



Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services



Period: 21 – 30 November 2011

Season: 2011/2012

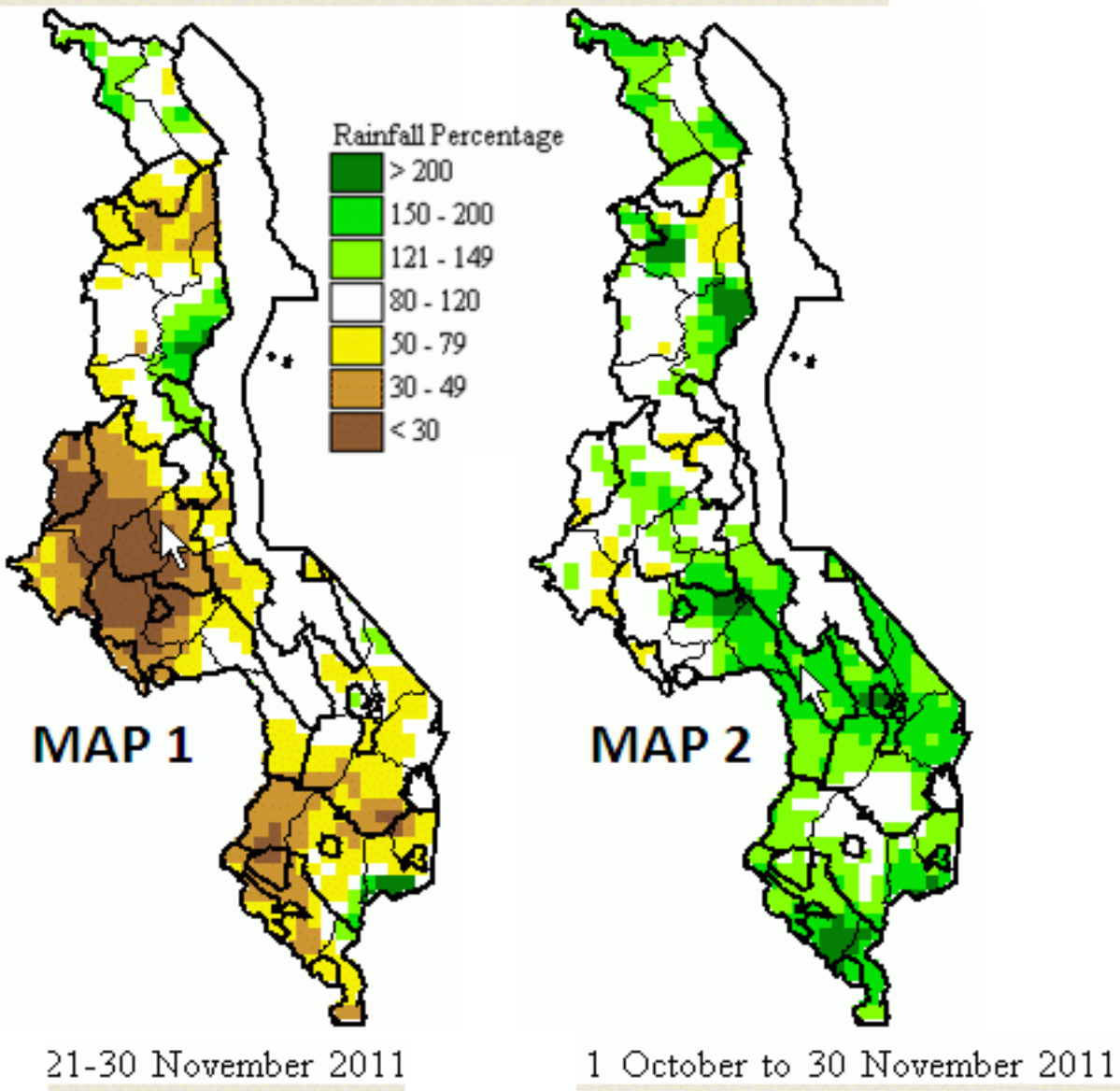
Issue No.6

Release date: 3rd December 2011

HIGHLIGHTS

- Light rainfall resulted in below average rainfall situation during end of November 2011...
- Land preparation and procurement of farm inputs were still major agricultural activities ...
- Rainfall distribution and amounts to greatly improve within the first ten days of December 2011 .

Malawi Percentage of Average Rainfall



1.1 RAINFALL SITUATION

During the third ten days of November 2011, pulses of Congo air brought rainfall over Northern and Central Malawi while a local convergence caused rainfall over some parts of southern Malawi. However, most parts of Malawi had received light rainfall resulting in mostly below average rainfall situation (Yellow and Brown colours in Map 1) over the country. High rainfall intensities were confined to a few areas and floods were reported some parts of Mangochi. During the entire period areas that received cumulative ten day rainfall amounts of more than 100mm included Mimosa Met in Mulanje (116mm), Monkey Bay Met in Mangochi (156mm), Ntcheu-Nkhonde Agric (104mm), Nkhata Bay Met (127mm) and Chitipa Met (134mm).

