10-Day Rainfall & Agromet Bulletin

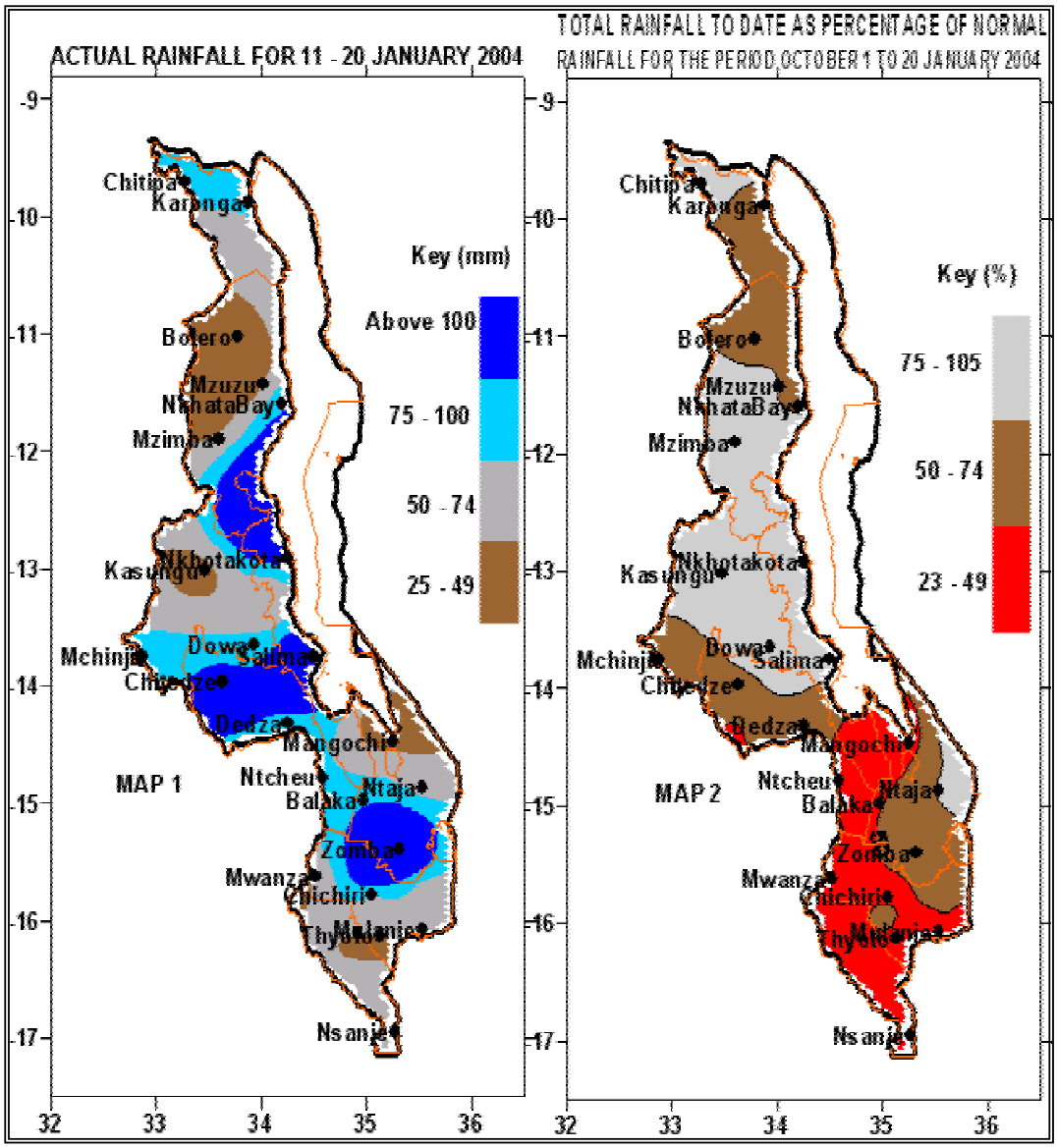
Department of Meteorological Services

Period: 11 – 20 January 2004 Season: 2003/2004 Issue No.11

Release date: 23 January 2004

HIGHLIGHTS

- **Most areas received moderate to heavy rains from 17th…**
- **Wet conditions spread to extreme southern parts of Malawi…**
- **Farmers advised to plant more sweet potatoes and cassava…**
- **Widespread rains expected during 21 – 31 January 2004…**



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1. WEATHER SUMMARY

1.1 RAINFALL

Towards the end of the period 11 – 20 January 2004 widespread rains with moderate to heavy amounts were received over most parts of Malawi including the extreme southern parts which have been dry since the season started in October 2003 received first good rains. Due to high intensities, most areas reported rainfall in excess of 50mm. Dwangwa in Nkhota Kota registered the highest total rainfall (236mm).

Cumulative rainfall performance is indicated on Map 2. By 20th January 2004, over half of Malawi had received below normal rainfall with the worst hit being southern Malawi particularly the western sector where below 50% of normal rainfall had been received. However, most of northern highlands and part of central Malawi including Dowa, Ntchisi, Kasungu, Salima and Nkhota Kota received between 75 – 105% of normal rainfall **(Map 2 and Table 1)**.

