



# Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services



Period: 11 – 20 October 2011

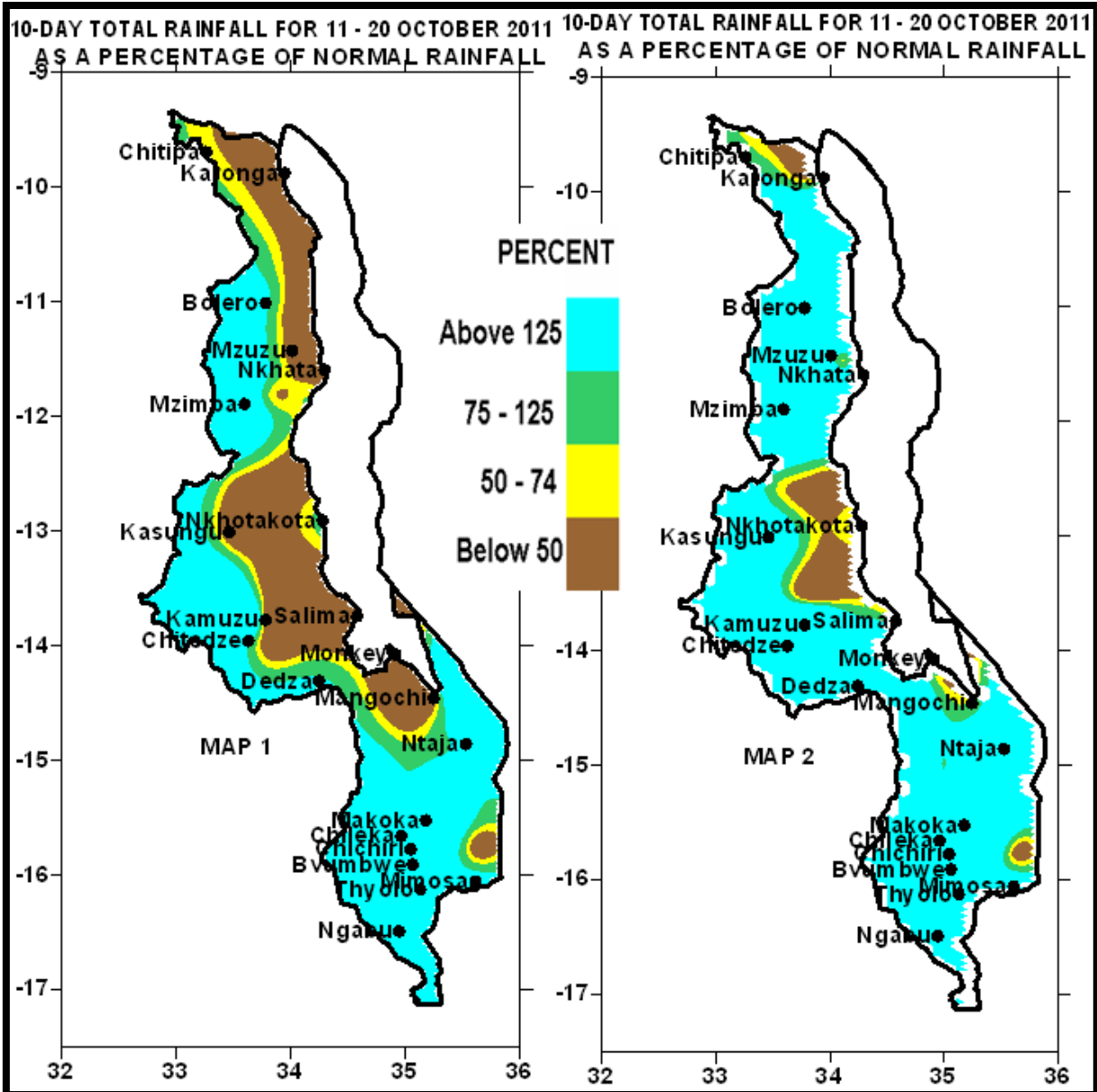
Season: 2011/2012

Issue No.2

Release date: 25 October 2011

## HIGHLIGHTS

- Pre-rains continued into first half of the period 11 – 20 October 2011...
- Land preparations was still the major on-farm agricultural activity ...
- Hot and dry weather expected over Malawi during 21 – 31 October 2011...



### 1.1 RAINFALL SITUATION

Some parts of Malawi continued to receive pre-rains that are locally referred to as Chizimalupsya during the first half of the second ten days of October 2011. These rains started during the first ten days of October 2011 and had persisted into the under review. The cumulative rainfall amounts for the period continued to be very much above average with most areas registering over 120 percent of the expected rainfall amounts (Map 2). Some parts of Malawi continued to register locally heavy rainfall amounts. Notable ones above 40mm included Neno Agric 51mm, Makoka 47mm, Masambanjati 45mm, Ngabu 44mm, Bvumbwe 42mm and Kasiya Agric in Lilongwe, 42mm. On the other hand throughout the period under review dry conditions persisted over some parts of the country including areas along the lakeshore. For more details see Table 1.

