



Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services



Period: 01 – 10 November 2011

Season: 2011/2012

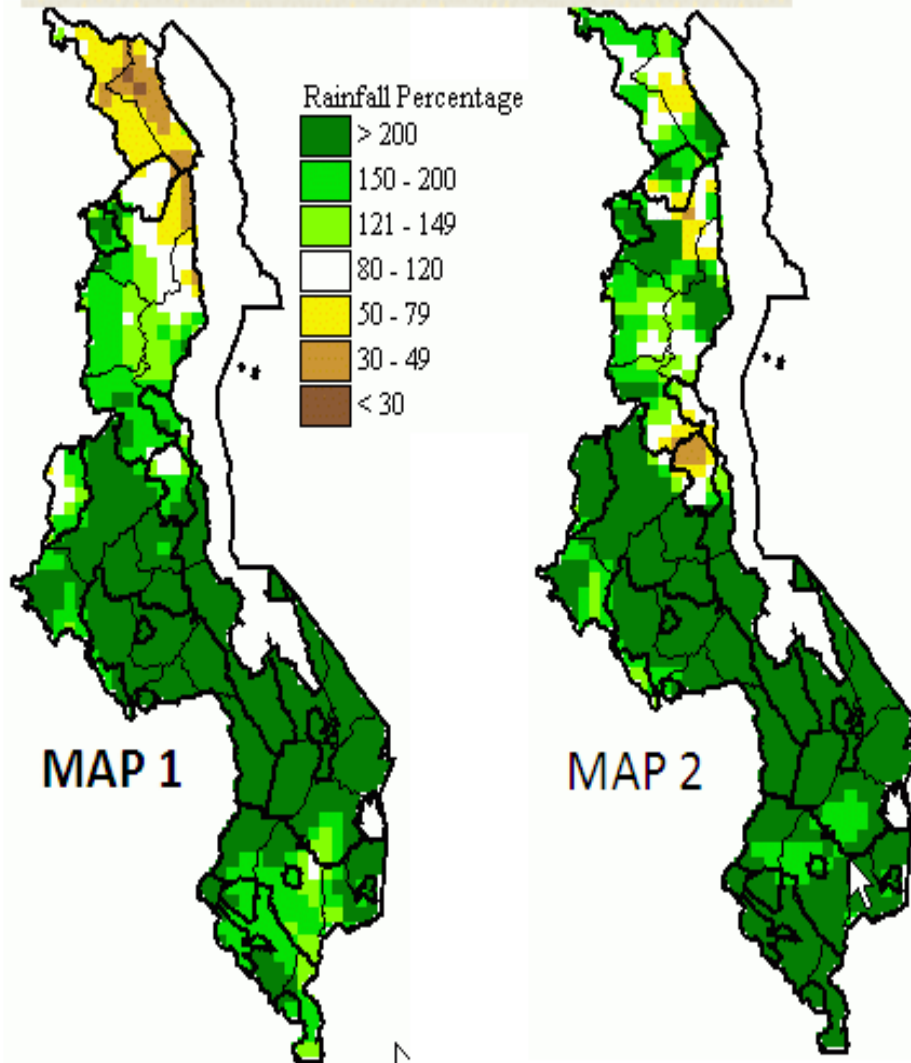
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HIGHLIGHTS

- Substantial rainfall received over the South and Centre, reduced in the North...
- Land preparation and procurement of farm inputs were still major agricultural activities ...
- Further improvement in rainfall distribution and amounts expected ...

Malawi Percentage of Average Rainfall



01 – 10 NOVEMBER TOTAL RAINFALL

1 OCT TO 10 NOV 2011 TOTAL RAINFALL

1.1 RAINFALL SITUATION

During the first ten days of November 2011, a combination of pulses of Congo Air and local convergence brought rainfall to southern and most parts of central Malawi. During the entire period areas which received significant cumulative ten day rainfall amounts of more than 80mm included Mangochi Met (97mm), Mimosa Met (118mm), Monkey Bay Met (88mm), Satemwa Tea Estate (98mm), Mlangeni-Njolomole Agric (87mm), and Dedza Agric (129mm). On the other hand in the north dry weather had persisted over Chitipa, Karonga and some parts of Rumphi resulting in below average rainfall situation (Yellow and Brown colours in Map 1).

