



Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services



Period: 01 – 10 April 2010

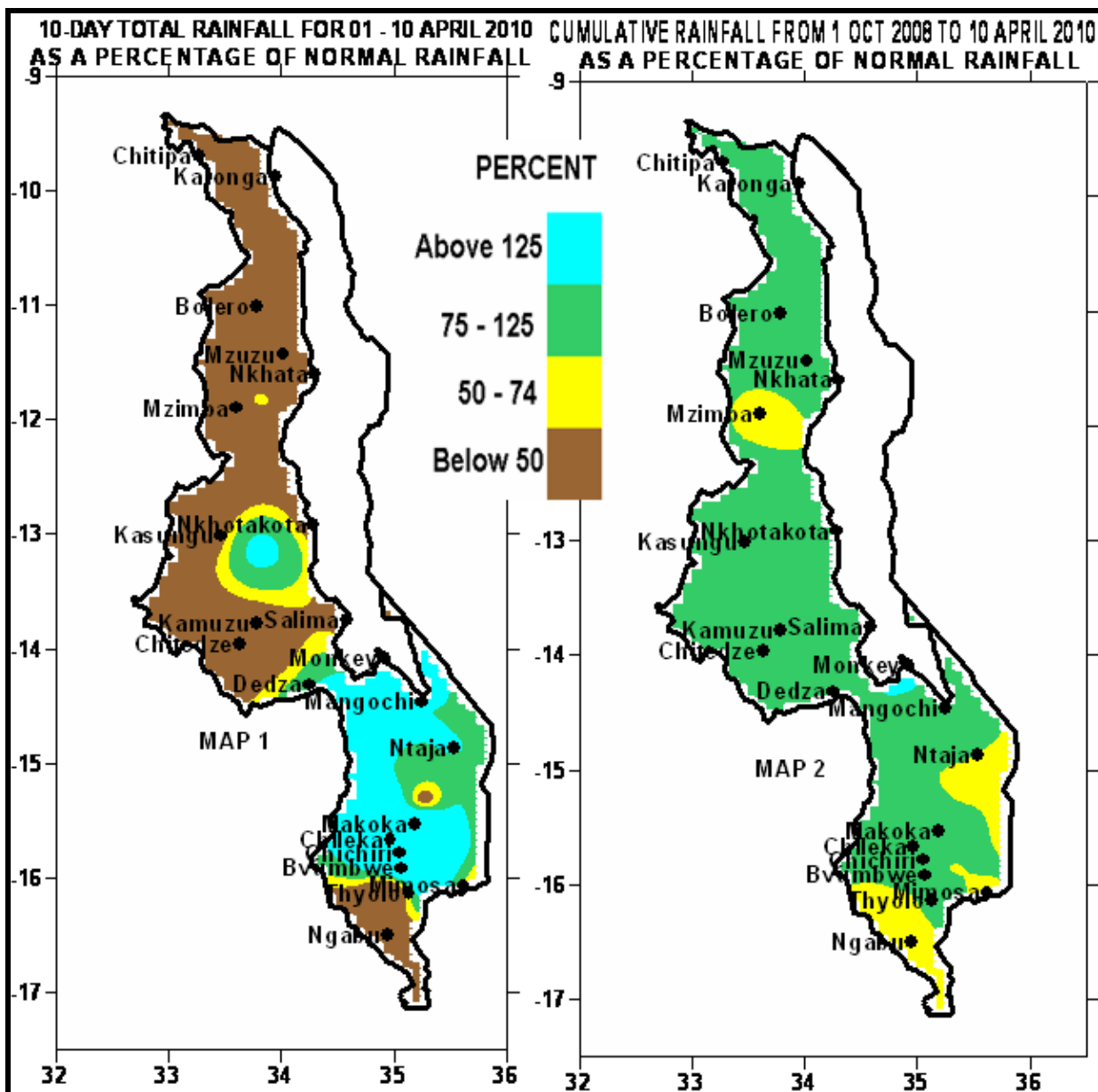
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HIGHLIGHTS

- Mostly wet south, dry centre and north during 01 – 10 April 2010...
- Dry weather facilitated harvesting and drying of matured crops...
- Light to moderate rainfall expected during 11 – 20th April 2010 ...



