Malawi 10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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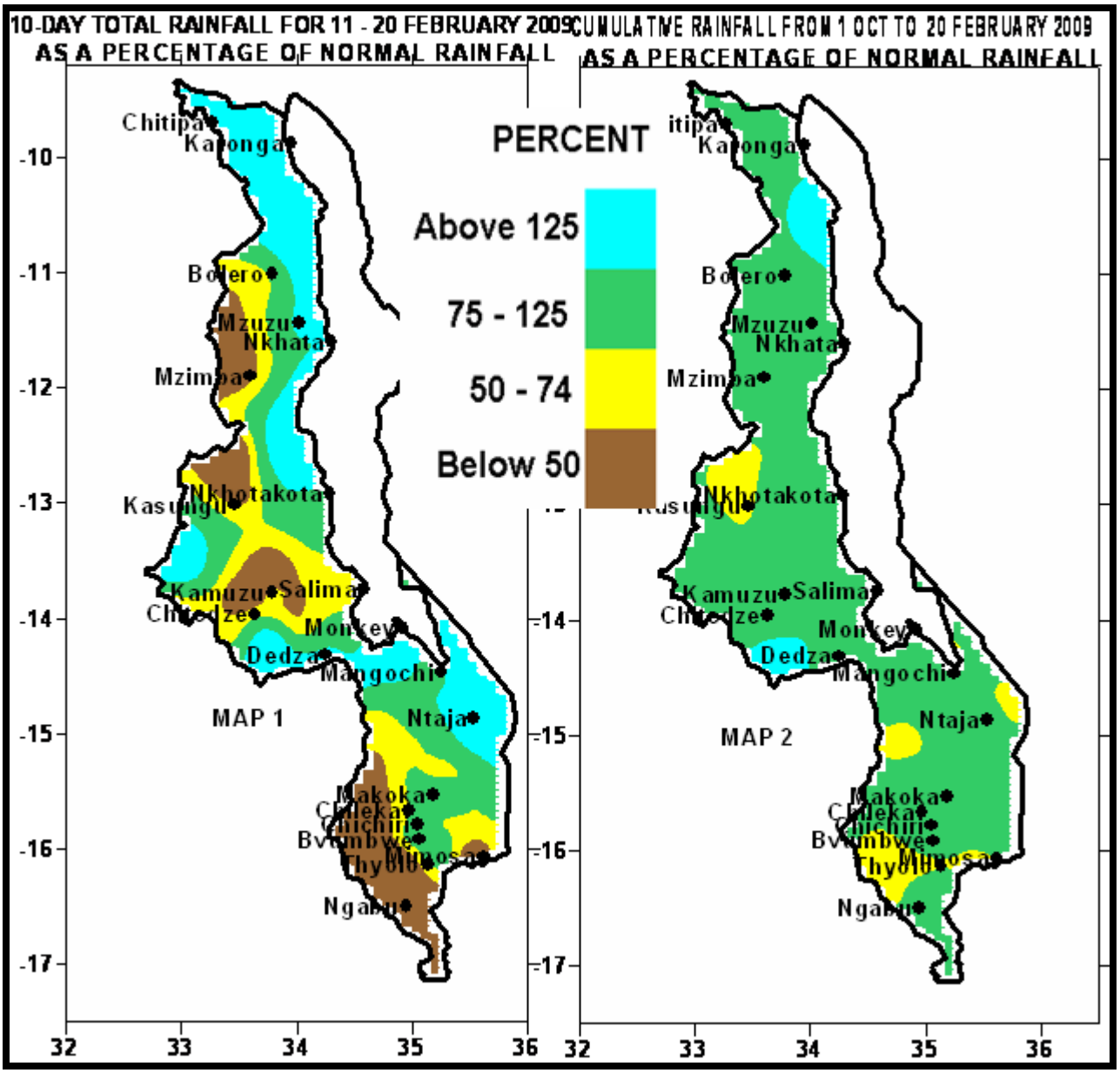
HIGHLIGHTS

- **Lower Shire Valley most affected by localized dry spells…**
- **Maize crop ranged from flowering to maturity stages ……**
- **Light to moderate rainfall expected during 21 – 28 February, 2009..**



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1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the second ten days of February 2009, Easterly waves brought moderate to locally heavy rains particularly to the eastern sector of Malawi while the extreme north was affected by the equatorial trough. As a result above average (**light blue colour on map 1**) ten day cumulative rainfall was confined to the extreme north and much of the eastern parts of Malawi. High total ten day rainfall amounts of greater than 120mm during the period were reported at Nankumba, Namwera and Ntaja in the south, Mtakataka and Dwangwa in the centre and Vinthukutu and Karonga in the north. Details are on Table 1. On the other hand, drier than normal conditions **(yellow and brown colours on Map 1)** were experienced in lower Shire Valley (Nsanje and Chikwawa districts) and some parts of Mwanza, Neno and Mulanje districts in the south, Lilongwe, Dowa, Salima and Kasungu in the centre and western parts of Mzimba and Rumphi in the north. Further analysis of rainfall shows that some parts of lower Shire Valley had been dry for more than two weeks while some parts of the centre and north experienced a dry spell of slightly more than one week.

