A
NTAJA	28.5	21.7	30.7	21.1	1.2	57	N/A	N/A	N/A	N/A
SALIMA	28.5	22.3	30.2	21.2	0.4	87	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