### 1.2 MEAN AIR TEMPERATURE

Air temperatures were still warm to hot over most areas during the second ten days of October 2011 except in lower Shire Valley where very hot temperatures were reported. The absolute maximum temperatures for Ngabu went as high as 42°C. Overall, mean maximum temperatures ranged between 26°C at Bvumbwe to 36°C at Ngabu while mean minimum temperatures ranged from around 15°C at Kamuzu International Airport to around 23°C at Salima. For more details see Table 2.

### 1.4 MEAN WIND SPEEDS

Mean wind speeds recorded at a height of two metres above the ground level across the country ranged from 1.1 to 3.5 metres per second or 3.96 – 12.6 Km/hr (see table 2). The highest wind speeds were reported at Ngabu and Chileka (3.5 m/s).

### 1.5 MEAN RELATIVE HUMIDITY

During the second ten days of October 2011, air over Malawi became relatively drier compared to the first ten days. Daily average relative humidity values were as low as 47% at Bolero. The highest average was 67%, recorded at Bvumbwe. Details are on the Table 1.

### 1.6 MEAN SUNSHINE HOURS

Mean daily sunshine duration across the country during the second ten days of October showed that the mean bright sunshine hours ranged from 5.5 hrs/day over Salima to 10.2 hrs/day at Karonga as shown in Table 2

## 2. AGROMETEOROLOGICAL ASSESSMENT

Locally heavy rains continued into the first half of the period under review. These rains which were pre-main rains continued to encourage farmers to speed up land preparations, improved water resources and maintained soil moisture reserves in some parts of the country especially over southern highlands. Reports from districts within southern highlands indicate good crop germination during the period under review. However, this crop was being threatened by high temperatures and scorching sun. These conditions are depleting very fast the available soil moisture reserves.

The decision to plant is usually done by the farmers themselves and in most cases in consultation with local Agricultural Extension Officers. Where farmers are in doubt as to when to plant they are encouraged to seek advice from officials of Ministry of Agriculture and Water Development.

The major on-farm agricultural activity during the period continued to be land preparation in readiness for the establishment of the main rain bearing systems for Malawi which are climatologically expected around mid-November for the south and some parts of the centre and in December for the north. Sometimes the country experiences uniform onset of the main rains.

## 3. PROSPECTS FOR 2011/12 RAINFALL SEASON

In summary of the 2011/2012 rainfall forecast is that ***“Normal total rainfall amounts are expected over most parts of Malawi from October 2011 to March 2012”***. The rainfall forecast indicates that from October to December 2011, the northern half of the country will receive normal to above normal total rainfall amounts while the southern half will experience normal to below normal total rainfall amounts. The greater part of the country will experience normal to above normal total rainfall amounts during January to March 2012.

This forecast is relevant only to seasonal time-scales and relatively large areas. It does not fully account for local and month to month variations in distribution of rainfall such as localised dry spells and flash floods.

The seasonal forecast is issued to users as a planning tool. For day to day operations, users are advised to make use of the available short and medium range forecasts and the 10-day Rainfall and Agrometeorological bulletin.

## 4. OUTLOOK 21 – 31 OCTOBER 2011

Short and medium range forecasts indicate that warm and dry north easterly airflow will cover most parts of Malawi. Therefore expect plenty of sunshine and high day and night temperatures during the last ten days of October 2011.

