



10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services



Period: 11 – 20 December 2007

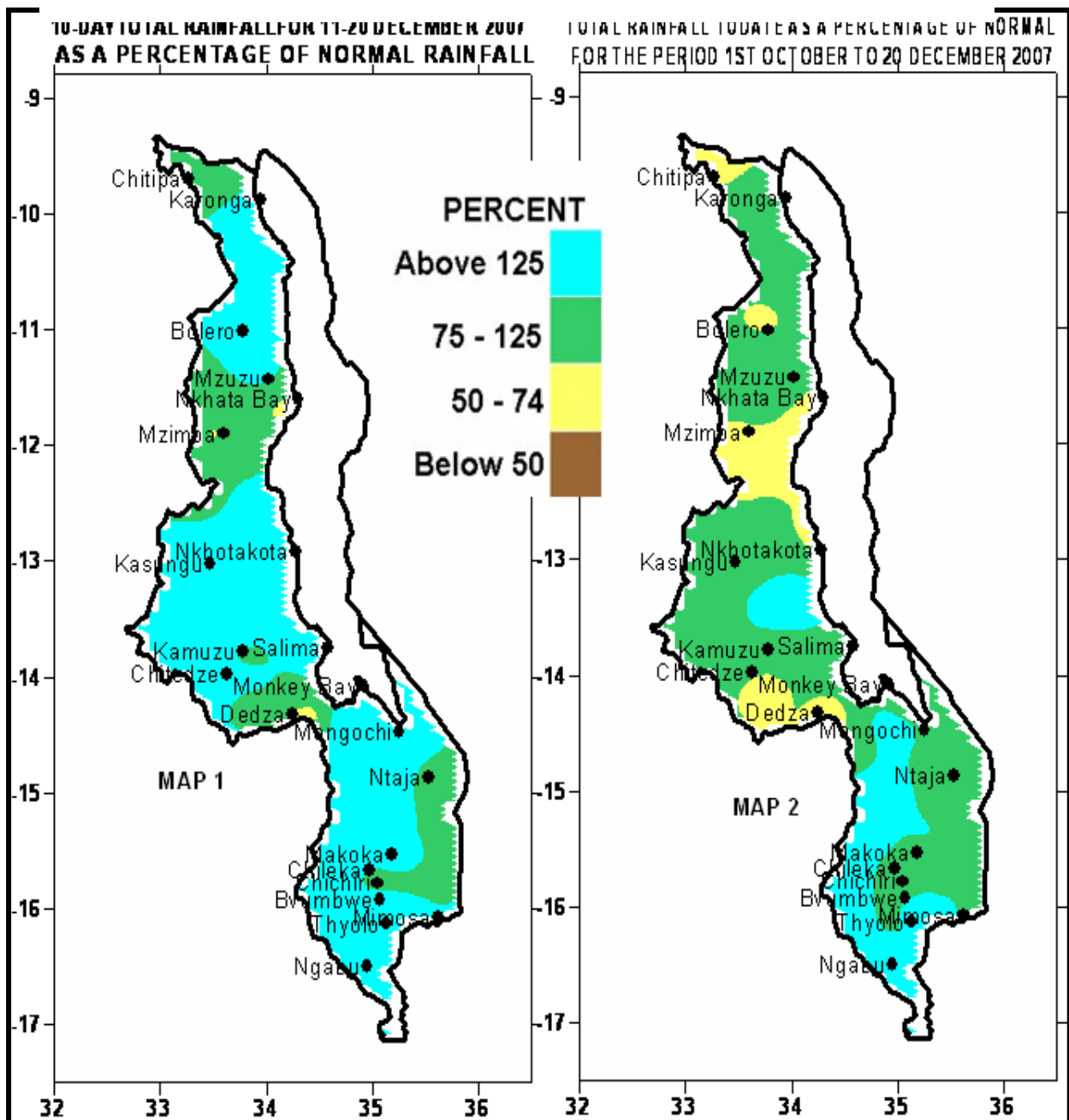
Season: 2007/2008

Issue No.08

Release date: 24 December 2007

HIGHLIGHTS

- Significant improvement in rainfall distribution experienced...
- Agricultural activities were enhanced in most parts of Malawi...
- Widespread locally heavy rains expected during 21 – 31 December, 2007...



