Malawi 10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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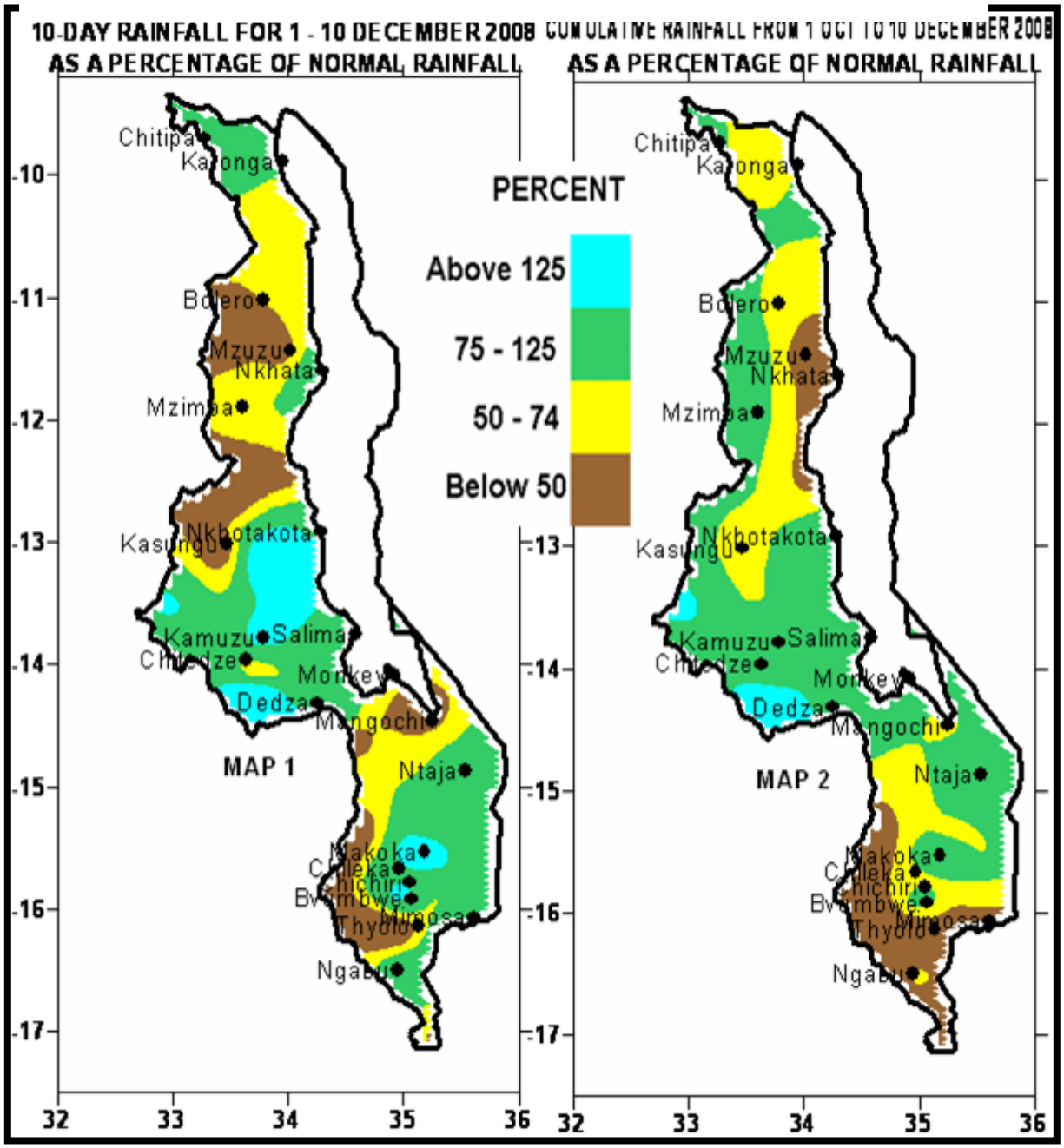
HIGHLIGHTS

- **Better rainfall performance experienced parts of centre and south…**
- **Major agricultural activities included planting and fertilizer application …**
- **Widespread rains expected during 11 to 20 December 2008…**



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1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the first 10-days of December 2008 drier than normal conditions persisted over most areas in the north including Kasungu in the centre as well as some parts of Mangochi, Mwanza, Neno and Chikwawa districts in the south. However, significant improvement in rainfall performance was experienced over some parts of the south and centre where most areas registered good rainfall amounts with better distribution in time and space. Some areas particularly in the south reported cumulative rainfall amounts in excess of 100mm. Such areas included Makoka Research Station in Zomba (151mm), Mpemba in Blantyre (142mm), Chancellor College in Zomba (110mm) and Mulanje Boma (108mm) and Mtakataka (160mm) in Dedza in central region and Nkhata Bay (105mm) in the north. See **Map1 and Table 1**.

