



# Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services



Period: 11 – 20 November 2009

Season: 2009/2010

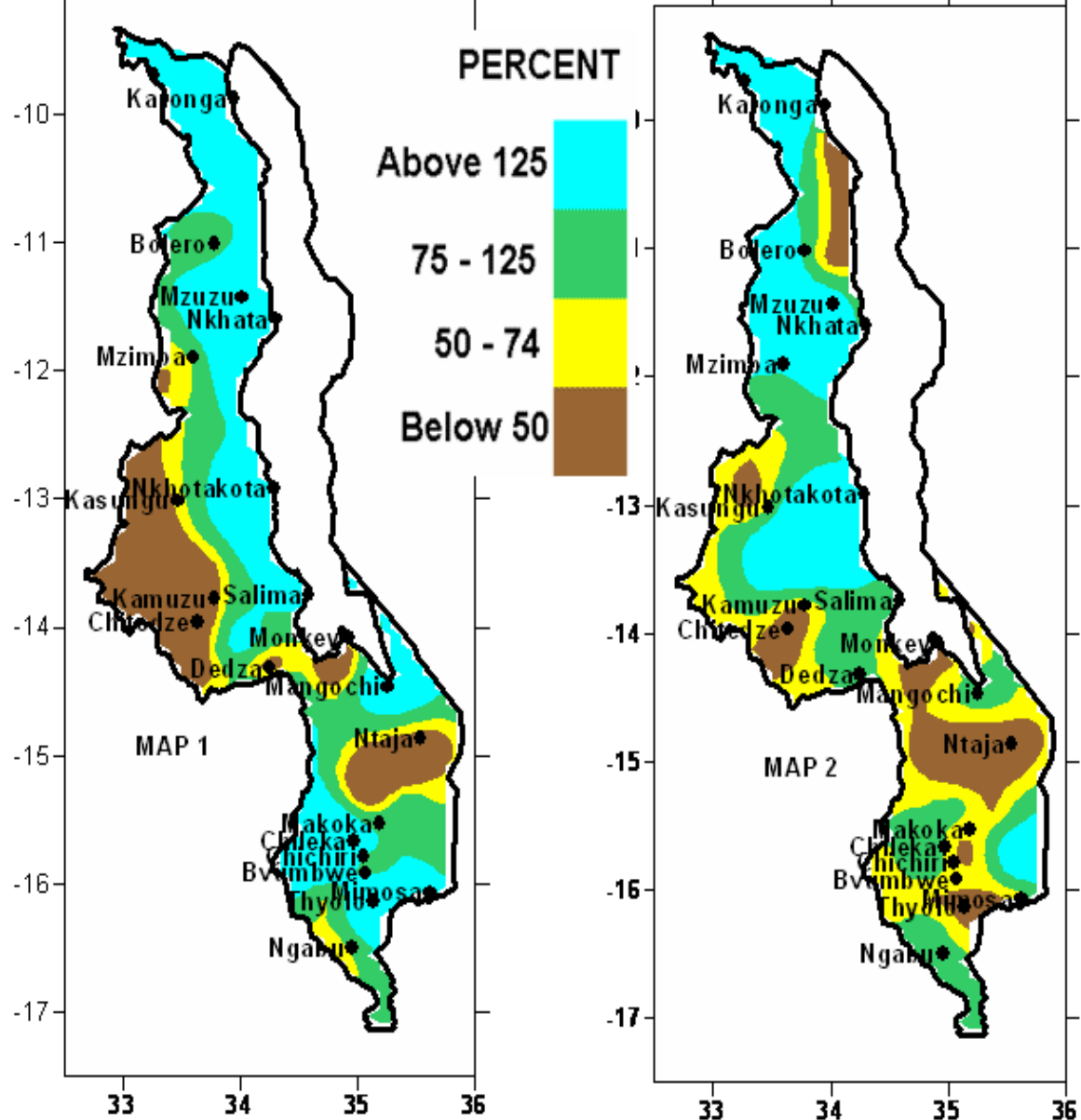
Issue No.5

Release date: 25 November 2009

## HIGHLIGHTS

- Good rainfall distribution and amounts experienced in some parts...
- Good rains supported land preparation, planting and germination of crops..
- Wet weather to cover more areas in the last days of November, 2009...