1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the first ten days of April 2010, dry weather (yellow and brown colours on Map 1) returned to central and northern of Malawi and above average rainfall amounts (light blue colour on Map 1) were received in most parts of the south except in Chikhwawa and Nsanje in the shire valley. Otherwise, light to moderate rainfall was received rainfall and very few areas reported rainfall exceeding 90mm and these included Makoka 128mm and Mpemba 99mm in southern Malawi.

There has been significant improvement in cumulative rainfall performance over Malawi. As at 10th April 2010, most areas in Malawi had received over three quarters of the long term average rainfall amounts for the period (depicted by green colour on Map 2). Pockets of rainfall deficits 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 were experienced over most areas during the period under review. High temperatures continued in low altitude areas while lower temperatures were confined over higher altitudes. Ngabu in Shire valley reported the highest daily average maximum temperature of 37°C. On the other hand, lowest absolute minimum temperature was reported at Kamuzu Internatuonal Airport (14°C). (See Table 2 for more details).

1.4 MEAN WIND SPEEDS

Low mean wind speeds continued to prevail over Malawi during the first 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 2.9 m/s (10.4 Km/h) recorded at Chitipa (Refer to Table 2 for more details).

1.5 MEAN RELATIVE HUMIDITY

Most areas continued to report high daily average relative humidity (RH) values. The highest relative humidity value was 81% reported at Makoka while the lowest mean relative

humidity value of 63% was reported at Monkey Bay in Mangochi district. (Table 2).

2. AGROMETEOROLOGICAL ASSESSMENT

Fairly dry conditions that were experienced in the first ten days of April had facilitated drying and harvesting of matured crops. In most parts of Malawi crops have reached maturity and drying stages and more sunshine is needed for proper drying. However, there is a small proportion of late planted crop that still needs moisture for it to reach full maturity. The rainfall that was received during the first ten days of April supported growth and development of the late planted crop, root and tuber crops as well as replenish water resources. On the other hand, wet weather hindered harvesting and drying of matured crops and this would increase field losses.