So far most parts of Malawi have received pre-rains that are locally referred to as Chizimalupsya. The percentage of average rainfall since the season started in October up to 30 November shows that most parts of Malawi have received average to above average rainfall. However pockets of below average below average rainfall still existed in some parts of the country particularly over the centre and north. For more details see Map 2 and Table 1.

1.2 MEAN AIR TEMPERATURE

Hot to very hot air temperatures were experienced over Malawi during the last ten days of November 2011. Mean maximum temperatures for most areas were above 30°C except over high altitude areas like Chichiri in Blantyre, Chitipa, Kamuzu International Airport (KIA), Mzimba and Mzuzu. The highest reported absolute maximum temperature was 40°C which was registered at Ngabu. Overall, mean daily maximum temperatures for the period ranged from 28°C to 36°C while mean minimum temperatures ranged from around 17°C at Mzuzu Airport to around 24°C. 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 0.9 to 3.0 metres per second or 3.2 – 10.8 Km/hour (see details on Table 2). The highest wind speeds was reported at Ngabu Met (3.0 m/s).

1.5 MEAN RELATIVE HUMIDITY

During the last ten days of November 2011, relatively moist air prevailed over Malawi. Daily average relative humidity values ranged from 51% at Kasungu to 73% at Chichiri in Blantyre. More details are on the Table 2.

1.6 MEAN SUNSHINE HOURS

During the last days November 2011 Malawi registered between six and around nine hours of bright sunshine each day. Mean daily sunshine duration values across the country ranged from 6.2 hours per day at Chitipa to 8.9 hours per day at Mangochi as shown in Table 2

2. AGROMETEOROLOGICAL ASSESSMENT

The light rains that were received during the last ten days of November 2011 supported crop germination, growth and developments of various crops in some parts of the country especially in the south. High temperatures on the other hand resulted in fast depletion of soil moisture and wilting was observed in some field crops especially at during midday. Erratic rains have caused poor germination of crops. The rains received so far have facilitated land preparation and where enough moisture had been received farmers have been planting crops. The rains have also supported growth and development of pasture and regeneration of the natural vegetation.

The major agricultural activities during the period under review included implementation of government Farm Input Subsidy Program (FISP), land preparation, weeding and fertilizer application where farmers had planted. Maize crop was reported doing well at germination to vegetative stages in some parts of Zomba, Mulanje, Phalombe, Chiradzulu, Thyolo and Blantyre districts. Spatial rainfall distribution and intensity in most parts of the country have remained poor and erratic.

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 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.

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 01 – 10 DECEMBER 2011

Meanwhile medium range weather forecasts indicate that the main rain bearing systems for Malawi will be established within the first ten days of December 2012. Therefore Malawi is likely to experience improved rainfall distribution and amounts within the first ten days of December 2011.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 21 – 30 NOVEMBER 2011 AT SELECTED STATIONS

