10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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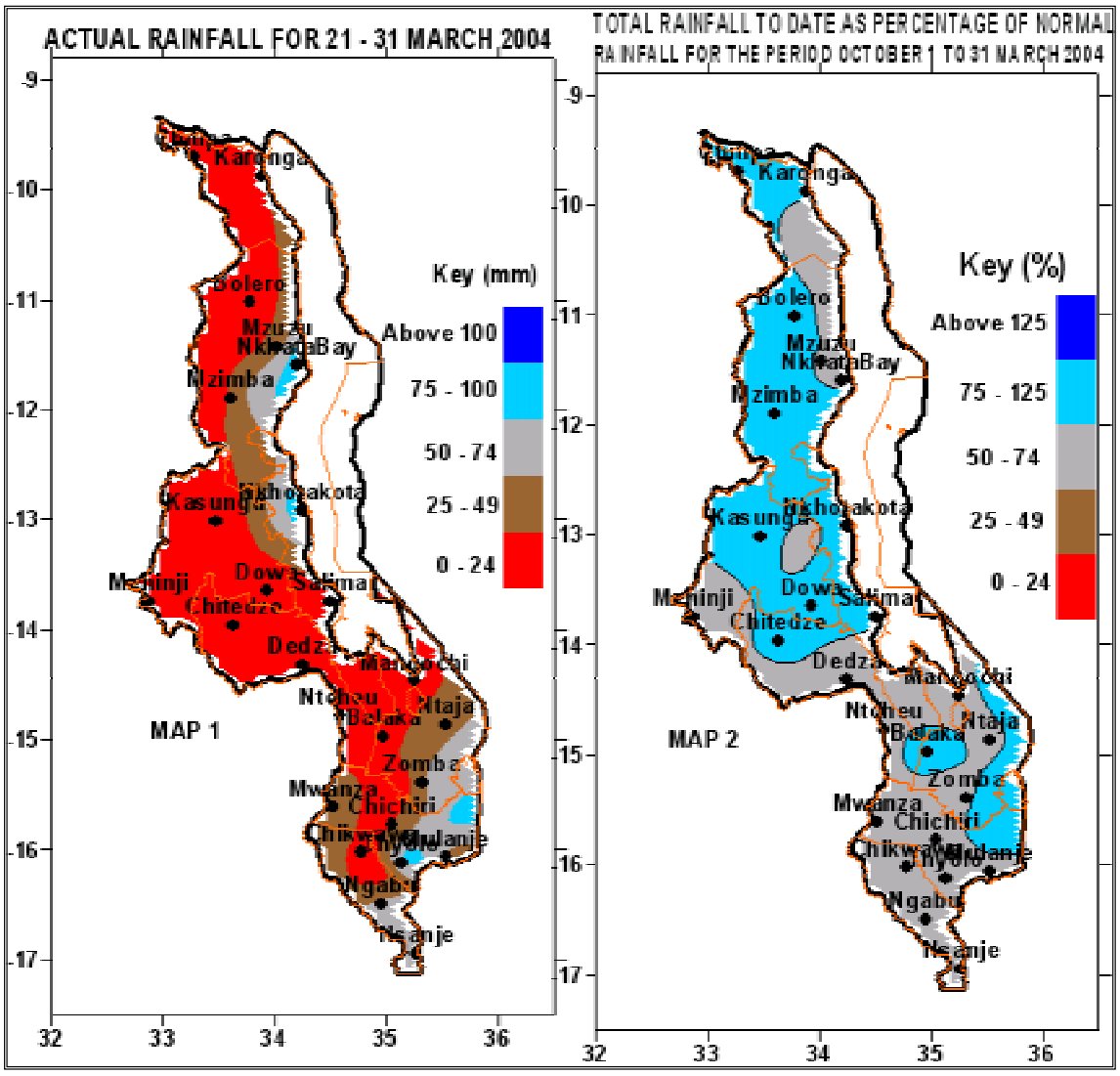
HIGHLIGHTS

- **Dryness persists over most areas of Malawi…**
- **Prolonged dry spell strain crop production prospects…**
- **Near normal cumulative rainfall experienced…**
- **Wet weather expected to return to some parts of Malawi…**



