10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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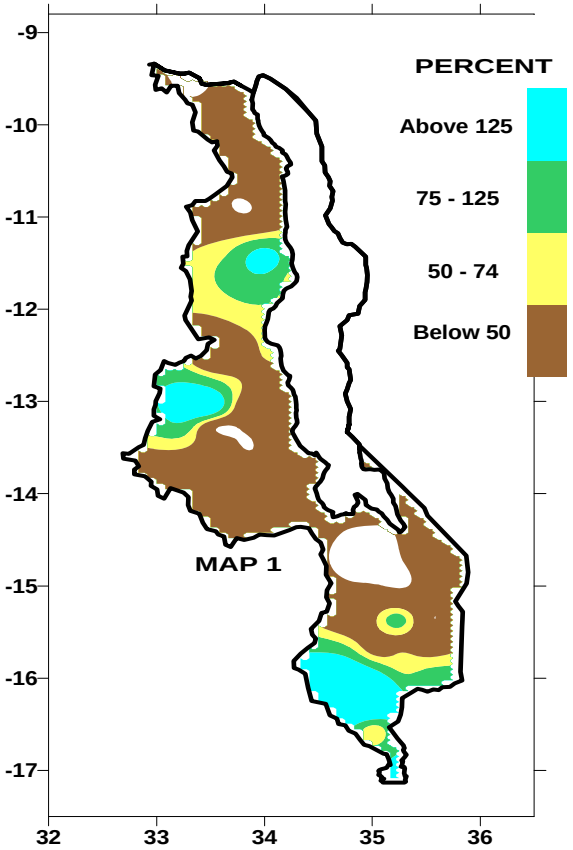
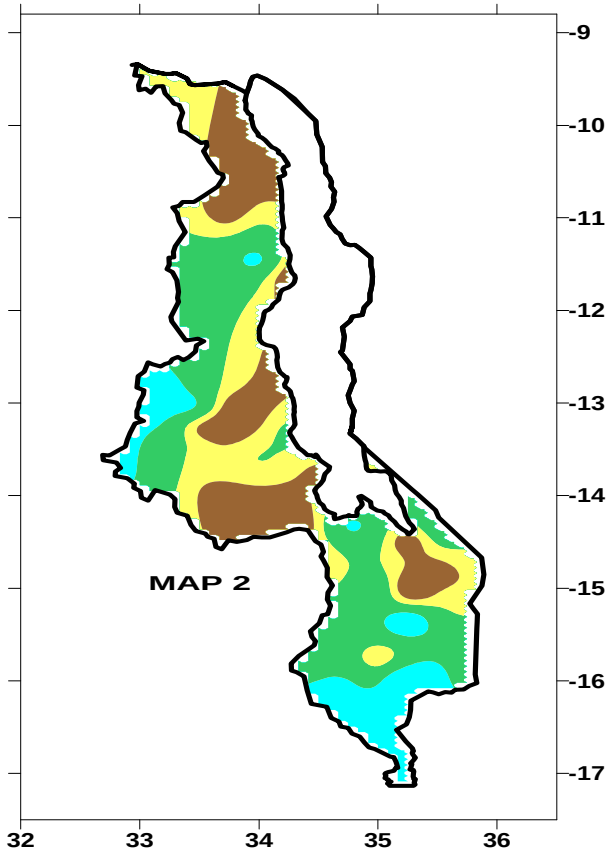
HIGHLIGHTS

- **Erratic rainfall continued being experienced over Malawi…**
- **Land preparation and planting were major agricultural activities…**
- **Rainfall distribution is expected to improve during the first dekad of December …**

10-DAY TOTALRAINFALL FOR 21-30 NOVEMBER 2007
AS A PERCENTAGE OF NORMAL RAINFALL



CUMULATIVE RAINFALL FROM 1 0CT TO 30 NOVEMBER 2007
AS A PERCENTAGE OF NORMAL CUMULATIVE RAINFALL



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1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

The influence of fairly moist and unstable airmass persisted over some parts of the country. As a result a few areas continued to experience locally heavy sporadic rainfall but the major part of the country remained dry. Notable 10-day total rainfall amounts in excess of 50mm have been reported mainly in southern Malawi and these include Kasinthula in Chikwawa (227mm), Lujeri in Mulanje (81mm), Nchalo in Chikwawa (72mm), and Satemwa in Thyolo (69mm). Others from other regions include Mwimba Research station in Kasungu and Mzuzu Aerodrome (88mm).