STATION NAME	DEKADAL TOTAL RAINFALL	DEKADAL NORMAL mm	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	16.5	34.3	48	67.7	100.7	67	1
Bvumbwe Met.	6.1	43.7	14	92.4	128.6	72	2
Chichiri Met.	23.2	75.9	31	139.1	301.6	46	1
Chikweo Agric.	41.8	25.7	163	108.8	84.7	128	3
Chileka Airport	23.3	43.9	53	130.8	123.0	106	2
Chingale Agric	24.1	36.2	67	165.4	88.7	186	3
Mpilipili (Makanjila)	33.5	20.6	163	67.9	64.1	106	1
Makhanga Met	10.7	28.5	38	77.3	92.7	83	2
Makoka Met	44.4	35.0	127	206.2	92.9	222	3
Mangochi Met.	38.9	16.9	230	141.3	45.4	311	2
Masambanjati Agric	26.6	45.4	59	131.3	150.4	87	2
Mimosa Met.	115.5	58.6	197	332.9	203.7	163	3
Monkey Bay Met.	156.4	8.1	1931	244.6	22.0	1112	2
Mpemba Vet	63.4	49.3	129	153.4	145.9	105	3
Mwanza Boma	25.0	52.5	48	205.2	143.7	143	2
Namwera Agric	27.6	32.8	84	38.7	94.2	41	2
Nchalo Sucoma	18.1	28.0	65	114.1	78.1	146	2
Ngabu Met.	6.4	32.8	20	59.8	88.3	68	2
Ntaja Met.	51.2	29.6	173	105.9	73.8	143	3
Satemwa Tea Est. No.1	46.7	43.5	107	195.9	134.4	146	2
Thyolo Met	44.2	44.7	99	144.1	143.6	100	1
CENTRAL REGION							
Chileka Namitete	36.6	39.6	92	75.3	99.9	75	2
Chitedze Met.	12.8	32.5	39	80.2	86.0	93	3
Dedza Met	12.2	30.0	41	147.1	71.9	205	1
Dowa Agric	30.2	24.0	126	63.8	57.8	110	1
Dwangwa Sugar Corp.	82.5	39.8	207	123.0	92.2	133	5
Dzonzi Forest	58.4	34.3	170	169.4	93.9	180	3
K.I.A Met	31.1	19.1	163	144.9	65.7	221	1
Kasungu Met	8.5	25.3	34	12.7	52.9	24	4
Madisi Agric	28.0	19.3	145	79.9	49.3	162	1
Mchinji Boma	52.9	40.0	132	174.1	113.4	154	4
Mkanda Met	22.5	30.0	75	110.3	85.9	128	4
Mponela Agric	40.0	28.9	138	92.0	63.4	145	2
Nathenje Agric	15.0	29.0	52	46.2	73.6	63	2
Nkhotakota Met	33.3	25.5	131	88.2	55.9	158	2
Ntcheu - Nkhande	104.2	34.1	306	152.4	92.0	166	3
Dedza RTC	71.5	22.1	324	247.0	82.7	299	3
NORTHERN REGION							
Baka Res. Stn.	41.9	31.7	132	41.9	42.9	98	4
Bolero Met	3.9	20.6	19	16.1	44.0	37	2
Bwengu Agric.	5.2	22.2	23	26.1	57.3	46	1
Chitipa Met	133.6	44.8	298	174.8	75.9	230	6
Chintheche Agric	49.0	40.0	123	118.7	131.7	90	5
Karonga Met.	57.2	28.7	199	57.2	49.5	116	5
Lupembe	17.5	22.2	79	19.5	39.4	49	2
Mbawa Res. Stn	32.0	25.4	126	83.1	70.2	118	5
Mzimba Met	15.0	24.2	62	83.9	63.3	133	4
Mzuzu Met.	31.0	30.5	102	227.9	107.4	212	4
NkhataBay Met.	126.9	31.7	400	217.3	95.6	227	5
Rumphi Boma	6.6	20.0	33	8.9	43.4	21	3
Vinthukutu Agric	91.8	25.8	356	135.6	65.7	206	3
Zombwe Agric	0.0	19.5	0	117.0	60.2	194	0

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 21 – 30 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	32.0	19.4	35.0	17.4	N/A	53	5.3	6.1	4.8	8.0
CHICHIRI	27.7	17.9	30.7	14.6	1.2	73	N/A	N/A	N/A	N/A
CHILEKA	30.1	20.7	34.7	18.1	2.9	65	N/A	N/A	N/A	N/A
CHITEDZE	29.9	18.7	32.6	17.5	1.2	57	7.5	7.0	5.5	9.4
CHITIPA	28.3	18.7	31.5	17.3	1.6	69	6.2	6.3	5.0	8.5
K I A	28.3	16.9	31.1	15.4	1.8	60	8.4	7.1	5.6	10.0
KARONGA	32.8	23.8	36.2	21.3	1.8	60	N/A	N/A	N/A	N/A
KASUNGU	32.0	19.5	34.2	17.6	2.3	51	N/A	N/A	N/A	N/A
MAKOKA	28.9	18.5	31.9	16.2	1.5	65	N/A	N/A	N/A	N/A
MANGOCHI	34.8	23.6	36.8	20.9	2.2	67	8.9	8.6	6.9	10.3
MIMOSA	29.8	18.6	33.6	17.1	1.3	71	N/A	N/A	N/A	N/A
MONKEY BAY	32.4	23.9	35.5	18.6	2.3	60	N/A	N/A	N/A	N/A
MZIMBA	28.7	17.8	31.4	16.4	1.1	64	5.8	6.1	4.9	8.3
MZUZU	28.8	17.0	33.9	15.1	1.6	72	7.2	6.5	5.1	9.2
NGABU	36.0	31.2	40.2	18.0	3.0	59	N/A	N/A	N/A	N/A
NKHATA BAY	32.5	20.8	35.7	20.1	0.9	72	N/A	N/A	N/A	N/A
NKHOTAKOTA	31.2	22.8	34.2	17.6	2.3	58	N/A	N/A	N/A	N/A
NTAJA	32.1	22.0	35.6	20.6	2.5	65	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) = mps x 3.6