Cumulative rainfall performance from October 2008 through to 20 February 2009 indicated that generally normal rainfall (**green colour on Map 2)** have been received over Malawi.

1.2 MEAN AIR TEMPERATURE

During the second ten-days of February 2009 average daily maximum temperatures over Malawi remained in the warm to hot category. Higher temperatures were confined to Shire Valley and Lakeshore areas. The highest average maximum temperaure was reported at Ngabu (35°C) in lower Shire Valley while the lowest was registered at Dedza (23°C). At the same time, the lowest absolute minimum temperatures ranged from 15°C to 22°C (Table 2).

1.3 MEAN DAILY WIND SPEEDS

Mean daily wind speeds at a height of two meters above the ground were light. The highest speed was reported at Chileka (2.4m/s or 8.5 Km/hr) . See Table 2.

1.4 MEAN RELATIVE HUMIDITY

There was a reduction in average daily relative humidity values in the second ten days of February 2009 compared to the first ten days. From Table 2 average daily values ranged from 70 to 80% while in the first ten days the values ranged from 73 to 84%. Outbreaks of fungal diseases are normally promoted by persistence humid conditions.

2. AGROMETEOROLOGICAL ASSESSMENT

In the second ten days of February 2009, localised dry spells affected crops in some parts of the country and lower Shire districts of Nsanje and Chikwawa were most affected. Unlike in other parts of the country, the dry spell in lower Shire started towards the end of January and has persisted into the first twenty days of February, 2009. As a result some parts lower Shire have experienced heat and moisture stress for more than four weeks and some crops were reported wilting and drying prematurely. Poor rainfall performance spread to some parts of central Malawi and western parts of Mzimba and Rumphi districts where crops had to survive on residual moisture following good rains during the first ten days of February.

The general crop stand in the fields was still reported in good condition with brighter prospects of good harvest this season, higher than last season. Maize crop ranged from flowering to maturity stages and more rains are required till early March. Early planted hybrid maize in the low altitude areas in the south were at drying stage

3. PROSPECTS OF 2008/09 SEASON

Climate prediction models continue to suggest that by end of April 2009 the greater part of Malawi should expect normal rainfall amounts when applying this forecast the influence of climate change cannot be ignored and one of the indicators of climate change is occurrence of extreme climatic events such as floods and drought.

