10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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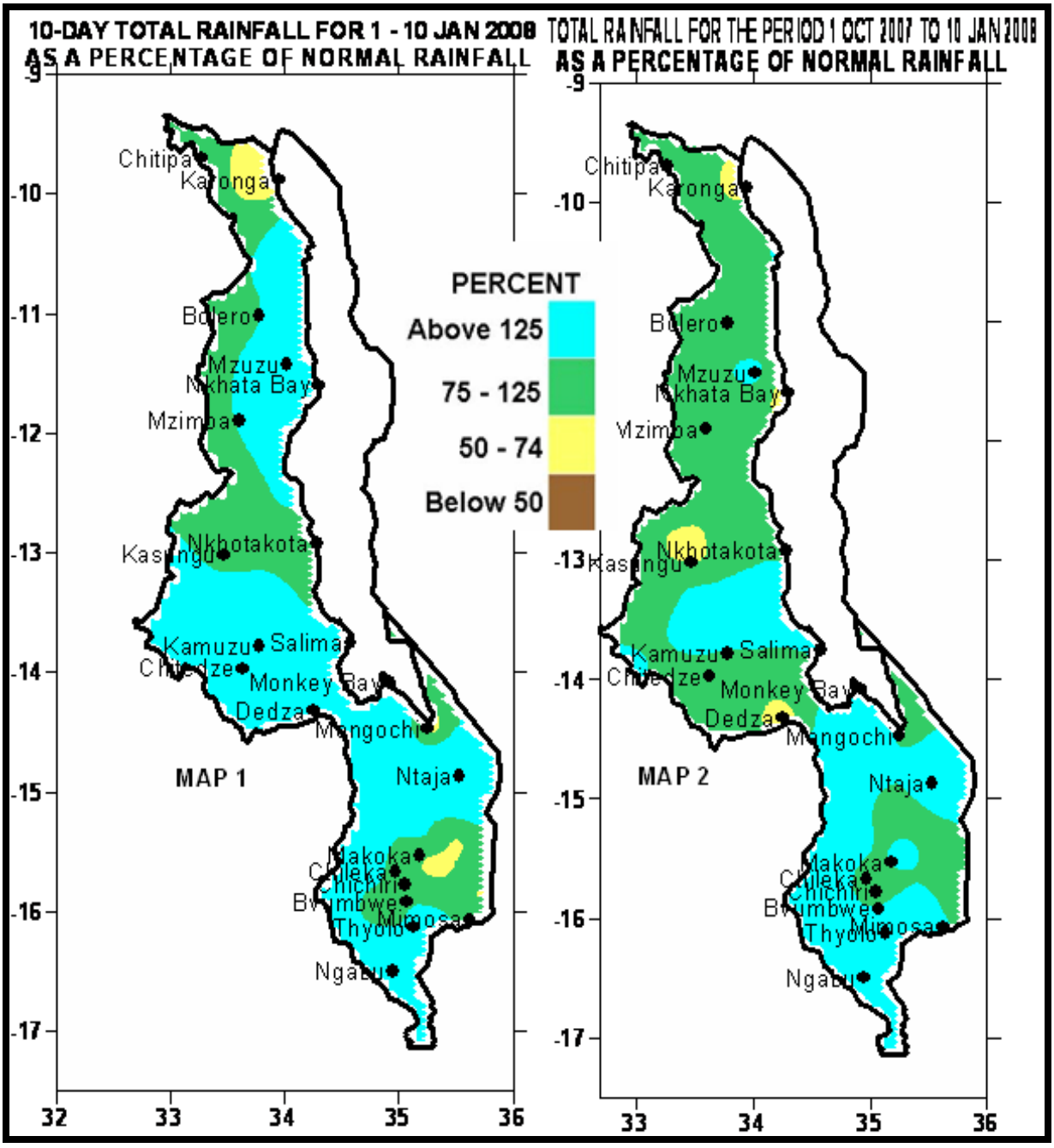
HIGHLIGHTS

- **Moderate to heavy rainfall amounts received over most areas…**
- **Maize crop mostly in good condition at vegetative stage…**
- **Widespread rains expected during 11 – 20 January, 2008…**



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1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the first ten days of January 2008, both main rain bearing systems, moist Congo Air mass and Inter Tropical Convergence Zone were active over Malawi. As a result good rainfall amounts good spatial and temporal distribution were experienced over the country. High rainfall intensities that were experienced in some areas resulted high ten day total rainfall amounts. For instance areas that reported rainfall amounts of higher than 150mm included Mlangeni–Njolomole 344mm, Nankumba in Mangochi 239mm, Ntaja 194mm, Ntcheu-Nkhande 186mm, Vinthukutu in Karonga 182mm and Mimosa in Mulanje 165mm. See Table 1.