10-DAY TOTAL RAINFALL FOR 11 - 20 NOVEMBER 2009 AS A PERCENTAGE OF NORMAL RAINFALL      CUMULATIVE RAINFALL FROM 1 OCT TO 20 NOVEMBER 2009 AS A PERCENTAGE OF NORMAL RAINFALL



## 1. WEATHER SUMMARY

### 1.1 RAINFALL SITUATION

Malawi generally experienced a further improvement in rainfall distribution and amounts during the second ten days of November 2009. More areas in southern Malawi and along the lakeshore received above average rainfall amounts. Places that accumulated at least 50mm of rainfall during the period in the north included Chintheche Agric in Nkhata Bay (176mm), Mzuzu Met (106mm) and Chitipa Met (56mm), while in the south such places included Chileka Airport (86mm), Thyolo Met (76mm), Mimosa (74mm), Mpemba Agric (68mm), Chichiri Met (66mm), and Mwanza Boma (65mm). During the period under review rainfall distribution in space was better than during the first ten days of November 2009. Some areas reported up to four rainfall days. See more details in Table 1.

### 1.2 MEAN AIR TEMPERATURE

Mean maximum air temperatures at most places were generally hot. Only However, Ngabu in lower Shire Valley continued to experience very hot temperatures (37°C). The lowest mean maximum temperature was reported at Dedza. (26°C). Average minimum temperatures ranged from 16°C at Mzuzu Airport to 24°C. See more details in Table 2.

### 1.4 MEAN WIND SPEEDS

Mean wind speeds at a height of two metres above the ground ranged from 1.0 m/s (3.6 Km/h) at Chitedze to 3.6 m/s (13 Km/h) at Chileka See more details in Table 2.

### 1.5 MEAN RELATIVE HUMIDITY

During the second ten days of November 2009, air over Malawi was fairly moist. Most areas reported daily average relative humidity values of at least 55% except at Mimosa where daily average relative humidity was at 52%. The highest daily average relative humidity was reported at Mzuzu Airport (71%). More details are in the Table 2.

## 2. AGROMETEOROLOGICAL ASSESSMENT

Light to moderate rainfall that was received in some parts of the country particularly in the south and north encouraged farmers begin planting crops and in other few areas the rains supported germination of crops. In Malawi, planting rains are normally expected in November in the south and in December in the northern half. So far the onset of the rains appear sporadic such that by 20<sup>th</sup> November 2009, field reports suggested that although the growing season has started in some parts of the country, pockets of dry areas still existed in some parts of the country. Such areas included Balaka - Liwonde and some parts of Thyolo, Zomba, Machinga and Mangochi districts in the south, some parts of Lilongwe, Mchinji and Kasungu districts in the centre and some parts of Rumphu and Karonga districts in the north. See details in Map 2.

Procurement of agricultural inputs (fertilizer and seeds) through the government of Malawi input subsidy program to boost agricultural production was in progress in most parts of the country.

## 3. PROSPECTS OF 2009/10 RAINFALL SEASON

Most climate models continue to indicate that during the first half of the season (October to December 2009), the northern half of Malawi is likely to receive normal to above normal rainfall while the Southern half will receive above normal to normal rainfall. These rains are likely to support planting, germination and growth and development of various crops in Malawi

During January to March 2010 the northern half of Malawi will receive above normal to normal rainfall while the Southern half will receive normal to above normal rainfall. The rains in the second half will be enough to support maturity of most crops.

## 4. OUTLOOK 21 – 30 NOVEMBER 2009

The main rain bearing systems are expected to get established and enhance rainfall over Malawi during 21 to 30 of November 2009. Hence good rainfall amounts and distribution are anticipated to cover more areas during the last days of November 2009.