Total rainfall amounts for the period 21 – 30 November 2007 expressed as percentage of normal demonstrated most areas in Malawi received rainfall amounts of below 50% of the expected rainfall (Map 1 and Table 1) while cumulative rainfall amounts received since October 2007 expressed as a percentage of normal rainfall showed that over half of the country have received in excess of 50% of the expected rainfall for the period (Map 2 and Table 1).

1.2 MEAN AIR TEMPERATURE

Generally hot weather persisted over Malawi during the period under review. Mean daily maximum temperatures ranged from 27°C at Dedza to 36°C at Ngabu in Chikwawa and Nkhata Bay. On the other hand mean daily minimum temperatures ranged from 16°C at Mzuzu to 25°C at Karonga, Salima and Ngabu (Table 2).

1.3 MEAN DAILY WIND SPEEDS

Mean wind speeds at a height of two meters above the ground were still in the category of light to moderate. The highest wind speed was reported at Chileka (3.5m/s or 12.6Km/hr) while the lowest wind speed was reported at Nkhata Bay (1.0m/s or 3.6 Km/hr). See Table 2.

1.4 MEAN RELATIVE HUMIDITY

Relative Humidity values ranged from 50% at Karonga to 65% at Bvumbwe, Dedza and Mimosa.

2. AGROMETEOROLOGICAL ASSESSMENT

The last ten-days of November registered a slight improvement in rainfall distribution from the previous dekad. Rains continued to be light and sporadic over Malawi. The sporadic rains apart from supporting land preparations activities also improved water resources and soil moisture reserves. At the same time, in the south and some parts of the centre where normal dates for effective onset of planting rains fall within the last twenty days of November, farmers who had already finalized land preparations and had seed were prompted to start planting crops.
The onset of the main rains for the north is climatologically expected in December.

3. PROSPECTS OF 2007/08 SEASON

Climate models updates for the period November to January 2008 indicate that Malawi has 40% chance of rainfall total being above normal, 35% chance of being normal and 25% chance of being below normal.
In summary, the models suggest that during 2007/2008 rainfall season, a greater part of Malawi will experience normal to above normal total rainfall amounts with an increased chance of floods.
Reports indicate that a combination of high intensisty rainfall and strong winds have already damaged some infrastructure in Phalombe, Nsanje, Chapananga in Chikwawa and Nankumba in Mangochi..

4. OUTLOOK FOR 1 – 10 DECEMBER 2007

Towards the end of the first ten days of December, the rain bearing systems, namely Congo airmass and the ITCZ are expected to be established and become active over Malawi. Therefore a significant improvement in spatial and temporal distribution of rainfall is expected especially towards the end of the forecast period.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 3 OF NOVEMBER 2007: PERIOD 21 – 30

