10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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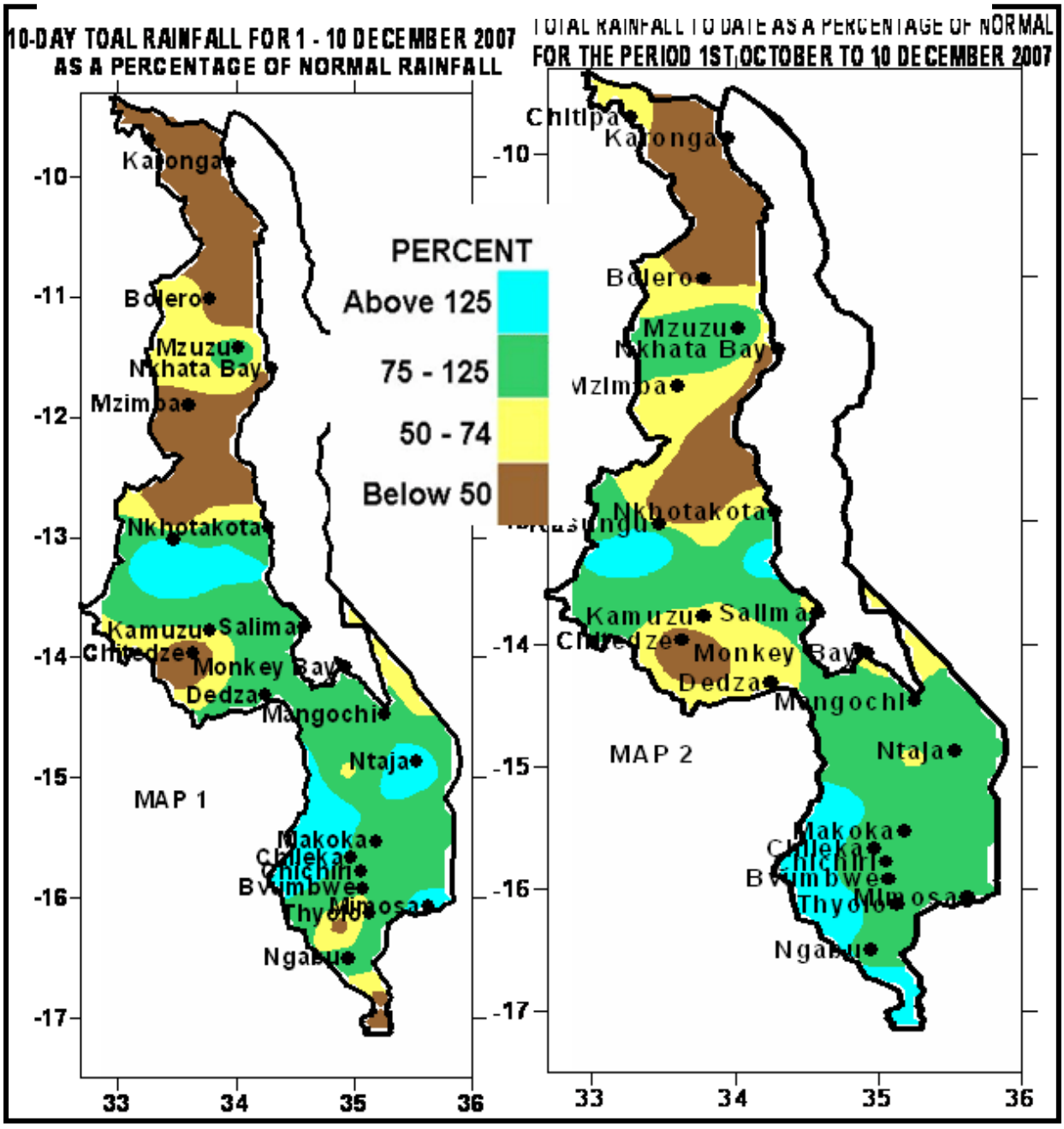
HIGHLIGHTS

