



# Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services



Period: 11 – 20 April 2010

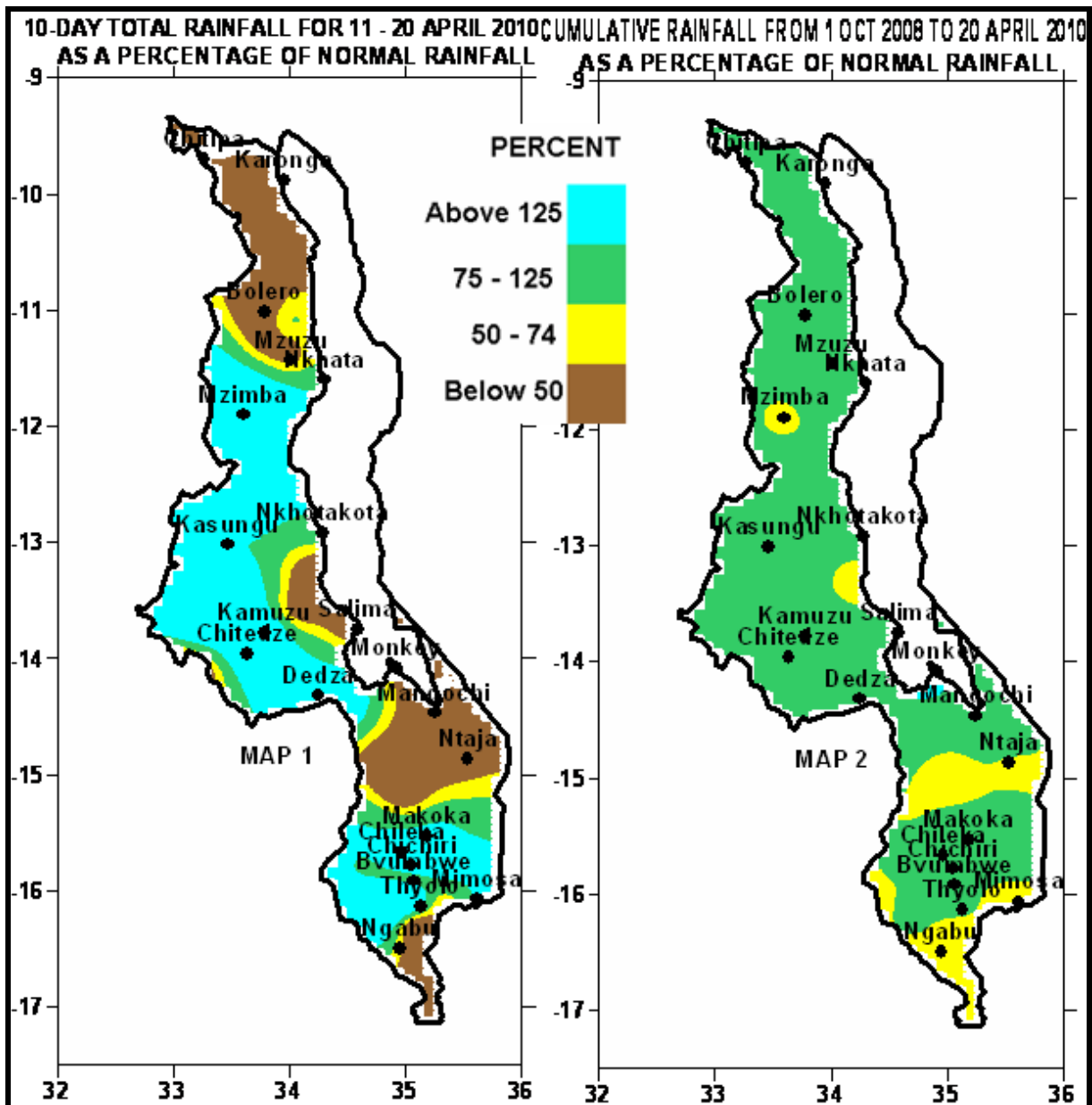
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## HIGHLIGHTS

- Wet conditions returned to most areas during 11 – 20 April 2010...
- Wet weather hindered harvesting and drying of matured crops...
- Light to moderate rainfall to continue during 21 – 30<sup>th</sup> April 2010 ...