**TABLE 1: DEKADAL RAINFALL SUMMARY FOR 11 – 20 OCTOBER 2011 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 TO DATE AS % NORMAL	RAINY DAYS ≥ 0.3 mm
<b>SOUTHERN REGION</b>							
Balaka Township	10.5	9.9	106	10.5	11.3	93	1
Bvumbwe Met.	41.6	8.5	489	61.4	12.8	480	4
Chichiri Met.	29.5	29.2	101	74.0	57.9	128	2
Chileka Airport	24.9	9.3	268	25.0	12.3	203	4
Chingale Agric	18.8	5.1	369	64.8	8.1	800	3
Mpilipili (Makanjila)	0.0	6.8	0	0.0	7.7	0	0
Makoka Met	47.4	9.2	515	102.1	11.7	873	2
Mangochi Met.	0.0	4.6	0	5.6	7.9	71	0
Masambanjati Agric	44.6	10.6	421	46.7	21.3	219	3
Mimosa Met.	37.2	17.2	216	82.8	29.7	279	4
Monkey Bay Met.	0.0	0.8	0	0.0	1.5	0	0
Mpemba Vet	21.7	12.3	176	21.7	18.1	120	2
Mulanje Boma	33.4	36.8	91	60.1	61.4	98	2
Mwanza Boma	27.1	14.5	187	32.2	21.8	148	2
Namiasi Agric	0.0	3.2	0	0.0	4.9	0	0
Naminjiwa Agric	0.0	6.5	0	0.0	8.7	0	0
Namwera Agric	11.1	1.9	584	11.1	3.9	285	1
Neno Agric	51.4	10.8	476	126.4	15.0	843	3
Ngabu Met.	43.7	6.6	662	45.7	9.8	466	3
Nsanje Boma	31.6	15.4	205	31.6	20.7	153	2
Ntaja Met.	3.9	2.9	134	17.6	5.2	338	2
Phalula Agric	13.8	9.7	142	18.3	13.3	138	1
Thyolo Met	26.3	11.9	221	46.3	20.7	224	2
Zomba RTC	23.1	8.4	275	51.1	11.4	448	1
<b>CENTRAL REGION</b>							
Chitedze Met.	1.3	3.2	41	11.0	4.4	250	3
Dedza Met	8.3	5.1	163	65.4	6.4	1022	3
Dowa Agric	0.0	1.1	0	1.8	2.2	82	0
Dwangwa	0.0	3.1	0	0.0	4.7	0	0
Dzonzi Forest	18.5	9.7	191	46.0	13.8	333	3
K.I.A Met	0.0	2.4	0	21.1	2.8	754	0
Kasiya Agric	42.2	7.1	594	42.2	14.7	287	2
Kasungu Met	0.0	1.1	0	4.2	1.3	323	0
Lifuwu	0.0	1.2	0	0.0	1.8	0	0
Mponela Agric	0.0	1.4	0	0.0	1.5	0	0
Nkhotakota Met	2.4	1.9	126	3.1	2.8	111	1
Salima Met	0.0	3.9	0	0.1	4.7	2	0
<b>NORTHERN REGION</b>							
Baka Res. Stn.	0.0	0.8	0	0.0	0.8	0	0
Bolero Met	3.6	1.8	200	10.6	2.1	505	1
Bwengu Agric.	0.0	5.6	0	7.2	5.8	124	0
Chikangawa forest	3.0	5.1	59	26.0	5.7	456	1
Chitipa Met	0.6	1.0	60	1.0	1.0	100	1
Chintheche Agric	3.7	4.2	88	30.0	6.7	448	1
Emfeni Agric	0.0	0.6	0	0.0	0.8	0	0
Karonga Met.	0.0	0.5	0	0.0	0.5	0	0
Lupembe	0.0	0.5	0	2.0	0.5	400	0
Mbawa Res. Stn	4.9	1.5	327	9.6	2.3	417	2
Mzimba Met	6.1	1.4	436	7.5	1.6	469	3
Mzuzu Met.	3.3	18.5	18	166.7	25.4	656	2
Nkhatabay Met.	0.0	7.8	0	41.2	8.7	474	0
Rumpho Boma	0.0	1.9	0	0.0	2.2	0	0

**TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 – 20 OCTOBER 2011**

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %	SUN SHINE HOURS	Eo mm per day	Et mm per day	RAD- TION cal cm <sup>-2</sup> p/day
BOLERO	31.3	21.1	33.8	19.7		40	7.1	6.6	5.2	9.0
BVUMBWE	26.3	16.6	30.9	14.0	1.8	63	7.3	6.3	5.0	9.0
CHILEKA	30.3	19.7	33.8	17.5	3.5	59	7.8	7.6	6.2	9.3
CHITEDZE	30.3	16.7	33.1	15.6	1.1	56	7.3	6.5	5.2	9.1
CHITIPA	30.6	19.5	32.8	18.6	3.4	48	8.8	8.2	6.6	10.1
K I A	28.5	15.4	31.4	11.5	2.0	52	7.8	6.8	5.4	9.4
KARONGA	32.8	22.0	33.8	20.7	2.0	48	10.2	8.6	6.9	11.1
MAKOKA	28.7	17.4	32.7	16.0	1.4	66	N/A	N/A	N/A	N/A
MANGOCHI	32.7	22.4	35.7	20.9	2.0	56	8.1	7.8	6.3	9.6
MONKEY BAY	32.2	22.9	34.0	21.9	2.2	53	9.1	8.3	6.7	10.2
MZIMBA	29.3	18.5	32.1	17.0	1.7	54	7.8	7.0	5.6	9.5
MZUZU	27.0	15.6	28.6	13.5	1.6	60	8.1	6.6	5.1	9.6
NGABU	36.0	20.2	41.8	14.6	3.5	55	N/A	N/A	N/A	N/A
NKHATA BAY	32.6	19.0	34.2	18.0	1.1	61	8.5	7.3	5.8	9.9
NKHOTAKOTA	31.2	22.2	34.0	21.3	2.4	54	8.4	8.1	6.6	9.8
NTAJA	31.5	20.1	35.2	19.2	2.4	54	N/A	N/A	N/A	N/A
SALIMA	32.4	22.6	35.1	20.9	2.1	56	5.5	6.8	5.6	7.9

**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