- **Slight rainfall improvement over the south and some parts of the centre…**
- **Agricultural activities were enhanced in most parts of Malawi…**
- **Widespread locally heavy rains expected during 11 – 20 December, 2007…**



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1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the first ten days of December 2007, moist and unstable Congo Airmass became active Malawi particularly towards the end of the period. As a moderate to heavy rains were experienced in most parts of the country except for the north including Kasungu. The spatial distribution as well as amounts was better in the south and some parts of central Malawi (see Map 1). Rainfall reports of amounts in excess of 100mm were mainly confined to sothern Malawi where during the period Neno Agric registered 183mm, Lujeri in Mulanje 164mm, 130mm at Mulanje Boma, Chancellor College 108mm (Table 1).

Cumulative rainfall from 1st October to 10th December 2007 expressed as a percentage of normal showed that very few areas of the country have received rainfall below 75 percent (yellow and brown colours). Most of these areas are over the northern half of Malawi while in the south most areas have received nornal 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 24.0℃ and 37.2℃ at Dedza and Ngabu respectively. At the same time, mean daily minimum temperatures ranged from 16.2℃ at Dedza to 25.0℃ 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 lgenerally less than 3m/s. The highest wind speed was reported at Chileka (2.6 m/s or 9.4 Km/hr) while the lowest wind speed was recorded at Chitedze and Nkhata Bay (0.9m/s or 3.2 Km/hr). See Table 2.

1.4 MEAN RELATIVE HUMIDITY

Most areas reported relative humidity values of 60% or more except for Karonga which reported mean relative humidity of 54%. The highest was reported at Bvumbwe 79%. See Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

Good rains for agricultural production fell over the south and some parts of the centre while the north received generally light rainfall during the period under review. The onset of effective rains for planting of crops particularly over the south and centre have been slightly late this season compared to last season. However, it is still too early to judge whether this will have a negative impact on the final crop yields. The major farming activities during the period included land preparation, planting of crops, weeding and basal fertiliser application. The rains have 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 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 early land preparation, 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. So far, media reports indicate that distribution of coupons for government input subsidy programme is still going on in most parts of the country.

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.

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4. OUTLOOK FOR 11 – 20 DECEMBER 2007

Meanwhile, models for medium range forecasts indicate that Congo airmass and the ITCZ are expected to be cause significant improvement in spatial and temporal distribution of rainfall during the period.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 1 OF DECEMBER 2007: PERIOD 01 – 10