## 1. WEATHER SUMMARY

### 1.1 RAINFALL SITUATION

During the period 11 – 20 April 2010, the greater part of Malawi received above average rainfall amounts (light blue colour on Map 1) except over the extreme north, around Salima in the centre, Mangochi, Machinga and Chikhwawa and Nsanje in the shire valley (yellow and brown colours in Map 1). Generally most areas registered light to moderate rainfall amounts ranging from 0 to 50mm. Areas that recorded rainfall exceeding 70mm included Kasinthula and Mimosa in the south and Kavuzi Rosefalls and Nkhata Bay (Mkondezi) in the north.

Cumulative rainfall performance continued to improve. As at 20<sup>th</sup> April 2010, the greater part of Malawi had received over three quarters of the long term average rainfall amounts (depicted by green colour on Map 2). Pockets of below average rainfall performance still existed in Chikhwawa and Nsanje districts in Southern Malawi and around Mzimba in the north.

### 1.2 MEAN AIR TEMPERATURE

Warm to hot temperatures continued to be experienced over most areas. As usual low altitude areas continued to register high temperatures while lower temperatures were confined over higher altitudes. Ngabu in Shire valley reported the highest absolute maximum temperature of 39°C and the lowest absolute minimum temperature was reported at Dedza (13°C). (See Table 2 for more details).

### 1.4 MEAN WIND SPEEDS

Mean wind speeds continued to be generally low during the second ten of April 2010. The lowest mean wind speed was 0.6m/s (2.2 Km/h), reported at Nkhata Bay while the highest wind speed was 3.2m/s (11.5 Km/h) recorded at Chitipa (Refer to Table 2 for more details).

### 1.5 MEAN RELATIVE HUMIDITY

During the period under review, average relative humidity (RH) values over Malawi ranged from 56% at Monkey Bay to 83% over Mzuzu. (Table 2).

## 2. AGROMETEOROLOGICAL ASSESSMENT

Fairly wet weather was experienced over most areas in the second ten days of April, 2010. This supported growth and development of the late planted crops, root and tuber crops as well as replenished water resources. On the other hand, wet weather hindered harvesting and drying of matured crops and this is likely increase losses of field crops. In most parts of Malawi crops have reached maturity and drying stages and require more sunshine for proper drying. However, there is a small proportion of late planted crop that still needs moisture for it to reach full physiological maturity.

Results from the Crop Water Requirement Satisfaction Index (WRSI) model suggest that most farmers in Chikhwawa and Nsanje are not expected to harvest anything from the rain-fed crop. However, the overall crop production at national level would be enough for domestic consumption as well as reasonable surplus. Household food shortages are expected to be confined to districts which were most hit by prolonged dry spells.

## 3. RAINFALL PROSPECTS FOR APRIL TO JUNE 2010

As the main rainfall season comes to an end, Easterly waves are expected to maintain locally heavy rains in some parts of Malawi especially during the better part of April before incursions of cool and moisture air bring chiperoni weather. Therefore, expect light to moderate rainfall to continue particularly over highlands and along the lakeshore districts during May and June 2010.

## 4. OUTLOOK FOR 21 – 30 April 2010

Medium range model projections suggest that a series of high pressure areas passing over South Africa will maintain an influx of easterly waves and local convergences over Malawi. Therefore expect light to moderate rainfall to continue over most areas of Malawi during the last ten days of April 2010.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 11 – 20 APRIL 2010 AT SELECTED STATIONS