**TABLE 1: DEKADAL RAINFALL SUMMARY FOR 11 – 20 NOVEMBER 2009 AT SELECTED STATIONS**

STATION NAME	DEKADAL TOTAL RAINFALL	DEKADAL NORMAL	DEKADAL TOTAL AS % NORMAL	TOTAL TO DATE	NORMAL TO DATE	TOTAL TODATE AS % NORMAL	RAINY DAYS ≥ 0.3 mm
<b>SOUTH</b>							
Balaka Township	0.0	20.2	0.0	13.7	66.4	21	0
Bvumbwe Met.	34.6	34.0	102	53.6	84.9	63	4
Chancellor College	27.8	27.5	101	30.8	75.5	41	3
Chichiri Met.	65.5	59.2	111	66.9	225.6	30	2
Chikwawa Boma	17.3	21.9	79	17.3	55.5	31	4
Chileka Airport	86.1	30.7	280	99.5	79.1	126	4
Chingale Agric	2.0	20.8	10	69.5	52.5	132	2
Liwonde Township	0.0	13.7	0	0.0	38.3	0	0
Makoka Met	15.2	18.1	84	15.2	57.7	26	4
Mangochi Met.	18.8	7.3	258	32.9	28.6	115	3
Mimosa Met.	74.2	49.4	150	115.7	145.0	80	3
Monkey Bay Met.	0.8	3.9	21	0.8	14.0	6	2
Mpemba Agric	68.1	33.0	206	115.8	96.6	120	4
Mwanza Boma	65.1	21.7	300	69.9	91.2	77	3
Naminjiwa Agric	18.7	17.0	110	154.2	60.9	253	3
Nankumba Agric	0.0	13.9	0	0.0	36.1	0	0
Nchalo Sucoma	24.1	19.4	124	56.8	50.1	113	2
Ngabu Met.	9.3	15.5	60	52.1	55.4	94	2
Ntaja Met.	1.9	22.0	9	5.4	44.1	12	1
Phalula Agric	3.8	32.4	12	3.8	73.3	5	1
Thyolo Met	76.7	24.5	313	100.7	98.9	102	3
<b>CENTRAL REGION</b>							
Chitedze Met.	2.5	32.6	8	17.6	53.5	33	2
Dedza Met	6.9	20.8	33	37.7	42.0	90	2
Dwangwa Sugar Corp.	43.0	30.3	142	43.0	52.4	82	4
K.I.A Met	8.3	26.3	32	8.3	46.6	18	3
Kasungu Met	7.9	14.8	53	14.4	27.6	52	2
Malomo Agric	27.2	16.2	168	67.2	22.5	299	1
Mponela Agric	3.5	16.8	21	69.5	34.5	201	2
Mtakataka Airwing	2.0	8.0	25	16.0	30.0	53	1
Nathenje Agric	38.5	22.5	171	46.0	44.5	103	2
Nkhotakota Met	44.3	14.0	316	57.4	30.5	188	3
Ntcheu - Nkhande	25.2	17.4	145	32.2	57.9	56	2
Salima Met	19.1	11.9	161	19.1	25.9	74	2
Dedza RTC	32.0	24.8	129	41.5	60.6	68	2
<b>NORTHERN REGION</b>							
Baka Res. Stn.	22.5	6.6	341	22.5	11.2	201	1
Bolero Met	7.9	13.5	59	30.8	23.5	131	4
Chitipa Met	55.6	16.8	331	126.3	31.1	406	4
Chintheche Agric	175.9	52.5	335	194.9	91.7	213	3
Euthini Agric.	24.2	19.4	125	74.2	33.8	220	2
Karonga Met.	21.6	15.6	138	21.6	20.8	104	3
Mzimba Met	14.0	24.1	58	50.6	39.2	129	4
Mzuzu Met.	106.0	28.1	377	138.2	77.0	179	5
NkhataBay Met.	39.7	33.1	120	61.7	63.8	97	3

**TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 – 20 November 2009**

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
<b>BOLERO</b>	30.6	17.3	34.0	15.8	N/A	62
<b>BVUMBWE</b>	27.8	17.9	32.0	13.2	2.5	66
<b>CHICHIRI</b>	29.4	18.9	33.3	14.0	1.0	69
<b>CHILEKA</b>	32.2	21.3	35.0	17.5	3.6	55
<b>CHITEDZE</b>	31.0	18.5	37.2	13.6	1.0	56
<b>CHITIPA</b>	28.1	18.0	30.9	17.2	1.7	69
<b>DEDZA</b>	26.3	16.5	28.5	13.6	1.4	68
<b>K I A</b>	28.1	17.8	30.1	14.5	1.9	60
<b>KARONGA</b>	31.7	23.7	33.3	22.0	1.9	64
<b>KASUNGU</b>	30.0	20.0	33.0	17.4	2.8	58
<b>MAKOKA</b>	29.5	18.8	33.0	15.4	1.9	60
<b>MANGOCHI</b>	N/A	22.5	N/A	19.0	2.2	50
<b>MIMOSA</b>	32.8	19.5	36.5	14.2	1.6	52
<b>MONKEY BAY</b>	33.0	23.7	35.3	19.8	2.7	57
<b>MZIMBA</b>	28.5	17.4	31.6	16.6	1.2	67
<b>MZUZU</b>	26.9	15.8	30.8	13.6	2.2	71
<b>NGABU</b>	37.2	23.5	41.2	19.1	3.2	60
<b>NKHATA BAY</b>	32.1	20.7	35.0	19.6	1.3	55
<b>NKHOTAKOTA</b>	30.9	22.0	33.7	20.6	N/A	62
<b>NTAJA</b>	32.7	21.6	35.0	17.2	2.7	59
<b>SALIMA</b>	31.5	23.3	34.5	21.1	2.6	58

**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