10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

Period: 1 – 10 January 2004 Season: 2003/2004 Issue No.10

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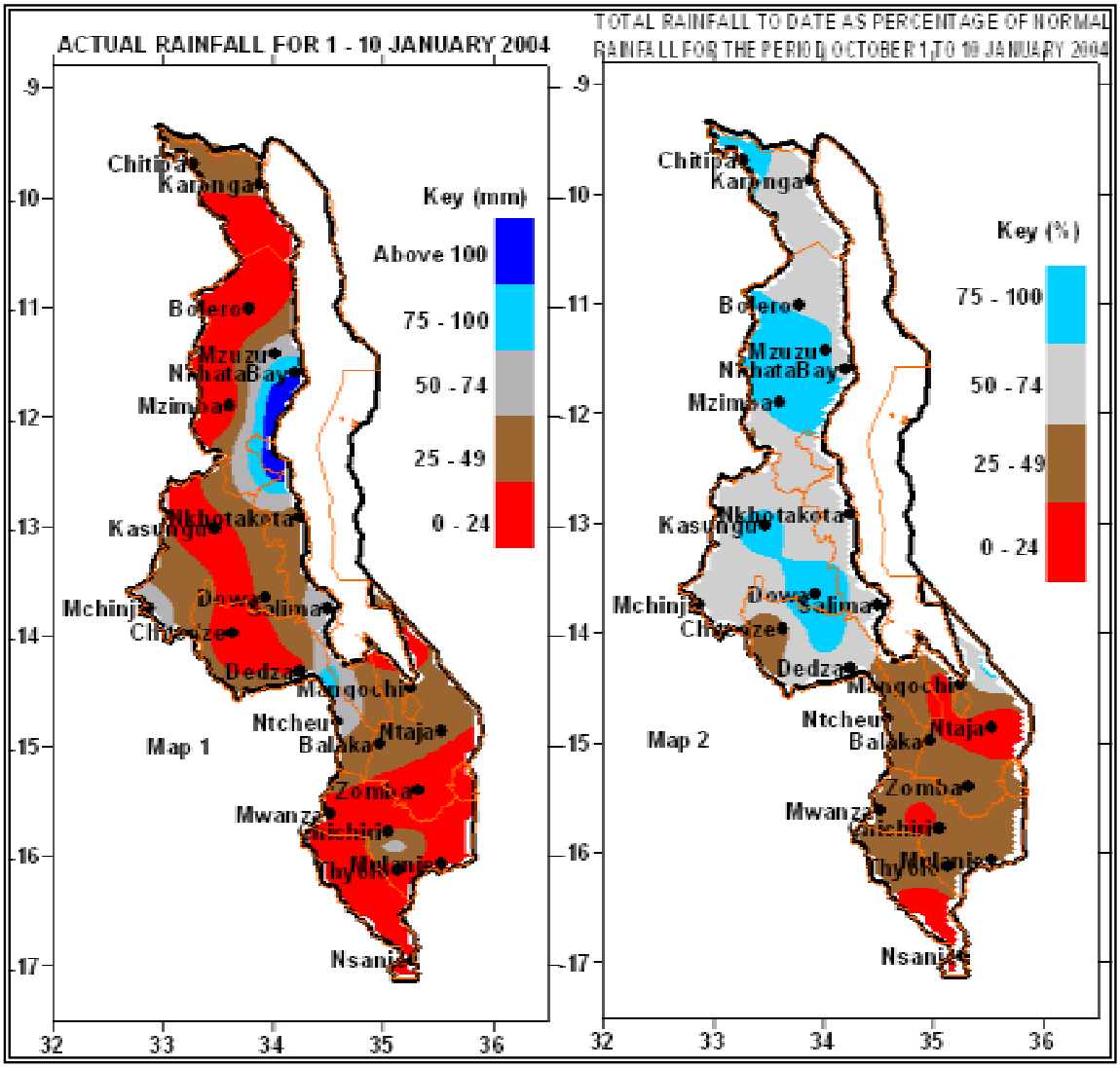
HIGHLIGHTS

- **Most areas received light to moderate rainfall…**
- **Dry conditions persist over parts of southern Malawi…**
- **Planting rains not yet received in parts of southern Malawi…**
- **Mostly wet weather expected during 11 – 20 January 2004…**