Map 2 shows the performance of cumulative rainfall from 1st October 2007 to 10 January 2008. The map suggests that although the main rains this season generally started late most areas in Malawi had received over 75% of the expected rainfall amounts (green and light blue colours) by 10 January 2008.

1.2 MEAN AIR TEMPERATURE

During the first ten days of January 2008 cloudy conditions caused a drop in mean daily maximum temperatures over most areas in Malawi. This time mean daily maximum temperatures ranged from 25.3 at Mzimba to 33.5°C at Ngabu. \ At the same time, mean daily minimum temperatures ranged from 16.8°C at Mzuzu to 23.9°C at Ngabu (Table 2).

1.3 MEAN DAILY WIND SPEEDS

Mean daily wind speeds at a height of two meters above the ground were light. The highest wind speed was reported at Chileka (2.2 m/s or 7.9 Km/hr) while the lowest wind speed was recorded at Chitipa (0.5m/s or 1.8 Km/hr). See Table 2.

1.4 MEAN RELATIVE HUMIDITY

Mean daily relative humidity values indicate that humid conditions prevailed over most parts of Malawi. The highest was registered at Chichiri (88%) while the lowest was registered at Karonga and Ngabu in Chikwawa (72%). See Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

During the first dekad of January substantial rainfall amounts covered most parts of the country. Most areas received rainfall above 100mm which was sufficient to satisfy daily requirements of crops. However, there were some areas that received rainfall amounts in excess of 200mm. Such huge amounts of rainfall cause problems of floods and soil water logging conditions. Apart from these problems the rains supported crop growth and development, improve water resources, soil moisture reserves and pasture availability for grazing animals.

The general crop stand in the fields was reported in good condition with Maize reported at various stages of development. In the south and some parts centre maize is mostly at vegetative stage while in the north ranges from germination to early vegetative stage. Some of the hybrid maize that was planted mid November particularly over low altitudes in some parts of the south and centre was at advanced vegetative stage. So far, no major incidences of pests and diseases have been reported.

3. PROSPECTS OF 2007/08 SEASON

Most of the dynamical and statistical climate models predict La Nina conditions to persist during January to March 2008. During this period Malawi is still expected to experience normal to above normal total rainfall amounts with an increased chance of floods.

