



Malawi 10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services



Period: 11 – 20 March 2009

Season: 2008/2009

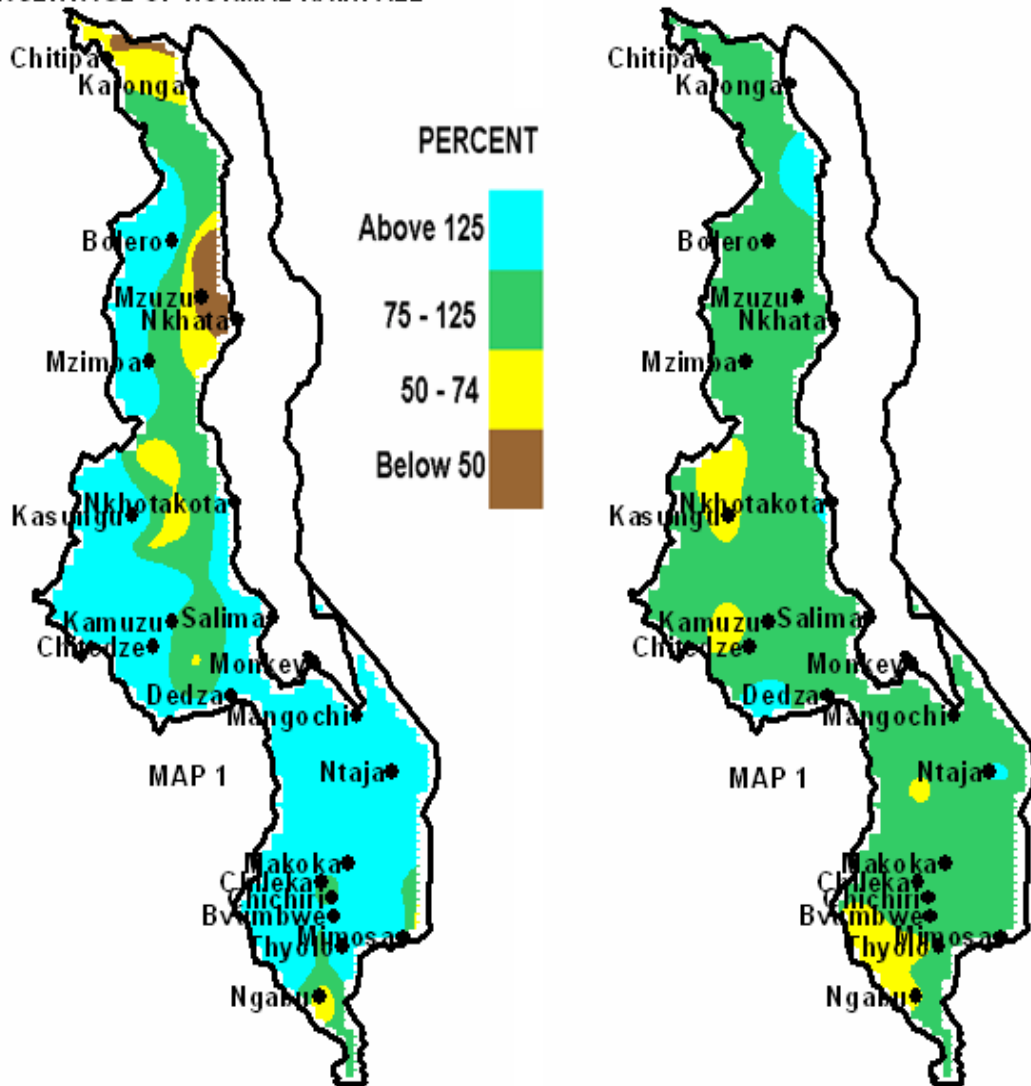
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HIGHLIGHTS

- Wet weather returned to most areas in Malawi...
- Maize crop was at maturity, drying and harvesting stages
- Wet weather likely to persist during 21 – 31 March, 2009.....

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



1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the second ten days of March 2009, a high pressure area off south coast of the Republic of South Africa anchored an active convergence zone over central and southern Malawi especially towards the end of the period. As a result persistent moderate to heavy rains soaked most areas and floods were reported in the lower Shire districts of Nsanje and Chikwawa. Most areas in the south and centre experienced above average cumulative rainfall performance (**light blue colour on Map 1**). Stations that reported ten day cumulative rainfall amounts of between 150 and 230mm included Chikwawa Boma, Kasitthula Research, Liwonde Township, Mulanje Boma, Neno Agric and Zomba RTC in the south and in the centre such figures were reported at Mkanda Agric in Mchinji and Nkhotakota Met. However, most stations in the north reported ten days rainfall amounts of less than 90mm. More details are in Table 1.