All inquiries should be addressed to: The Director of Meteorological Services, P.O. Box 2, Chileka, MALAWI
Tel: (265) 1 692 312/333/320 Fax: (265) 1 692 329 E-mail: metdept@metmalawi.com Homepage: www.metmalawi.com

1. WEATHER SUMMARY

1.1 RAINFALL

During the period 1 – 10 January 2004 generally light rainfall with poor distribution in both time and space was received over most parts of Malawi. Very few areas experienced up to six rainy days. Dry conditions spread from southern Malawi to some parts of central and northern Malawi. Most of the western sector in the north and an area covering Dedza Boma, Chitedze - Likuni and Kasungu in central Malawi received less than 25mm during the whole period. High rainfall was confined to an area stretching from Dwangwa in Nkhota Kota to Chintheche in Nkhata Bay along Lake Malawi and rainfall in excess of 120mm was received.

As at 10 January 2004 cumulative rainfall performance indicated that overall Malawi has received below normal cumulative rainfall (50 – 74%) with just pockets of normal rainfall (75 – 100%) around Dowa and Kasungu in central Malawi, Mzimba and Mzuzu in the north **(Map 2 and Table 1)**. Far below normal (less than 50%) cumulative rainfall situation exist over the whole of southern Malawi with some areas experiencing less than 25% of the average rainfall for the period. These areas include most parts of Chikwawa and Nsanje districts in lower Shire Valley, parts of Blantyre, Machinga and Mangochi districts.

1.2 MEAN AIR TEMPERATURE

Daily maximum temperatures remained in the warm to hot category in most parts of the country except in Shire Valley where very hot temperatures were maintained (Table 2). Ngabu in Shire Valley reported daily avearge maximum temperature of 37°C, reaching 40°C on 1st January 2004.

1.3 AVERAGE DAILY WIND SPEEDS

Average wind speeds at height of 2 meters above the ground were highest at Ngabu, Chileka and Chitipa (Table 2). Daily average wind speeds ranged from 1 to 4 m/s.

1.4 MEAN RELATIVE HUMIDITY

Most parts of Malawi were fairly moist. Daily average relative humidity values were in excess of 70% in most areas except at Ngabu in lower Shire Valley, Chileka, Monkey Bay, Thyolo, Chichiri and Chitedze where lower values were reported.

2. AGROMETEOROLOGICAL ASSESSMENT

Most parts of Malawi experienced light rainfall with good sunshine hours. This facilitated weeding, crop growth and development in most areas where crops have been planted. Crops in most parts of the country ranged from emergence to vegetative stages. On other hand, soil moisture deficits continued to persist over most areas in southern Malawi causing further delays in planting of crops and wilting and death of crops in some areas. In some parts Blantyre and Shire Valley by 10 January 2004 farmers had not yet planted crops due to unavailability of rains. Any planting decision now should consider the fact that rains normally end in March in the south, April to May in central and northern Malawi. This being the case it might be prudent for farmers who have not yet planted their crops to consider planting very early maturing crop varieties and possibly diversify to other crops like sweet potatoes and cassava.

3. FORECAST FOR 11 – 20 JANUARY 2004

Meanwhile, atmospheric conditions indicate that both Congo air and Inter Tropical Convergence Zone (ITCZ) will be active over Malawi. Therefore, wet conditions are expected over most parts of Malawi during 11 – 20 January 2004.

4. RAINFALL MID- SEASON UPDATE

The state of Sea Surface Temperatures in the equatorial Pacific Ocean which can result into the development of either El Nino or La Nina has been used as an indicator of seasonal rainfall behaviour in southern Africa including Malawi. Currently, the Sea Surface Temperatures are still near normal and do not support the development of either El Nino or La Nina during the remainder of the season. Hence the rains, once fully established, across the country are expected to progress normally up to the end of the season.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 1 OF JANUARY 2004: PERIOD 1 - 10