1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the second ten days of December 2007, both the Inter Tropical Convergence Zone and moist and unstable Congo Airmass, which are the main rain bearing systems became active over Malawi. As a result heavy rains were experienced in most parts of the country. The rains were well distributed in space and time. During the period under review, most areas reported amounts in excess of 100mm (Table 1). These high figures represented normal to above normal rainfall for the dekad compared to the expected amounts for the period (Map 1). Nkhata Bay in the North reported only 19 percent of the expected amounts.

Cumulative rainfall from 1st October to 20th December 2007 expressed as a percentage of the expected amounts showed that most areas of the country have received rainfall above 75 percent (green and light blue colours). However areas around Dedza, Mzimba and Chitipa, have received between 50 and 75 percent of the expected rainfall amounts. (Map 2 and Table 1).

1.2 MEAN AIR TEMPERATURE

During the period under review Malawi experienced generally warm to hot conditions. Mean daily maximum temperatures ranged between 26.1°C and 33.7°C at Bvumbwe and Ngabu respectively. On the other hand, mild to warm mean daily minimum (night) temperatures were reported and ranged between 16.4°C at Dedza and 23.5°C at Ngabu in Chikwawa district (Table 2).

1.3 MEAN DAILY WIND SPEEDS

Mean daily wind speeds, measured at a height of two meters above the ground were generally light. The highest wind speed was reported at Chileka (2.5 m/s or 9.0 Km/hr) while the lowest wind speed was reported at Chitedze (0.5m/s or 1.8 Km/hr). See Table 2.

1.4 MEAN RELATIVE HUMIDITY

During the period under review, the country was generally moist. As such high values of

mean relative humidity were reported and these ranged from 68 percent at Karonga to 88 percent at Dedza. See Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

Good rains for agricultural production were received over the country during the period under review. By this point in time it can safely be generalised that all areas have received planting rains despite being relatively late in some parts especially in the south and centre.

The major farming activities during the period varied from planting of crops, weeding and basal fertiliser application depending on when the first effective rains were received. The rains have significantly improved pasture availability for animal production, water resources, soil moisture reserves and supported seed germination, growth and development of crops. Due to variations in onset of effective planting rains maize crop was reported at various stages of development ranging from planting to early vegetative stage. For good yields to be achieved, agricultural extension officers should encourage farmers to adhere to principles of good crop husbandry practices that include timely planting, use of improved seed, proper plant population and spacing, control of weeds, pests and diseases and timely fertiliser application.

Most farmers in Malawi are smallholder farmers who can not afford to buy commercial fertilisers and improved seed. As such most of them depend on government input subsidy programme for farm inputs.

3. PROSPECTS OF 2007/08 SEASON

Climate models update for the period November to January 2008 indicate that Malawi will experience normal to above normal total rainfall amounts with an increased chance of floods.

4. OUTLOOK FOR 21 – 31 DECEMBER 2007

Meanwhile, models for medium range forecasts indicate that the moist and unstable Congo Airmass will still be active over Malawi. As result widespread locally heavy rains are expected to continue over the country during the forecast period.

**TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR
DEKAD 2 OF DECEMBER 2007: PERIOD 11 – 20**

STATION NAME	DEKADAL	DEKADAL	DEKADAL	TOTAL	NORMAL	TOTAL	RAINY
	TOTAL	NORMAL	TOTAL	TO	TO	TODATE	DAYS
	RAINFALL		AS %	DATE	DATE	AS %	
SOUTHERN REGION	mm	mm	NORMAL	mm	mm	NORMAL	≥0.3mm
Bvumbwe Met.	100.6	59.5	169	283.2	274.1	103	8
Chichiri Met.	65.4	57.2	114	238.2	279.4	85	7
Chikwawa Boma	85.1	56.2	151	240.5	178.0	135	5
Chileka Airport	60.2	57.3	105	200.2	237.1	84	6
Chiradzulu Agric	67.4	77	88	168.7	251.2	67	5
Chizunga Factory	149.0	113.0	132	438.0	376.4	116	8
Kasinthula Res. Stn.	91.6	46.3	198	401.9	175.6	229	3
Lujeri Tea Estate	202.3	126.8	160	630.8	552.9	114	8
Makoka Met	146.9	57.1	257	264.7	247.1	107	9
Mangochi Met.	130.1	52.3	249	226.9	183.9	123	6
Masambanjati Agric	111.6	88.4	126	299.2	316.2	95	8
Monkey Bay Met.	121.9	83.7	146	180.7	197.7	91	7
Mulanje Boma	102.2	87.3	117	453.3	428.4	106	3
Naminjiwa Agric	58.2	70.5	83	231.4	249.4	93	4
Nankumba Agric	127.1	66.3	192	280.3	201.5	139	8
Nchalo Sucoma	95.4	45.3	211	266.1	180.2	148	4
Neno Agric	186.8	61.8	302	512.0	254.8	201	7
Ngabu Met.	163.4	48	340	336.5	200.6	168	4
Nsanje Boma	163.5	51.9	315	440.6	223.6	197	5
Satemwa Tea Est. No.1	148.0	87.8	169	387.4	354.8	109	8
Zomba RTC	138.2	95.0	145	396.4	316.5	125	6
CENTRAL REGION							
Bunda College	85.4	72.5	118	145.0	231.4	63	5
Chileka Namitete	99.5	77.2	129	190.4	237.5	80	3
Chitedze Met.	142.1	66.9	212	183.3	220.7	83	6
Dedza Met	85.1	71.4	119	160.2	204.5	78	5
Dwangwa Sugar Corp.	124.0	70.2	177	179.3	251.7	71	6
Kaluluma DTC	76.5	67.1	114	134.3	175.7	76	5
K.I.A Met	62.5	58	108	144.1	175.4	82	7
Lifuwu	116.1	66.3	175	178.3	200.9	89	6
Mlangeni Njolomole	111.6	69	162	214.6	217.7	99	5
Mponela Agric	138.0	52.4	263	220.3	156.4	141	6
Nkhotakota Met	109.3	84.7	129	121.4	223.9	54	7
Ntcheu - Nkhande	135.9	74.7	182	268.6	237.5	113	7
Ntchisi Boma	98.3	67.5	146	262.7	166.4	158	3
Salima Met	129.5	84.5	153	238.5	208.8	114	6
NORTHERN REGION							
Bolero Met	71.4	49.6	144	124.5	178.3	70	7
Chitipa Met	70.4	67.7	104	148.1	200.8	74	8
Emfeni Agric	77.2	55.0	140	137.4	170	81	7
Karonga Met.	113.6	85.8	132	133.4	171.7	78	6
Mzimba Met	45.1	68.5	66	129.1	187.9	69	9
Mzuzu Met.	120.6	82.6	146	369.0	279.7	132	6
NkhataBay Met.	19.1	98.8	19	68.2	457.5	15	5
Vinthukutu Agric	156.4	75.8	206	193.6	202.7	96	2

**TABLE 2: AGROMETEOROLOGICAL PARAMETERS
FOR DEKAD 2 OF DECEMBER 2007**

STATION	MAX TEMP	MIN TEMP	ABS MAX	ABS MIN	WIND SPEED	RH
	(°C)	(°C)	(°C)	(°C)	m/s	%
BVUMBWE	26.1	18.1	29.8	16.8	1.2	81
BOLERO	28.2	18.0	30.1	16.5	1.0	75
CHICHIRI	26.8	18.8	30.5	17.5	2.3	78
CHILEKA	28.5	21.1	32.4	19.4	2.6	73
NTAJA	29.3	21.7	32.0	19.0	1.7	75
CHITEDZE	26.9	18.7	29.7	17.6	0.5	79
CHITIPA	26.4	17.6	29.4	16.6	0.9	72
DEDZA	23.4	16.4	25.7	14.8	1.1	82
KARONGA	31.4	22.3	33.5	21.0	1.5	68
K I A	26.3	17.9	28.7	17.2	1.3	81
MAKOKA	27.0	18.7	N/A	N/A	1.0	88
MANGOCHI	30.4	22.1	34.1	19.4	1.2	75
MONKEY BAY	29.5	22.7	31.8	19.3	1.7	78
MZIMBA	26.2	17.0	27.5	16.2	0.7	75
MZUZU	26.2	18.7	27.5	15.6	1.4	74
NGABU	33.7	23.5	38.1	22.1	1.7	60
NKHATA BAY	31.8	21.1	33.1	20.0	0.7	71
SALIMA	29.6	22.1	31.7	19.7	1.6	79

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