Cumulative rainfall situation map 2 shows that by 20th March 2009 most areas in Malawi had received normal rainfall amounts (**green colour on Map 2**) with pockets of below average cumulative rainfall (**yellow colour on Map 2**) particularly around Chikwawa in the south and Kasungu in the centre...

1.2 MEAN AIR TEMPERATURE

During the second ten days of March 2009 daily average maximum temperatures over Malawi ranged from 23 to 33°C. The highest average maximum temperature was reported at Ngabu in lower Shire Valley while Dedza Met reported the lowest average maximum temperature. The lowest absolute minimum temperatures were in the range of 14 to 22°C. See details in Table 2.

1.3 MEAN DAILY WIND SPEEDS

Average daily wind speeds recorded at two meters above the ground continued to be light. The highest average wind speed was still observed at Chileka International Airport in Blantyre (2.2m/s or 7.9Km/hr). More details are in Table 2.

1.4 MEAN RELATIVE HUMIDITY

Daily average relative humidity values during the period under review ranged from 64% at Mimosa

to 87% at Nkhata Bay. Persistent humid conditions are conducive for high incidences of fungal diseases.

2. AGROMETEOROLOGICAL ASSESSMENT

In second ten days of March, 2009, above average rainfall performance was experienced over central and southern Malawi. The wet weather brought relief to areas that were experiencing soil moisture stress due to prolonged dry spells. In fact areas like lower Shire Valley moved from dry spell to floods and water logging soil conditions. The rains were good for growth and development of roots and tuber crops. However, in most parts of the south and centre where most crops had reached maturity and drying stages and required more sunshine, the return of wet weather hampered harvesting and drying of matured crops. At the same time the rains would provide enough residual soil moisture to support planting of winter crops

The general crop stand in the fields was reported generally in good condition. Maize crop which is the staple food crop for Malawi was reported at mostly drying stage and harvesting had started in some parts of the south. Generally no major incidences of pests and diseases had been experienced reported. There are high prospects of another good harvest this season. This could be mainly attributed to the Government of Malawi fertiliser and input subsidy programme and good rainfall performance.

3. PROSPECTS OF 2008/09 SEASON

Climate prediction models continue to indicate weak La Nina to ENSO neutral conditions in the next few months. The models still suggest that above normal to normal rainfall amounts are expected over the greater part of Malawi during March to May 2009.

4. OUTLOOK FOR 21 – 31 MARCH 2009

Short to medium-term weather forecasts for Malawi indicate active convergence zone lying over southern and central Malawi during the first two to three days, gradually shifting to northern Malawi mid way through the period before covering the entire country on 30 and 31st March 2009. Therefore wet weather is likely to persist particularly over central and northern Malawi during the period 21 to 31st March 2009.

**TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR
DEKAD 2 OF MARCH 2009: PERIOD 11 - 20**

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 ³ 0.3 mm
SOUTHERN REGION							
Balaka Township	33.5	31.6	106	488.5	752.0	65	3
Bvumbwe Met.	101.5	63.1	161	1142.0	937.2	122	5
Chichiri Met.	62.7	65.0	96	992.9	952.1	104	6
Chikwawa Boma	157.0	47.7	329	451.9	662.6	68	4
Chileka Airport	40.8	56.5	72	761.3	793.2	96	4
Chiradzulu Agric	98.7	52.0	190	790.7	929.4	85	5
Kasinthula Res. Stn.	206.0	29.6	696	564.2	646.0	87	2
Liwonde Township	175.0	45.6	384	743.8	754.8	99	4
Lujeri Tea Estate	99.7	146.5	68	1517.0	1612.8	94	5
Mpilipili (Makanjila)	89.2	N/A	N/A	1043.9	N/A	N/A	6
Makoka Met	107.2	52.0	206	992.2	905.1	110	7
Mangochi Met.	123.6	48.2	256	656.4	752.2	87	5
Masambanjati Agric	62.0	74.7	83	924.7	1123.7	82	2
Mimosa Met.	92.7	99.9	93	1312.5	1210.9	108	5
Monkey Bay Met.	134.0	18.6	720	960.0	870.4	110	6
Mpemba Vet	114.8	70.9	162	1141.5	1023.7	112	4
Mulanje Boma	168.7	81.6	207	1066.8	1333.1	80	4
Naminjiwa Agric	43.0	44.2	97	1032.1	859.9	120	1
Nchalo Sucoma	32.5	19.4	168	469.1	608.0	77	2
Neno Agric	180.0	33.3	541	1102.8	1004.5	110	5
Ngabu Met.	16.4	41.2	40	502.3	686.2	73	2
Nsanje Boma	45.6	37.8	121	703.1	761.7	92	3
Ntaja Met.	104.7	45.9	228	1020.9	786.8	130	6
Satemwa	60.1	83.4	72	669.7	1101.4	61	4
Thyolo Met	83.4	74.2	112	1000.6	990.0	101	5
Zomba R.T.C	182.4	74.4	245	1011.0	1072.3	94	6
CENTRAL REGION							
Chileka Namitete	125.8	44.6	282	534.2	827.0	65	6
Chitedze Met.	91.8	46.8	196	729.3	815.4	89	5
Dedza Met	71.1	42.9	166	902.0	849.3	106	9
Kaluluma DTC	28.3	50.3	56	475.1	736.9	64	3
K.I.A Met	55.2	44.6	124	740.6	772.0	96	6
Kasiya Agric	143.4	39.7	361	567.4	871.0	65	8
Kasungu Met	76.9	36.9	208	549.1	805.7	68	7
Lisasadzi	19.3	33.7	57	543.3	752.8	72	4
Malomo Agric	26.8	46.7	57	828.2	761.3	109	5
Mchinji Boma	108.9	56.7	192	1125.7	919.1	122	7
Mkanda Met	228.2	40.3	566	1026.9	815.2	126	7
Mponela Agric	73.5	41.4	178	793.9	750.7	106	6
Mwimba Research	89.0	32.6	273	608.5	856.6	71	4
Mtakataka Airwing	49.4	33.5	147	1254.6	758.9	165	6
Nathenje Agric	27.0	51.4	53	896.5	795.0	113	5
Nkhotakota Met	219.9	132.4	166	1506.6	1150.0	131	8
Ntcheu - Nkhonde	44.5	47.7	93	1114.1	969.2	115	6
Ntchisi Boma	67.2	44.2	152	916.7	777.4	118	5
Salima Met	144.6	77.8	186	1122.7	1100.8	102	6
Dedza RTC	90.3	49.2	184	890.9	900.7	99	7
NORTHERN REGION							
Bolero Met	73.2	38.1	192	630.6	665.8	95	4
Bwengu Agric.	19.0	52.6	36	574.4	729.2	79	2
Chitipa Met	38.3	72.8	53	673.6	872.2	77	5
Karonga Met.	51.4	91.2	56	894.2	753.8	119	5
Mbawa Res. Stn	114.2	44.6	256	755.2	765.7	99	5
Mzimba Met	53.5	47.2	113	659.1	797.6	83	8
Mzuzu Met.	24.7	62.6	39	690.8	893.3	77	7
NkhataBay Met.	19.2	49.9	38	946.2	1096.4	86	7

Vinthukutu Agric	91.6	93.0	98	1576.3	829.9	190	6
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**TABLE 2: AGROMETEOROLOGICAL PARAMETERS
FOR DEKAD 2 OF MARCH 2009**

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
BOLERO	28.4	16.9	30.2	15.5	N/A	81
BVUMBWE	25.0	17.3	26.5	16.0	1.7	81
CHICHIRI	25.7	17.5	27.8	16.2	1.0	77
CHILEKA	28.2	19.8	30.1	17.6	2.2	78
CHITEDZE	26.9	17.9	28.7	16.2	0.5	80
CHITIPA	26.4	17.2	28.4	15.2	1.1	78
DEDZA	23.2	15.4	25.4	14.1	1.0	83
K.I.A.	26.1	17.7	27.2	15.9	1.3	77
KARONGA	29.2	21.9	30.5	21.5	0.6	78
KASUNGU	27.9	18.9	30.2	17.6	1.1	78
MAKOKA	26.9	18.1	29.3	16.2	1.0	82
MANGOCHI	N/A	21.9	N/A	21.1	1.3	77
MIMOSA	28.3	18.4	31.4	16.4	0.9	64
MZIMBA	27.3	17.0	29.5	15.6	0.6	78
MZUZU	25.7	16.9	28.4	15.0	1.6	83
NGABU	33.3	22.8	35.0	21.8	1.6	77
NKHATA BAY	28.9	20.8	31.0	20.1	0.5	87
NKHOTAKOTA	27.2	21.5	29.1	20.3	N/A	91
NTAJA	27.9	20.5	31.1	19.5	1.1	81
SALIMA	27.9	21.8	30.1	20.2	0.9	81

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) = mps x 3.6