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1. WEATHER SUMMARY

1.1 RAINFALL

During the period 21 to 31 March 2004, the dry spell which started in the previous dekad (10-day period) continued in most parts of Malawi. Easterly waves brought isolated rains during the very last days of March 2004. However, the amounts were generally below normal except at Nkhotakota, Thyolo Boma and Naminjiwa. During the entire period significant rainfall was only confined to parts of Thyolo, Phalombe and Mulanje districts in the south and Nkhotakota and Nkhata Bay along the lakeshore.
Cumulative rainfall totals by end of March 2004 indicated that most areas in the north and centre had received between 75 and 125% of normal amounts. The south, however, had largely received between 50 and 74% of normal rainfall amounts and most of this had been received between mid January and end of March 2004.

1.2 MEAN AIR TEMPERATURE

During the last dekad of March 2004 warm to hot temperatures were maintained over most parts of Malawi. Mean daily maximum temperatures ranged from 24°C at Dedza in the centre to 35°C at Ngabu in Chikwawa district in the south. The highest absolute temperature was registered at Ngabu (37°C) while the lowest temperature (14°C) was reported at Mzuzu Airport on 26th March 2004.

1.3 AVERAGE DAILY WIND SPEEDS

Wind speeds at a height of 2 meters above the ground remained light and variable. However, Chitipa in the north and Chileka in the south continued to experience highest mean daily wind speeds. Chitipa registered a mean wind speed of 3.1m/s while Chileka 2.9m/s.

1.4 MEAN RELATIVE HUMIDITY

Mean daily relative humidity values during the period 21 to 31 March continued to go down. This was in line with relatively dry weather that persisted over Malawi. Mean daily relative humidity values ranged from 64% at Monkey Bay to 80% at Mzuzu.

1.5 MEAN SUNSHINE HOURS

Sunny periods continued over Malawi. Most areas registered mean daily sunshine hours of more than 9 hours during the period 21 to 31 March 2004. Ntaja experienced mean daily sunshine hours of 11 hours.

2. AGROMETEOROLOGICAL ASSESSMENTS

The dry spell which started in early March 2004 continued in most parts of Malawi till the very last days of March. This prolonged dry spell has strained crop production prospects particularly for late planted maize which was at critical flowering and silking stages in lower Shire Valley and some isolated areas in southern Malawi. In these areas reports indicate that crops had either been written off or were under severe moisture stress. When water stress occurs at this stage, fertilisation is hampered. If proper fertilisation fails, cob size, grain size and grain number are affected. Reports indicate that in some areas maize reached permanent wilting point. So although some rains were received during the very last days of March the crop could not recover. On the other hand, in the centre and north the dry spell facilitated drying and harvesting of matured crops.
Following relatively poor rainfall performance, overall maize production is expected *to* be lower than last year's. Better production is expected in centre and north than in the south. Most of the maize produced in Malawi is grown in central region.

2. FORECAST FOR 1 –10 APRIL 2004

The current atmospheric pattern indicates that easterly waves will become active over Malawi as the main rainfall season comes to an end. Therefore, wet weather is expected to return to some parts of Malawi during the first 10-days of April 2004.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 3 OF MARCH 2004: PERIOD 21 - 31