STATION NAME	DEKADAL TOTAL RAINFALL (mm)	DEKADAL NORMAL RAINFALL (mm)	RAINFALL DEKADAL TOTAL (%)	TOTAL TO DATE (mm)	NORMAL TO DATE (mm)	RAINFALL TOTAL TODATE (%)	RAINY DAYS ≥ 0.3 mm
<b>SOUTHERN REGION</b>							
Balaka Township	0.0	11.8	0	398.5	842.7	47	0
Bvumbwe Met.	10.9	19.6	56	988.0	1066.4	93	4
Chichiri Met.	57.0	21.1	270	1223.5	1078.6	113	4
Chikwawa Boma	12.8	8.1	158	533.3	743.3	72	4
Chileka Airport	32.7	16.7	196	824.2	863.6	95	1
Kasinthula Res. Stn.	96.8	12.4	781	952.0	697.7	136	4
Mpilipili (Makanjila)	0.0	8.3	0	616.7	872.3	71	0
Makoka Met	24.4	14.1	173	977.9	949.1	103	2
Mangochi Met.	3.9	9.4	41	780.6	692.9	113	2
Mimosa Met.	74.8	43.6	172	1017.0	1375.4	74	3
Monkey Bay Met.	1.3	3.3	39	878.1	561.4	156	1
Mpemba Vet	18.6	18.5	101	1353.3	1091.1	124	4
Mulanje Boma	52.2	52.8	99	984.3	1659.1	59	3
Namiasi Agric	0.0	3.2	0	574.1	740.8	77	0
Nchalo Sucoma	10.4	10.2	102	417.3	634.5	66	4
Neno Agric	28.4	21.2	134	792.2	1068.6	74	4
Ngabu Met.	6.6	13.6	49	469.9	736.3	64	1
Nsanje Boma	6.9	26.2	26	632.3	1048.4	60	1
Ntaja Met.	3.7	14.0	26	638.9	872.4	73	1
Phalula Agric	3.0	12.7	24	614.7	811.8	76	1
Satemwa Tea Es	43.0	24.4	176	995.6	1049.3	95	6
Thuchila Agric	24.6	15.6	158	673.5	856.2	79	3
Thyolo Met	12.9	19.6	66	952.5	1157.4	82	4
<b>CENTRAL REGION</b>							
Chileka Namitete	6.0	17.8	34	687.8	907.3	76	1
Chitedze Met.	23.9	9.0	266	870.1	868.0	100	1
Dedza Met	16.9	10.3	164	920.4	915.1	101	4
Dowa Agric	6.0	9.6	63	842.9	869.5	97	1
K.I.A Met	4.3	1.6	269	648.8	832.0	78	3
Kasungu Met	8.4	5.6	150	769.9	766.4	100	2
Malomo Agric	2.5	2.5	100	740.7	810.9	91	1
Mchinji Boma	2.0	15.3	13	982.6	993.2	99	2
Mkanda Met	24.5	3.4	721	1030.2	856.7	120	1
Nkhotakota Met	55.6	56.1	99	1407.7	1397.8	101	3
Ntcheu - Nkhande	6.8	16.8	40	1028.6	1027.8	100	2
Ntchisi Boma	0.0	24.8	0	664.2	1213.8	55	0
Salima Met	10.6	27.6	38	1152.4	1195.8	96	2
Dedza RTC	19.8	6.4	309	1026.8	973.9	105	3
<b>NORTHERN REGION</b>							
Baka Res. Stn.	14.3	76.4	19	917.2	1276.8	72	2
Bolero Met	0.1	10.8	1	601.9	624.9	96	0
Bwengu Agric.	15.4	17.5	88	566.6	751.4	75	1
Chitipa Met	0.0	17.4	0	1016.5	935.8	109	0
Karonga Met.	1.6	59.2	3	837.2	954.9	88	0
Kavuzi Rosefalls	76.0	112.9	67	1457.6	1474.1	99	7
Mzimba Met	46.7	13.9	336	608.0	876.2	69	4
Mzuzu Met.	24.3	65.6	37	1040.3	1031.0	101	4
NkhataBay Met.	98.6	96.0	103	1067.4	1311.9	81	5
Zombwe Agric	3.6	19.0	19	621.3	735.9	84	2

**TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 – 20 APRIL 2010**

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED (m/s)	RELATIVE HUMIDITY (%)
BOLERO	30.1	17.0	32.6	16.0	N/A	62
BVUMBWE	24.1	17.0	29.5	14.5	1.6	74
CHILEKA	28.1	19.1	31.9	16.9	2.6	74
CHITEDZE	27.5	16.6	30.5	15.2	0.8	74
CHITIPA	28.7	18.7	30.8	16.8	3.2	66
DEDZA	24.0	15.4	26.6	13.3	1.2	79
K I A	26.8	15.2	29.2	13.6	1.7	72
KARONGA	31.7	22.5	32.5	21.5	1.7	69
KASUNGU	28.8	17.5	32.0	16.4	1.4	72
MAKOKA	28.7	17.3	30.5	16.1	1.2	82
MANGOCHI	N/A	21.2	N/A	20.3	1.5	77
MIMOSA	29.6	18.5	34.2	17.0	0.9	74
MONKEY BAY	31.6	21.1	33.7	20.2	1.6	56
MZIMBA	28.0	17.4	31.2	16.5	1.2	72
MZUZU	25.1	17.3	27.9	15.6	1.5	83
NGABU	34.6	22.3	38.9	19.0	1.6	67
NKHATA BAY	30.6	20.8	32.4	20.1	0.6	79
NTAJA	28.9	20.2	23.5	19.0	1.2	77
SALIMA	29.7	21.6	32.3	20.3	2.1	70

**Glossary of some terms on this table**

- 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 (m/s) to Kilometers per hour (Km/h) = m/s x 3.6