Inter Tropical Convergence Zone and Congo Air which are major rain bearing systems for Malawi normally get established over Malawi anytime between the middle of November and December. So far between October and early November 2011 most parts of Malawi had received pre-rains that are locally referred to as Chizimalupsya and locally heavy rainfall amounts had been registered mostly over southern half of Malawi with pockets of below average rainfall in the north. For more details see Map 2 and Table 1.

1.2 MEAN AIR TEMPERATURE

Mean Air temperatures were hot over most areas during the first ten days of November 2011. Mean maximum temperatures for most areas were above 30°C. The absolute maximum temperatures for Malawi was as high as 41°C which was registered at Ngabu. Overall, mean daily maximum temperatures for the period ranged from 26°C at Dedza to 36°C at Ngabu while mean minimum temperatures ranged from around 16°C at Mzuzu to around 24°C at Karonga. For more details see Table 2.

1.4 MEAN WIND SPEEDS

Mean wind speeds recorded at a height of two metres above the ground level across the country ranged from 1.1 to 3.6 metres per second or 4.0 – 13.0 Km/hr (see details on Table 2). The highest wind speeds were reported at Ngabu Met (3.6 m/s).

1.5 MEAN RELATIVE HUMIDITY

During the first ten days of November 2011, fairly moist air prevailed over Malawi. Daily average relative humidity values over most areas were above 50%. The lowest relative humidity value was 51% reported at Bolero while the highest was 67% recorded at Mzuzu and Mimosa in Mulanje district. More details are on the Table 2.

1.6 MEAN SUNSHINE HOURS

Over six hours of bright sunshine each day were observed over Malawi during the first ten days of November 2011. Mean daily sunshine duration values across the country ranged from 6.2 hours per day at Chileka to 9.3 hours per day at Monkey Bay in Mangochi as shown in Table 2

2. AGROMETEOROLOGICAL ASSESSMENT

The rains that were received during the first ten days of November 2011 were enough to improve soil moisture supply particularly over the south and most parts of central Malawi. These rains facilitated land preparations and where enough moisture had been received farmers started planting crops. The rains also supported growth and development of pasture and regeneration of the natural vegetation which in turn have improved the availability of livestock feed. In southern highlands including some parts of Zomba, Mulanje and Blantyre districts maize crop though planted at a small scale was reported doing well at generally at early vegetative stage. The major agricultural activities during the period under review still included implementation of government Farm Input Subsidy Program (FISP) and land preparation in readiness for the main rains which are around the corner.

3. PROSPECTS FOR 2011/12 RAINFALL SEASON

“Normal total rainfall amounts are expected over most parts of Malawi from October 2011 to March 2012”. The 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.

This forecast is relevant only to seasonal time-scales and relatively large areas. It does not fully account for local and month to month variations in distribution of rainfall such as localised dry spells and flash floods.

The seasonal forecast is used as a planning tool. For day to day operations, users are advised to make use of the available short and medium range forecasts and the 10-day Rainfall and Agrometeorological bulletin.

4. OUTLOOK FOR 11 – 20 NOVEMBER 2011

Meanwhile short to medium range weather forecasts indicate that pulses of Congo Air and effects of local convergence will cause increased rainfall over Malawi during the period 11 to 20 November 2011. Therefore Malawi is expected to experience a further improvement in rainfall distribution and amounts

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 01 – 10 NOVEMBER 2011 AT SELECTED STATIONS