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 TownHall	30.0	84.4	30.0	413.0	7	3
Bvumbwe Met.	98.4	77.4	224.0	423.1	53	4
Chichiri Met.	16.5	76.7	122.3	429.5	28	4
Chikwawa Boma	0.0	60.8	116.2	297.1	39	0
Chileka Airport	11.2	68.3	79.6	370.2	22	1
I.T.G. Limbe	19.0	57.5	124.8	382.2	33	1
Lujeri Tea Estate	12.8	135.4	400.3	813.6	49	2
Mangochi Met.	32.0	60.5	94.7	311.5	30	4
Mimosa Met.	11.6	91.4	232.8	565.8	41	2
Monkey Bay Met.	6.4	64.9	105.4	357.2	30	1
Namiasi Agric	27.2	50.2	83.7	281.4	30	0
Nchalo Sucoma	0.0	50.6	30.3	276.2	11	0
Ngabu Met.	0.0	60.8	45.6	326.6	14	0
Satemwa Tea Est. No.1	21.0	89.5	214.9	522.4	41	4
Thyolo Met	18.4	66.6	171.3	453.3	38	3
CENTRAL REGION						
Chitedze Met.	11.5	77.6	126.3	369.8	34	2
Dedza Met	19.3	79.1	213.3	361.2	59	4
Dwangwa Sugar Corp.	127.9	79.4	246.8	419.8	59	5
L.I.A. Met.	20.6	65.7	265.9	304.7	87	3
Kasungu Met	15.0	68.3	274.8	334.7	82	4
Mchinji Boma	70.5	82.0	251.2	410.0	61	4
Nkhotakota Met	29.9	109.8	305.4	427.1	72	4
Salima Met	79.4	101.2	230.4	396.9	58	4
NORTHERN REGION						
Chitipa Met	33.6	76.7	328.8	380.2	86	4
Chintheche Agric	161.6	88.2	546.3	563.5	97	6
Karonga Met.	43.0	66.1	169.1	308.7	55	4
Kavuzi Rosefalls	72.1	84.1	306.9	538.9	57	2
Lupembe	13.0	65.6	120.0	255.4	47	3
Mzimba Met	1.3	89.4	340.5	351.7	97	2
Mzuzu Met.	71.8	67.4	412.6	429.7	96	4
NkhataBay Met.	88.3	61.4	331.1	599.4	55	6
Rumphi Boma	6.0	59.8	175.2	253.5	69	1

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 1 OF JANUARY 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
BVUMBWE	27.1	17.4	28.9	15.1	1.7	75	7.5	6.6	5.2	9.5
CHICHIRI	27.7	18.5	30.0	16.5	1.8	69	8.0	7.0	5.5	9.9
CHILEKA	31.5	21.7	33.4	19.3	3.4	62	9.5	8.8	7.1	10.8
CHITEDZE	28.5	18.7	30.8	17.4	0.6	69	9.5	7.3	5.7	10.8
CHITIPA	27.9	18.1	29.8	17.0	3.0	71	9.0	7.4	5.9	10.4
DEDZA	24.2	16.0	26.9	15.9	1.2	77	6.6	5.8	4.5	8.9
KASUNGU	28.7	19.0	29.6	18.2	2.0	77	7.6	6.9	5.4	9.6
KARONGA	30.8	22.6	32.0	21.5	1.9	74	10.0	8.3	6.6	11.1
L I A	27.3	17.6	28.9	17.0	1.4	76	6.9	6.3	5.0	9.1
MANGOCHI	33.1	22.7	35.0	21.5	1.5	70	9.4	8.4	6.7	10.8
MIMOSA	31.7	19.5	33.9	17.4	1.4	71	8.3	7.4	5.9	10.1
MONKEY BAY	31.6	23.9	33.2	21.7	2.1	65	9.0	8.4	6.7	10.5
MZIMBA	27.7	17.6	29.2	15.7	0.9	70	8.0	6.7	5.2	9.8
MZUZU	26.8	16.9	28.8	15.8	1.6	82	6.5	6.0	4.7	8.8
NGABU	37.1	25.3	39.5	23.0	3.5	53	9.6	10.1	8.4	10.9
NKHATA BAY	30.7	21.0	32.9	19.6	1.5	77	7.0	6.8	5.4	9.1
NKHOTAKOTA	29.6	21.7	30.3	19.0	1.4	77	6.7	6.8	5.4	9.0
SALIMA	31.0	22.9	32.8	20.6	1.6	71	7.5	7.3	5.8	9.5
THYOLO	29.4	19.3	32.6	17.5	1.4	66	7.0	7.0	5.6	9.2

Glossary of some terms on this table

- E_O = Potential Evaporation
- E_T = Potential Evapotranspiration and 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).