Cumulative rainfall performance still indicated below normal rainfall situation (**yellow and brown colours on Map 2)** in parts of southern Malawi and along the lakeshore.

1.2 MEAN AIR TEMPERATURE

Malawi continued to experience generally hot temperatures. Mean daily maximum air temperatures ranged from 22°C at Dedza to 37°C at Ngabu.. Average daily minimum temperatures ranged from 18°C to 25°C. See more details in Table 2.

1.4 MEAN WIND SPEEDS

Mean wind speeds at a height of two metres above ground level ranged from 0.7 m/s (2.5 Km/h) at Nkhata Bay to 3.1 m/s (11.2 Km/h) at Ngabu (see Table 2).

1.5 MEAN RELATIVE HUMIDITY

The atmosphere was fairly moist during the first 10-days of December 2008. Daily average relative humidity values ranged from 63% at Mimosa to 80% at Dedza. More details are in Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

In the first 10-days of December 2008, there was generally a significant improvement in rainfall performance over the centre and some parts of southern Malawi. The good rains had supported planting and germination of various crops as well as crop establishment and application of basal dressing fertilizer in some areas. However, although drier than normal conditions existed in some parts of the north and south land preparation in readiness for the effective planting rains remained a major agricultural activity. The Maize crop ranged from land preparation to early vegetative stage..

Land preparation, planting of crops, weeding, fertilizer application and acquisition of farm inputs were still major agricultural activities for farmers.

Cumulative rainfall performance still indicated slow start of the wet season **(yellow and brown colours on Map 2)** in southern Malawi and some parts of lakeshore areas. In some areas particularly in the south, the start of the wet season has delayed by over twenty days. Generally in Malawi planting rains start in November in the south and in December in the northern half.

3. PROSPECTS OF 2008/09 RAINFALL SEASON

Climate models suggest that by end of April 2009 the greater part of Malawi should expect normal rainfall amounts. However the distribution of rains in both space and time is not expected to be uniform. Already there has been a delay in the onset of the wet season in some parts of the country. Externally, the influence of climate change cannot be ignored and one of the indicators is occurrence of extreme climatic events such as floods and drought. Low lying areas such as the Shire valley and lakeshore areas are more vulnerable to floods and droughts.

4. OUTLOOK FOR 11 – 20 DECEMBER 2008

Both the Inter-Tropical Convergence Zone (ITCZ) and Congo Air are anticipated to become more active over Malawi.. Therefore, the country is expected to experience widespread rains and occasional thunderstorms which will be locally heavy particularly over the south and centre during the period 11 to 20 December 2008..

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 01 – 10 DECEMBER 2008 AT SELECTED STATIONS