STATION NAME	DEKADAL TOTAL RAINFALL	DEKADAL NORMAL	DEKADAL TOTAL AS % NORMAL	TOTAL TO DATE Mm	NORMAL TO DATE mm	TOTAL TO DATE AS % NORMAL	RAINY DAYS ≥ 0.3mm
SOUTHERN REGION							
Balaka Township	40.7	18.9	215	51.2	46.2	111	3
Bvumbwe Met.	14.9	20.9	71	76.3	50.9	150	3
Chichiri Met.	27.8	69.5	40	101.8	166.5	61	2
Chileka Airport	27.3	19.6	139	52.3	48.4	108	2
Makhanga Met	66.4	20.9	318	66.4	43.3	153	2
Makoka Met	26.5	15.3	173	128.6	39.8	323	2
Mangochi Met.	96.8	7.3	1326	102.4	21.2	483	3
Mimosa Met.	117.9	33.7	350	208.4	95.7	218	4
Monkey Bay Met.	88.2	5.9	1495	88.2	10.0	882	0
Ngabu Met.	7.7	16.7	46	53.4	40.0	134	3
Ntaja Met.	31.8	9.1	349	49.4	22.2	223	3
Satemwa Tea Est. No.1	97.7	28.1	348	138.2	64.5	214	4
Thyolo Met	50.3	35.5	142	99.9	74.4	134	3
CENTRAL REGION							
Chitedze Met.	51.8	8.6	602	62.8	20.9	300	2
Dedza Met	69.5	10.1	688	134.9	21.1	639	4
Dowa Agric	22.1	9.3	238	23.9	16.3	147	1
Dwangwa Sugar Corp.	30	13.5	222	30.0	22.1	136	2
Kasiya Agric	46.1	27.6	167	88.3	51.0	173	2
Madisi Agric	48	7.4	649	51.9	13.3	390	2
Mlangeni Njolomole	86.8	17.9	485	121.7	43.4	280	3
Mtakataka Airwing	57.4	12.8	448	57.4	22.0	261	1
Nkhotakota Met	51.8	10.1	513	54.9	16.4	335	4
Ntcheu - Nkhande	35.8	18.1	198	35.8	40.5	88	2
Ntchisi Boma	30.7	8.1	379	30.7	13.7	224	3
Dedza RTC	128.7	7.3	1763	128.7	35.8	359	3
NORTHERN REGION							
Bolero Met	1.6	3.8	42	12.2	9.9	123	3
Chikangawa forest	42.6	16.3	261	68.6	28.5	241	4
Chintheche Agric	39.7	23.5	169	69.7	39.2	178	2
Emfeni Agric	15.5	7.1	218	15.5	8.1	191	2
Karonga Met.	0	3.4	0	0.0	5.2	0	0
Mbawa Res. Stn	19.7	9.2	214	29.3	20.0	147	2
Mzimba Met	46.6	9.8	476	54.1	15.0	361	4
Mzuzu Met.	25.4	12.7	200	192.1	48.8	394	6
NkhataBay Met.	35.5	16.9	210	76.7	30.8	249	2

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 01 – 10 NOVEMBER 2011

STATION	MAX TEMP	MIN TEMP	ABS MAX	ABS MIN	WIND SPEED	RH	SUN SHINE HOURS	Eo mm per day	Et mm per day	RAD-TION cal cm ⁻² p/day
	(°C)	(°C)	(°C)	(°C)	m/s	%				
BOLERO	27.9	20.4	36.1	16.1	N/A	51	6.5	6.2	4.9	8.7
BVUMBWE	28.3	17.0	34.6	13.5	2.6	65	7.1	6.7	5.4	9.1
CHICHIRI	28.1	17.4	34.6	14.7	1.2	65	N/A	N/A	N/A	N/A
CHILEKA	31.0	20.2	38.7	17.0	3.3	57	6.2	7.3	6.0	8.5
CHITEDZE	30.4	18.3	36.2	16.7	1.3	57	8.1	7.1	5.6	9.7
DEDZA	25.8	16.3	30.1	14.1	N/A	N/A	N/A	N/A	N/A	N/A
K I A	28.7	16.7	34.4	14.5	2.1	60	7.8	7.8	6.3	9.5
KARONGA	33.6	23.5	36.0	21.0	2.1	52	8.6	8.4	6.8	10.1
MAKOKA	28.9	17.9	34.8	15.6	1.5	65	N/A	N/A	N/A	N/A
MANGOCHI	33.1	22.2	40.5	20.2	2.1	57	8.7	8.2	6.6	10.1
MIMOSA	29.6	18.1	38.0	12.8	1.4	67	N/A	N/A	N/A	N/A
MONKEY BAY	32.6	23.3	37.8	20.7	2.8	58	9.3	8.7	7.1	10.5
MZUZU	27.3	16.3	32.2	14.1	2.1	67	7.5	6.6	5.2	9.4
NGABU	36.2	21.7	40.8	18.8	3.6	64	N/A	N/A	N/A	N/A
NKHOTAKOTA	32.9	20.1	37.7	18.1	1.1	64	7.5	4.6	3.5	9.4
NTAJA	31.3	20.8	31.6	18.1	2.5	57	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