STATION NAME	DEKADAL TOTAL RAINFALL	DEKADAL NORMAL	DEKADAL TOTAL AS %	TOTAL TO DATE	NORMAL TO DATE	TOTAL TO DATE AS %	RAINY DAYS
SOUTHERN REGION	mm	mm	NORMAL	mm	mm	NORMAL	>0.3mm
Bvumbwe Met.	39	46	85	114.3	128.6	89	3
Chancellor College	2.3	50.5	5	164.3	127.6	129	1
Chichiri Met.	20.5	40.9	50	70.8	142.1	50	3
Chileka Airport	12.7	45.4	28	86.4	124.1	70	3
Chingale Agric	33.4	36.9	91	149.5	92.2	162	3
Chiradzulu Agric	23.2	44.2	52	87.1	116	75	2
Chizunga Factory	91	42	217	207	157.6	131	4
Kasinthula Res. Stn.	227	20.4	1113	256.7	80.4	319	3
Lujeri Tea Estate	81.3	67.8	120	264.1	316.2	84	4
Mangochi Met.	0.6	32.2	2	27.7	78	36	1
Naminjiwa Agric	15	33.7	45	100.9	100.4	100	3
Namwera Agric	14.5	37	39	109.6	96.7	113	2
Nchalo Sucoma	72.2	14.3	505	152.2	77	198	1
Neno Agric	9.9	40.9	24	142.1	123.5	115	3
Ngabu Met.	8.7	29.7	29	113.7	88.7	128	2
Nsanje Boma	54	36.1	150	267.8	123.6	217	3
Ntaja Met.	3	40.3	7	28.7	81.5	35	1
Satemwa Tea Est.	68.8	49.2	140	170	168.1	101	5
CENTRAL REGION							
Chileka Namitete	13.5	39.6	34	64	99.9	64	2
Chitedze Met.	15.3	36.7	42	29.4	91.4	32	1
Dedza Met	5	29.3	17	5	71.2	7	2
Dwangwa Sugar	15.3	26.3	58	44.7	99.6	45	1
Kaluluma DTC	0	12.3	0	39.9	40.3	99	0
K.I.A Met	3.1	19.9	16	41.5	68.9	60	2
Lisasadzi	6.6	22.6	29	21	45.4	46	1
Malomo Agric	0	21.2	0	2	43.7	5	0
Mchinji Boma	0	37.7	0	151.4	109.4	138	0
Mwimba Research	68.2	25.4	269	98	67.9	144	1
Ntcheu - Nkhande	0	36.4	0	35.1	90.6	39	0
Ntchisi Boma	7.8	26.1	30	44.4	49.9	89	1
Salima Met	8.9	21.3	42	19.4	48.4	40	1
NORTHERN REGION							
Bolero Met	0	22	0	29.5	84.9	35	0
Bwengu Agric.	0	21.2	0	46.3	61.6	75	0
Chitipa Met	0	50.8	0	55.6	81.9	68	0
Karonga Met.	1.2	33.4	4	16.3	46.8	35	1
Mzuzu Met.	88.3	51.8	170	188.2	137.9	136	3
NkhataBay Met.	13.4	27.8	48	22.1	282.9	8	2
Vinthukutu Agric	10.5	30.9	34	31.9	79.9	40	1

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 3 OF NOVEMBER 2007

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
BOLERO	33.5	20.4	35.5	18.2	N/A	43
BVUMBWE	28.7	18.8	33.0	15.0	2.4	65
CHICHIRI	29.5	19.8	33.5	16.5	1.1	61
CHILEKA	31.7	22.0	35.4	19.2	3.5	63
CHITEDZE	32.5	18.9	35.5	17.3	1.3	51
CHITIPA	31.5	19.4	33.2	17.5	3.2	51
DEDZA	27.0	17.5	29.4	14.9	1.7	65
K.I.A.	30.6	18.7	32.9	16.6	2.1	54
KARONGA	34.6	24.8	36.0	23.5	2.1	50
MANGOCHI	35.4	23.4	38.6	21.5	2.2	54
MIMOSA	33.2	19.5	36.2	17.6	1.3	65
MZUZU	29.2	15.5	31.3	13.6	2.0	57
NGABU	35.5	25.2	41.7	22.1	2.9	57
NKHATA BAY	35.7	20.0	37.9	18.1	1.0	56
NTAJA	33.9	22.9	37.0	21.0	2.9	53
SALIMA	34.7	24.5	36.4	23.0	3.0	51

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