STATION NAME	DEKADAL TOTAL RAINFALL mm	DEKADAL NORMAL mm	DEKADAL TOTAL AS % NORMAL	TOTAL TO DATE mm	NORMAL TO DATE mm	TOTAL TODATE AS % NORMAL	RAINY DAYS
SOUTH							
Bvumbwe Met.	68.0	86.0	**79**	193.0	214.6	**90**	5
Chancellor College	109.8	117.8	**93**	145.0	245.4	**59**	8
Chichiri Met.	47.5	80.1	**59**	93.0	222.2	**42**	6
Chikwawa Boma	14.7	42.7	**34**	32.3	121.8	**27**	2
Chileka Airport	80.2	55.7	**144**	148.6	179.8	**83**	9
Kasinthula Res. Stn.	37.3	48.9	**76**	47.3	129.3	**37**	3
Lujeri Tea Estate	93.2	109.9	**85**	143.8	426.1	**34**	7
Mpilipili (Makanjila)	91.5		**N/A**	103.5		**N/A**	3
Makoka Met	151.4	81.8	**185**	215.3	190.0	**113**	8
Mangochi Met.	22.3	53.6	**42**	92.5	131.6	**70**	5
Masambanjati Agric	63.3	77.4	**82**	118.9	227.8	**52**	5
Mimosa Met.	70.7	103.5	**68**	135.5	300.3	**45**	7
Monkey Bay Met.	39.0	67.0	**58**	102.2	114.0	**90**	4
Mpemba Vet	142.0	74.2	**191**	208.2	225.4	**92**	6
Mulanje Boma	107.9	93.5	**115**	134.2	341.1	**39**	6
Mwanza Boma	18.4	63.7	**29**	31.4	186.5	**17**	3
Namiasi Agric	18.5	61.9	**30**	78.0	109.6	**71**	5
Nchalo Sucoma	5.5	57.9	**9**	19.9	134.9	**15**	3
Neno Agric	10.4	69.5	**15**	43.4	193.0	**22**	3
Ngabu Met.	80.3	63.9	**126**	85.6	152.6	**56**	3
Nsanje Boma	23.2	48.1	**48**	41.5	171.7	**24**	2
Ntaja Met.	75.2	67.9	**111**	176.8	149.4	**118**	6
Satemwa Tea Est	27.6	98.9	**28**	58.1	267.0	**22**	6
Thyolo Met	84.0	80.4	**104**	120.9	223.6	**54**	6
Zomba RTC	80.5	93.1	**86**	141.9	221.5	**64**	6
CENTRAL REGION							
Bunda College	41.2	58.7	**70**	166.0	158.9	**104**	8
Chileka Namitete	50.4	60.4	**83**	144.6	160.3	**90**	5
Chitedze Met.	40.4	62.4	**65**	157.2	153.8	**102**	4
Dedza Met	69.1	61.9	**112**	157.7	133.1	**118**	7
Dwangwa Sugar	33.9	81.9	**41**	67.1	181.5	**37**	5
K.I.A Met	74.7	48.5	**154**	125.7	117.4	**107**	6
Kasungu Met	28.1	53.6	**52**	62.6	130.8	**48**	2
Malomo Agric	51.2	22.9	**224**	66.1	66.6	**99**	5
Madisi Agric	41.9	45.9	**91**	68.6	104.0	**66**	4
Mchinji Boma	44.3	61.4	**72**	149.6	170.8	**88**	6
Mkanda Met	90.4	61.0	**148**	259.8	179.1	**145**	6
Mlangeni Njolomole	7.0	56.6	**12**	135.3	148.7	**91**	1
Mwimba Research	9.0	57.0	**16**	N/A	124.9	**N/A**	3
Mtakataka Airwing	159.5	47.7	**334**	302.8	125.5	**241**	5
Nathenje Agric	34.5	47.7	**72**	141.0	128.0	**110**	7
Nkhotakota Met	72.4	67.4	**107**	159.5	139.2	**115**	5
Ntcheu - Nkhande	59.0	72.2	**82**	100.5	162.8	**62**	4
Salima Met	49.8	75.9	**66**	94.2	124.3	**76**	4
Sinyala Agric	92.1	62.9	**146**	265.1	163.5	**162**	7
Dedza RTC	76.5	49.8	**154**	182.4	132.5	**138**	4
NORTHERN REGION							
Bolero Met	22.3	43.8	**51**	77.9	128.7	**61**	4
Chitipa Met	56.4	51.2	**110**	103.7	133.1	**78**	5
Emfeni Agric	8.3	70.1	**12**	86.3	115.0	**75**	2
Euthini Agric.	20.5	54.0	**38**	136.2	113.4	**120**	2
Karonga Met.	44.3	39.1	**113**	55.2	85.9	**64**	6
Lupembe	18.1	31.0	**58**	72.3	80.3	**90**	4
Mzimba Met	47.4	59.0	**80**	108.6	119.4	**91**	3
Mzuzu Met.	23.6	59.2	**40**	64.1	197.1	**33**	5
NkhataBay Met.	105.3	75.8	**139**	191.1	358.7	**53**	9

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 01 – 10 DECEMBER 2008

STATION	MAX TEMP (℃)	MIN TEMP (℃)	ABS MAX (℃)	ABS MIN (℃)	WIND SPEED m/s	RH %
BOLERO	29.7	18.4	31.4	17.1	N/A	66
BVUMBWE	26.4	18.2	28.7	16.8	2.1	79
CHICHIRI	27.4	18.1	31.0	17.0	1.0	71
CHILEKA	29.7	21.7	33.0	20.5	2.7	78
CHITEDZE	28.2	18.8	30.8	18.1	0.9	71
CHITIPA	28.1	18.1	29.8	17.4	1.5	68
DEDZA	22.4	16.2	26.5	15.3	1.1	80
K I A	27.3	18.1	29.7	16.8	2.0	66
KARONGA	31.0	22.5	34.0	21.6	1.8	66
KASUNGU	29.6	19.5	30.5	18.5	2.4	67
MAKOKA	28.2	19.5	23.0	18.5	1.2	78
MANGOCHI	33.1	22.9	36.0	21.2	1.7	65
MIMOSA	31.3	19.8	36.3	18.4	1.4	63
MONKEY BAY	30.9	23.7	33.5	22.4	2.1	68
MZIMBA	27.9	18.2	29.5	16.9	1.0	64
MZUZU	26.4	17.6	28.3	15.6	1.9	72
NGABU	37.0	24.9	39.6	22.9	3.1	58
NKHATA BAY	30.0	21.3	32.1	20.2	0.7	79
NKHOTAKOTA	29.4	21.9	31.3	18.8	2.0	72
NTAJA	31.0	21.7	34.6	20.5	2.1	69
SALIMA	31.1	23.6	34.0	21.1	2.3	68

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