4. OUTLOOK FOR 21 – 28 February 2009

The short to medium-term weather forecasts indicate that the rainfall over Malawi will be influenced by moist easterly airflow in the south and trough from Congo in the northern half. Hence light to moderate rains which will be locally heavy particularly over the northern half are expected during the last days of February 2009.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 2 OF FEBRUARY 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							
Bvumbwe Met.	95.8	79.1	121	881.1	748.9	118	7
Chichiri Met.	90.6	80.1	113	823.9	759.6	108	4
Chikwawa Boma	5.9	51.3	12	280.3	530.7	53	1
Chileka Airport	36.5	67.8	54	642.5	638.4	101	4
Chingale Agric	56.1	79.5	71	559.5	695.7	80	4
Chiradzulu Agric	52.5	75.6	69	669.3	754.3	89	2
Kasinthula Res. Stn.	41.8	46.3	90	320.5	487.8	66	5
Liwonde Township	51.5	60.2	86	506.8	591.4	86	4
Lujeri Tea Estate	66.0	138.8	48	1018.1	1341.2	76	5
Makoka Met	113.2	70.0	162	825.1	700.4	118	6
Mangochi Met.	74.1	68.3	108	501.2	600.2	84	5
Masambanjati Agric	47.0	95.3	49	727.5	873.1	83	5
Mimosa Met.	77.3	94.0	82	940.5	938.5	100	3
Monkey Bay Met.	86.4	79.1	109	653.8	749.2	87	4
Mpemba Vet	48.3	74.3	65	870.1	822.6	106	4
Mulanje Boma	20.6	103.7	20	697.5	1029.1	68	2
Mwanza Boma	32.8	73.6	45	598.0	704.4	85	4
Naminjiwa Agric	51.8	75.2	69	972.0	715.9	136	4
Namwera Agric	192.1	77.4	248	748.3	744.3	101	6
Nankumba Agric	126.0	74.7	169	821.2	633.7	130	3
Nchalo Sucoma	0.0	56.6	0	388.7	492.2	79	0
Neno Agric	30.8	88.3	35	767.8	837.9	92	2
Ngabu Met.	0.0	58.4	0	437.2	548.2	80	0
Nsanje Boma	2.3	66.8	3	580.3	619.3	94	2
Ntaja Met.	133.6	65.4	204	773.0	629.2	123	4
Satemwa Tea Est. No.1	36.8	75.9	48	515.8	854.0	60	6
Thyolo Met	86.0	83.0	104	774.5	785.3	99	6
Zomba RTC	36.6	68.8	53	706.6	849.2	83	4
CENTRAL REGION							
Bunda College	104.1	57.3	182	718.8	615.8	117	4
Chileka Namitete	35.0	68.3	51	341.4	677.3	50	3
Chitedze Met.	37.3	64.5	58	562.7	651.1	86	4
Dedza Met	112.0	83.4	134	696.0	681.8	102	5
Dwangwa Sugar Corp.	162.9	52.6	310	803.3	731.4	110	5
Kaluluma DTC	10.1	59.0	17	387.1	576.3	67	2
K.I.A Met	31.8	57.8	55	592.9	605.4	98	5
Kasiya Agric	20.2	75.4	27	339.3	699.1	49	4
Kasungu Met	22.3	85.0	26	440.1	647.8	68	5
Malomo Agric	59.7	65.7	91	730.1	581.5	126	5
Mchinji Boma	39.6	77.7	51	835.7	734.7	114	2
Mkanda Met	81.5	37.8	216	691.5	660.1	105	3
Mlangeni Njolomole	111.0	93.3	119	759.0	721.1	105	4
Mponela Agric	19.0	80.4	24	674.4	600.0	112	3
Mwimba Research	58.8	74.6	79	486.9	643.7	76	2
Mtakataka Airwing	129.1	65.4	197	1113.9	642.8	173	5
Nathenje Agric	36.0	82.8	43	757.5	623.0	122	3
Nkhotakota Met	98.7	97.6	101	912.3	807.3	113	7
Ntcheu - Nkhande	47.5	80.3	59	946.7	778.1	122	4
Ntchisi Boma	66.9	71.8	93	751.8	616.9	122	3
Salima Met	55.7	96.4	58	836.6	831.7	101	7
Sinyala Agric	66.0	64.9	102	872.2	647.3	135	4
Dedza RTC	81.0	68.8	118	693.7	722.4	96	4
NORTHERN REGION							
Bolero Met	50.2	71.1	71	499.5	540.9	92	7
Chitipa Met	102.4	75.4	136	538.5	680.6	79	5
Karonga Met.	136.9	53.3	257	734.3	526.0	140	0
Lupembe	119.0	55.7	214	531.5	473.3	112	4
Mbawa Res. Stn	41.0	65.5	63	600.5	603.3	100	2
Mzimba Met	19.9	74.8	27	543.1	626.4	87	4
Mzuzu Met.	95.5	69.6	137	581.8	695.1	84	7
NkhataBay Met.	104.5	80.2	130	727.9	929.4	78	6
Vinthukutu Agric	239.2	65.4	366	1179.9	603.4	196	5

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 2 OF FEBRUARY 2009

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
BOLERO	27.5	17.1	28.6	14.9	N/A	74
BVUMBWE	25.9	17.5	27.7	16.4	2.0	79
CHICHIRI	26.5	18.3	29.0	17.5	0.8	70
CHILEKA	28.6	19.0	30.9	19.0	2.4	79
CHITEDZE	26.7	17.7	27.8	16.4	0.7	78
DEDZA	23.0	15.9	24.2	15.2	1.4	80
K.I.A.	25.4	17.4	26.8	17.0	1.7	76
KARONGA	30.1	21.6	32.5	20.0	1.2	78
KASUNGU	27.0	18.2	28.4	17.6	1.6	79
MAKOKA	27.6	18.7	29.1	17.7	1.2	78
MANGOCHI	N/A	21.6	N/A	20.0	1.0	73
MONKEY BAY	30.1	22.1	31.8	20.6	1.3	73
MZIMBA	26.3	17.2	27.7	16.5	0.9	74
MZUZU	24.9	16.8	26.1	15.6	1.7	78
NGABU	35.0	23.9	36.4	22.1	1.9	71
NKHATA BAY	30.2	20.1	32.3	19.1	0.8	78
NKHOTAKOTA	28.1	21.0	29.7	19.0	N/A	78
NTAJA	29.0	20.7	30.6	20.0	1.3	76
SALIMA	29.4	21.5	31.0	20.4	0.8	70

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