4. OUTLOOK FOR 11 – 20 January 2007

Meanwhile, models for medium range forecasts indicate that both main rain bearing systems, moist Congo Air mass and Inter Tropical Convergence Zone likely to remain active over Malawi. Therefore wet conditions are expected over the country during the period 11 – 20 January 2008.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 1 OF JANUARY 2008: 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**	**³ 0.3 mm**
Bvumbwe Met.	95.9	77.4	**124**	530.2	423.1	**125**	5
Chancellor College	42.0	107.0	**39**	575.5	548.9	**105**	5
Chichiri Met.	83.7	76.7	**109**	464.3	429.5	**108**	6
Chikwawa Boma	66.2	60.8	**109**	470.4	297.1	**158**	5
Chileka Airport	81.9	68.3	**120**	360.6	370.2	**97**	4
Chiradzulu Agric	64.0	84.5	**76**	423.3	428.1	**99**	5
Chizunga Factory	110.0	96.6	**114**	796.0	573.8	**139**	7
Kasinthula Res. Stn.	108.4	62.9	**172**	722.8	291.5	**248**	3
Liwonde Township	98.5	60.1	**164**	301.1	296.9	**101**	5
Lujeri Tea Estate	90.5	135.4	**67**	1030.8	813.6	**127**	7
Makoka Met	49.9	76.2	**65**	537.2	395.4	**136**	6
Mangochi Met.	37.2	60.5	**61**	357.5	311.5	**115**	7
Mimosa Met.	164.8	91.4	**180**	307.4	565.8	**N/A**	5
Monkey Bay Met.	72.5	64.9	**112**	394.4	357.2	**110**	7
Mulanje Boma	119.4	108.4	**110**	837.9	632.5	**132**	7
Naminjiwa Agric	58.6	71.3	**82**	466.3	403.5	**116**	6
Nankumba Agric	238.9	68.1	**351**	684.4	333.9	**205**	4
Nchalo Sucoma	85.3	50.6	**169**	475.4	276.2	**172**	4
Neno Agric	132.7	80.6	**165**	838.7	416.6	**201**	5
Ngabu Met.	140.6	60.8	**231**	589.0	326.6	**180**	5
Nsanje Boma	96.9	56.7	**171**	580.5	350.8	**165**	6
Ntaja Met.	193.6	69.9	**277**	553.3	346.5	**160**	7
Satemwa Tea Est.	87.8	89.5	**98**	682.4	522.4	**131**	6
Thyolo Met	94.8	66.6	**142**	631.8	453.3	**139**	7
Zomba RTC	103.0	73.0	**141**	705.1	481.1	**147**	6
CENTRAL REGION							
Bunda College	113.8	78.5	**145**	394.6	384.2	**103**	6
Chileka Namitete	115.0	86.1	**134**	425.2	384.6	**111**	3
Chitedze Met.	114.8	77.6	**148**	416.2	369.8	**113**	8
Dwangwa.	118.0	79.4	**149**	483.7	419.8	**115**	7
Kaluluma DTC	45.7	59.1	**77**	267.3	307.1	**87**	5
K.I.A Met	98.7	65.7	**150**	349.7	304.7	**115**	9
Mkanda Met	137.5	57.2	**240**	413.5	386.4	**107**	6
Mlangeni Njolomole	344.0	84.7	**406**	650.3	374.7	**174**	6
Mponela Agric	144.0	70.2	**205**	492.8	279.1	**177**	8
Nkhotakota Met	94.5	109.8	**86**	508.9	427.1	**119**	7
Ntcheu – Nkhande	185.6	92.9	**200**	697.0	424.3	**164**	9
Ntchisi Boma	84.1	76.1	**111**	460.4	317.2	**145**	6
Salima Met	134.5	101.2	**133**	521.3	396.9	**131**	6
NORTHERN REGION							
Baka Res. Stn.	31.8	66.1	**48**	220.5	322.3	**68**	1
Bolero Met	73.7	66.9	**110**	293.5	311.3	**94**	6
Bwengu Agric.	122.6	65.6	**187**	280.0	322.0	**87**	4
Chitipa Met	72.3	76.7	**94**	348.7	380.2	**92**	5
Karonga Met.	37.1	66.1	**56**	213.6	308.7	**69**	6
Mzimba Met	113.3	89.4	**127**	311.7	351.7	**89**	7
Mzuzu Met.	118.9	67.4	**176**	621.5	429.7	**145**	7
NkhataBay Met.	149.9	61.4	**244**	259.2	599.4	**43**	8
Vinthukutu Agric	182.0	83.4	**218**	469.0	353.1	**133**	4

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 1 OF JANUARY 2008

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
BVUMBWE	25.5	17.6	26.5	16.3	1.2	82
BOLERO	27.5	18.1	30.5	16.3	1.0	81
CHICHIRI	26.6	18.9	28.0	17.2	0.6	88
CHILEKA	28.3	20.5	30.3	20.0	2.2	84
NTAJA	28.7	20.9	30.2	19.0	1.1	82
CHITEDZE	26.0	19.0	28.6	18.0	0.6	85
CHITIPA	26.5	17.7	28.6	16.9	0.5	79
KARONGA	30.2	22.8	32.1	21.9	1.4	72
K.I.A.	25.6	17.8	27.2	16.8	1.2	82
MAKOKA	27.4	18.7	28.4	17.9	1.2	79
MANGOCHI	30.1	22.1	31.9	21.4	1.1	80
MONKEY BAY	28.2	22.3	29.3	21.2	1.7	83
MZIMBA	25.3	17.1	27.9	15.9	0.6	79
MZUZU	25.5	16.8	27.6	15.7	1.3	83
NGABU	33.5	23.9	35.2	22.1	1.5	72
NKHATA BAY	29.6	21.1	32.0	20.0	0.6	84
NKHOTAKOTA	27.5	21.4	29.0	20.5	1.5	80
SALIMA	28.0	22.2	29.9	21.0	1.9	83

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