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

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 11 – 20 April 2010

Medium range model projections suggest that easterly waves and local convergence will influence rainfall over Malawi. Therefore expect light to moderate rainfall to continue during the second ten days of April 2010.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 01 – 10 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
SOUTHERN REGION							
Bvumbwe Met.	75.8	30.7	247	977.1	1046.8	93	5
Chichiri Met.	58.2	29.0	201	1166.5	1057.5	110	5
Chikwawa Boma	9.8	21.2	46	520.5	735.2	71	3
Chileka Airport	61.9	20.0	310	791.5	846.9	93	4
Chingale Agric	16.4	25.9	63	720.4	889.1	81	3
Chiradzulu Agric	85.6	22.4	382	863.4	941.9	92	4
Chizunga Factory	6.0	54.5	11	1098.0	1257.8	87	4
Kasinthula Res. Stn.	36.5	18.1	202	855.2	685.3	125	1
Liwonde Township	18.0	24.1	75	564.2	785.2	72	1
Lujeri Tea Estate	37.1	106.5	35	1434.3	1850.5	78	5
Mpilipili (Makanjila)	0.0	18.5	0	616.7	864.0	71	0
Makoka Met	128.3	30.7	418	953.5	935.0	102	5
Mangochi Met.	38.3	20.2	190	776.7	683.5	114	3
Mimosa Met.	54.5	63.8	85	942.2	1331.8	71	5
Monkey Bay Met.	3.2	6.5	49	876.8	558.1	157	3
Mpemba Vet	98.9	32.1	308	1334.7	1072.6	124	5
Namiasi Agric	23.9	4.6	520	574.1	737.6	78	3
Namwera Agric	35.6	34.5	103	842.5	1006.7	84	3
Nchalo	0.0	18.9	0	406.9	624.3	65	0
Ngabu Met.	0.0	17.9	0	463.3	722.7	64	0
Nsanje Boma	0.0	21.7	0	625.4	1022.2	61	0
Ntaja Met.	43.7	31.2	140	635.2	858.4	74	2
Satemwa Tea Est	13.5	46.5	29	952.6	1024.9	93	5
Thuchila Agric	79.4	25.5	311	648.9	840.6	77	2
Thyolo Met	29.8	30.7	97	939.6	1137.8	83	4
CENTRAL REGION							
Chileka Namitete	0.0	27.9	0	681.8	889.5	77	0
Chitedze Met.	3.5	29.3	12	846.2	859.0	99	2
Dedza Met	29.0	25.6	113	903.5	904.8	100	5
Dwangwa Sugar Corp.	1.0	92.8	1	975.6	1228.9	79	1
Kaluluma DTC	0.0	24.6	0	741.0	789.3	94	0
K.I.A Met	1.4	19.6	7	644.5	830.4	78	2
Kasungu Met	5.5	17.6	31	761.5	760.8	100	1
Malomo Agric	29.2	16.3	179	738.2	808.4	91	4
Mchinji Boma	5.6	29.3	19	980.6	977.9	100	2
Nathenje Agric	6.5	44.0	15	1040.5	840.3	124	1
Nkhotakota Met	13.3	97.1	14	1352.1	1341.7	101	2
Ntcheu - Nkhande	25.8	19.0	136	1021.8	1011.0	101	5
Ntchisi Boma	35.0	47.4	74	664.2	1189.0	56	3
Salima Met	14.7	44.8	33	1141.8	1168.2	98	1
Dedza RTC	41.0	22.5	182	1007.0	967.5	104	3
NORTHERN REGION							
Bolero Met	2.5	18.2	14	601.8	614.1	98	1
Bwengu Agric.	2.7	21.7	12	551.2	733.9	75	1
Chikangawa forest	44.7	70.3	64	728.3	1039.0	70	7
Chitipa Met	0.0	37.9	0	1016.5	918.4	111	0
Karonga Met.	1.3	88.0	1	835.6	895.7	93	0
Kavuzi Rosefalls	20.7	155.8	13	1381.6	1361.2	101	4
Mzimba Met	1.4	23.5	6	561.3	862.3	65	1
Mzuzu Met.	19.0	89.2	21	1016.0	965.4	105	4
NkhataBay Met.	17.0	133.0	13	968.8	1215.9	80	7
Zombwe Agric	0.0	36.0	0	617.7	716.9	86	0

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 01 – 10 APRIL 2010

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED (m/s)	RELATIVE HUMIDITY (%)
BVUMBWE	21.1	18.4	28.2	18.6	1.6	78
CHICHIRI	28.1	18.9	29.5	18.0	1.6	71
CHILEKA	29.2	21.0	30.6	20.4	2.5	77
CHITEDZE	27.7	17.7	28.7	16.3	0.8	76
CHITIPA	28.0	18.9	28.8	18.4	2.9	70
DEDZA	24.1	16.4	24.9	15.0	1.4	74
K I A	26.6	16.2	27.6	14.0	1.8	74
KARONGA	32.0	23.3	33.0	22.5	2.0	66
KASUNGU	28.6	18.2	30.1	17.4	1.5	75
MAKOKA	27.9	18.8	29.3	17.6	1.0	81
MANGOCHI	N/A	21.8	N/A	20.0	0.8	70
MIMOSA	31.2	19.4	33.5	17.6	0.9	72
MONKEY BAY	32.2	22.3	33.0	20.9	1.1	63
MZIMBA	27.7	17.8	29.2	16.3	1.7	70
MZUZU	25.6	18.0	26.3	16.2	1.5	77
NGABU	36.7	24.4	38.1	23.1	1.9	64
NKHATA BAY	31.5	20.6	32.2	19.4	0.6	78
NKHOTAKOTA	30.0	22.6	31.5	21.6	N/A	71
NTAJA	30.6	21.2	31.7	20.5	1.4	74
SALIMA	30.2	22.4	31.0	21.6	1.1	67

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