STATION NAME **SOUTHERN REGION**	DEKADAL TOTAL RAINFALL mm	DEKADAL NORMAL mm	TOTAL TO DATE mm	NORMAL TO DATE mm	**TOTAL TODATE AS % NORMAL**	RAINY DAYS ≥ 0.3 mm
Blantyre Town Hall	20.5	45.4	535.5	1009.9	53	2
Chancellor College	59.3	82.9	1010.8	1315.8	77	3
Chichiri Met.	26.1	51.5	708.7	1006.3	71	2
Chileka Airport	14.8	40.9	521.5	834.1	63	2
Lujeri Tea Estate	34.5	131.2	1017.1	1744.0	58	6
Monkey Bay Met.	0.0	28.0	493.9	898.4	55	0
Mulanje Boma	50.2	105.4	840.7	1438.5	58	3
Mwanza Boma	46.0	42.7	502.6	929.5	54	1
Namiasi Agric	3.9	28.6	212.9	783.3	27	1
Naminjiwa Agric	85.4	33.6	839.9	893.5	94	2
Nchalo Sucoma	11.4	22.4	359.3	630.4	57	3
Ngabu Met.	58.4	35.5	478.0	721.7	66	2
Ntaja Met.	43.0	52.3	593.3	839.1	71	3
Satemwa Tea Est. No.1	46.0	63.9	693.3	1165.3	59	5
Thyolo Boma	90.5	52.5	429.4	1048.8	41	5
Thyolo Met	49.3	56.0	557.7	1046.0	53	6
Zomba RTC	21.1	56.5	921.3	1128.8	82	4
CENTRAL REGION						
Chitedze Met.	0.0	42.9	685.1	858.3	80	0
Dedza Met	2.4	37.0	512.1	886.3	58	1
Dwangwa Sugar Corp.	51	160.4	931.9	1175.8	79	2
L.I.A. Met.	1.3	31.5	624.8	803.5	78	1
Kasungu Met	0.0	24.9	759.9	830.6	91	0
Nkhotakota Met	106.7	139.6	1038.6	1289.6	81	4
Ntchisi Boma	37.7	43.7	896.1	821.1	109	3
Salima Met	2.4	65.1	903.2	1165.9	77	1
NORTHERN REGION						
Chikangawa forest	61.6	80.4	986.1	985.9	100	4
Chitipa Met	0.0	50.5	813.1	922.7	88	0
Chintheche Agric	87.0	201.1	1283.5	1444.9	89	2
Karonga Met.	28.1	116.6	717.2	870.4	82	2
Mzimba Met	25.5	42.9	850.3	840.5	101	1
Mzuzu Met.	33.7	77.6	768.4	970.9	79	5
Nkhata Bay Met.	124.7	217.5	861.6	1313.9	66	8

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 3 OF MARCH 2004

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^{-2} p/day
BOLERO	29.2	17.4	29.8	15.8	1.7	70	9.6	7.1	5.5	10.4
CHICHIRI	28.7	18.5	31.0	16.4	0.8	73	8.5	6.7	5.2	9.8
CHILEKA	30.3	20.9	32.3	20.0	2.9	68	8.9	7.7	6.2	10.1
NTAJA	34.5	23.3	32.4	20.0	2.0	75	11.2	9.2	7.3	11.6
CHITEDZE	28.1	16.8	28.7	15.1	0.7	73	9.5	6.8	5.2	10.4
CHITIPA	27.9	17.6	28.5	16.8	3.1	70	9.0	7.3	5.7	10.2
DEDZA	23.9	16.3	24.9	15.5	1.8	75	9.1	6.4	4.9	10.2
KASUNGU	28.5	18.0	29.6	17.1	1.7	72	9.6	7.1	5.6	10.5
KARONGA	31.2	21.0	32.0	22.0	1.9	68	9.5	7.9	6.2	10.6
L I A	28.1	17.3	33.5	16.4	1.6	75	9.6	7.0	5.4	10.5
MONKEY BAY	32.4	22.9	33.2	21.6	1.5	64	9.0	7.8	6.3	10.1
MZIMBA	27.8	17.7	29.3	16.9	1.0	76	8.0	6.3	4.9	9.4
MZUZU	26.7	16.7	28.2	14.3	1.5	80	8.2	6.2	4.8	9.5
NGABU	35.1	24.2	37.2	23.0	1.5	67	9.0	8.3	6.7	10.2
NKHATA BAY	31.3	20.7	32.2	19.7	1.0	75	9.5	7.4	5.8	10.3
NKHOTAKOTA	30.1	22.1	30.9	21.1	2.4	77	9.9	8.0	6.4	10.7
SALIMA	31.6	21.9	32.6	21.3	1.6	67	9.9	7.8	6.2	10.7
THYOLO	29.3	19.7	31.1	18.5	1.4	72	9.0	7.3	5.7	10.0

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).