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.	68.3	86.0	**79**	182.6	214.6	**85**	6
Chancellor College	108.3	117.8	**92**	272.6	245.4	**111**	5
Chichiri Met.	102.0	80.1	**127**	172.8	222.2	**78**	7
Chikwawa Boma	35.7	42.7	**84**	155.4	121.8	**128**	2
Chileka Airport	53.6	55.7	**96**	140.0	179.8	**78**	6
Chingale Agric	63.9	57.7	**111**	213.4	149.9	**142**	7
Chizunga Factory	82.0	105.8	**78**	289.0	263.4	**110**	7
Liwonde Township	71.0	50.7	**140**	86.9	124.0	**70**	5
Lujeri Tea Estate	164.4	109.9	**150**	428.5	426.1	**101**	7
Makoka Met	80.4	81.8	**98**	198.2	190	**104**	6
Mangochi Met.	69.1	53.6	**129**	96.8	131.6	**74**	5
Masambanjati Agric	72.7	77.4	**94**	187.6	227.8	**82**	4
Monkey Bay Met.	49.8	67	**74**	58.8	114.0	**52**	4
Mulanje Boma	130.2	93.5	**139**	351.1	341.1	**103**	6
Naminjiwa Agric	72.3	78.5	**92**	173.2	178.9	**97**	4
Namwera Agric	34.3	71.9	**48**	143.9	168.6	**85**	3
Nankumba Agric	45.9	61.6	**75**	153.2	135.2	**113**	4
Nchalo Sucoma	18.5	57.9	**32**	170.7	134.9	**127**	2
Neno Agric	183.1	69.5	**263**	325.2	193.0	**168**	7
Ngabu Met.	59.4	63.9	**93**	173.1	152.6	**113**	3
Nsanje Boma	9.3	48.1	**19**	277.1	171.7	**161**	2
Ntaja Met.	98.3	67.9	**145**	127	149.4	**85**	8
Satemwa Tea Est. No.1	69.4	98.9	**70**	239.4	267.0	**90**	5
CENTRAL REGION							
Chitedze Met.	11.8	62.4	**19**	41.2	153.8	**27**	3
Dedza Met	70.1	61.9	**113**	75.1	133.1	**56**	4
Dowa Agric	32.1	46.3	**69**	78.9	105.0	**75**	5
Dwangwa Sugar Corp.	6.1	81.9	**7**	50.8	181.5	**28**	3
Kaluluma DTC	17.9	68.3	**26**	57.8	108.6	**53**	2
K.I.A Met	40.1	48.5	**83**	81.6	117.4	**70**	3
Kasungu Met	23.7	53.6	**44**	32.3	130.8	**25**	3
Lifuwu	59.9	89.6	**67**	62.2	134.6	**46**	6
Malomo Agric	33.1	22.9	**145**	35.1	66.6	**53**	3
Mchinji Boma	34.9	61.4	**57**	186.3	170.8	**109**	6
Mwimba Research	122.6	57.0	**215**	220.6	124.9	**177**	5
Ntcheu - Nkhande	97.6	72.2	**135**	132.7	162.8	**82**	7
Ntchisi Boma	67.5	49.0	**138**	164.4	98.9	**166**	5
Salima Met	89.6	75.9	**118**	109.0	124.3	**88**	4
NORTHERN REGION							
Bolero Met	23.6	43.8	**54**	53.1	128.7	**41**	2
Bwengu Agric.	0.0	43.8	**0**	46.3	105.4	**44**	0
Chitipa Met	22.1	51.2	**43**	77.7	133.1	**58**	4
Karonga Met.	3.5	39.1	**9**	19.8	85.9	**23**	2
Mzimba Met	23.0	59.0	**39**	84.0	119.4	**70**	3
Mzuzu Met.	60.2	59.2	**102**	248.4	197.1	**126**	5
NkhataBay Met.	27.0	75.8	**36**	49.1	358.7	**14**	4
Vinthukutu Agric	5.3	47.0	**11**	37.2	126.9	**29**	1

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 1 OF DECEMBER 2007

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
BVUMBWE	26.3	17.6	28.5	16.8	1.7	79
BOLERO	30.9	19.4	34.3	17.7	1.0	60
CHICHIRI	27.5	18.6	30.0	17.6	1.1	73
CHILEKA	29.8	20.9	32.3	19.4	2.6	73
NTAJA	30.7	21.2	33.4	19.0	2.1	73
CHITEDZE	30.1	18.9	32.9	17.6	0.9	67
CHITIPA	29.4	18.6	32.5	16.4	2.1	62
DEDZA	25.0	16.2	27.5	15.0	1.3	70
KASUNGU	30.7	18.3	33.2	11.2	2.5	69
KARONGA	33.3	24.3	35.0	22.5	2.0	54
K I A	28.4	18.1	31.0	16.7	1.7	69
MAKOKA	27.8	18.9	N/A	N/A	1.2	78
MANGOCHI	32.9	22.2	35.0	21.0	1.4	70
MONKEY BAY	32.0	24.2	34.8	21.1	2.0	69
MZIMBA	29.7	18.0	32.0	16.3	1.0	61
MZUZU	26.7	16.9	28.8	15.5	1.6	74
NGABU	34.9	23.8	37.8	22.6	2.2	60
NKHATA BAY	32.2	21.2	34.8	20.5	0.9	70
SALIMA	31.6	22.8	35.4	19.3	2.2	67

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