1.2 MEAN AIR TEMPERATURE

Generally warm to hot temperatures were experienced over the country except in Shire Valley where very hot temperatures were maintained (Table 2). Ngabu reported daily average maximum temperature of 37°C for the period. However, Dedza with daily average maximum temperature of 24°C was mild.

1.3 AVERAGE DAILY WIND SPEEDS

Average wind speeds generally ranged from 1 to 3 m/s. Chileka and Ngabu registered the highest (2.8m/s).

1.4 MEAN RELATIVE HUMIDITY

Most parts of Malawi were fairly humid. Daily average relative humidity values were in excess of 70% in most areas except at Ngabu in lower Shire Valley where daily average relative humidity was at 62%.

1.5 MEAN SUNSHINE HOURS

The number of stations reporting sunshine hours has reduced significantly due lack of Sunshine Cards. Therefore, monitoring of sunshine hours and eventual calculation of solar radiation is becoming difficult. However, from few reports generally most areas experienced below 7 hours of bright sunshine.

2. AGROMETEOROLOGICAL ASSESSMENT

Widespread rains received during this period replenished soil moisture in most parts Malawi including southern and parts of central Malawi where a drought situation was developing. This prompted farmers in some parts of southern Malawi where planting rains delayed by over a month to begin planting and where wilting and loss of the first crop has been experienced, farmers started replanting of crops. Given the short remaining length of the growing season, it is unlikely that any maize planted after 15 January in southern Malawi would realize a good harvest. Therefore, agriculture experts are strongly advising farmers in southern Malawi to consider planting more sweet potatoes and cassava.

The main agricultural activities included planting, weeding and fertilizer application. Crops were reported doing better at vegetative stage in central and northern Malawi while in the south due to late onset of planting rains crops ranged from sowing and emergence to vegetative stages. For crops in the south to do well, rains have to stretch to March/April.

3. FORECAST FOR 21 – 31 JANUARY 2004

Meanwhile, atmospheric conditions indicate that Inter Tropical Convergence Zone (ITCZ) will move to south of Malawi while Congo Air will be active over Malawi. At the same time, a tropical disturbance is expected to develop over the north east of Madagascar. Therefore, widespread moderate to heavy rains are expected particularly over central and southern Malawi during 21 – 31 January 2004.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 2 OF JANUARY 2004: PERIOD 11 - 20

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
Bvumbwe Met.	54.8	76.2	278.8	499.3	56	5
Chancellor College	168.8	92.3	398.6	641.2	62	6
Chichiri Met.	82.0	74.7	204.3	504.2	41	6
Chikwawa Boma	57.4	59.5	173.6	356.6	49	3
Chileka Airport	119.2	50.2	198.8	420.4	47	4
I.T.G. Limbe	60.3	90.7	185.1	472.9	39	2
Lujeri Tea Estate	81.2	127.7	481.5	941.3	51	5
Mangochi Met.	43.7	59.6	138.4	371.1	37	5
Mimosa Met.	59.4	70.7	292.2	636.5	46	6
Monkey Bay Met.	64.9	74.0	170.3	431.2	39	6
Mwanza Boma	46.5	62.2	186.0	459.2	41	4
Naminjiwa Agric	47.6	70.9	319.4	474.4	67	4
Nchalo Sucoma	41.2	35.8	71.5	312.0	23	5
Ngabu Met.	66.5	41.4	112.1	368.0	30	5
Ntaja Met.	63.5	70.2	322.1	416.7	77	4
Satemwa Tea Est. No.1	54.2	55.0	269.1	577.4	47	5
Thyolo Met	43.5	68.3	214.8	521.6	41	5
CENTRAL REGION						
Chitedze Met.	116.4	62.8	242.7	432.6	56	5
Dedza Met	92.5	69.3	270.4	430.5	63	7
Dwangwa Sugar Corp.	236.0	86.3	482.8	506.1	95	5
L.I.A. Met.	93.5	83.2	359.4	387.9	93	7
Kasungu Met	36.3	72.2	311.1	406.9	76	6
Mchinji Boma	93.5	77.0	344.7	487.0	71	5
Nkhotakota Met	109.1	81.5	414.5	508.6	81	7
Ntchisi Boma	44.0	81.0	402.4	398.2	101	2
Salima Met	190.3	124.9	420.7	521.8	81	7
NORTHERN REGION						
Baka Res. Stn.	74.8	60.6	188.8	382.9	49	3
Chikangawa forest	68.3	83.1	361.1	474.7	76	9
Chitipa Met	84.2	62.5	413.0	442.7	93	6
Chintheche Agric	122.0	72.9	668.3	636.4	105	3
Karonga Met.	88.5	60.0	257.6	368.7	70	3
Kavuzi Rosefalls	69.4	76.5	376.3	615.4	61	4
Mzimba Met	53.3	70.1	393.8	421.8	93	7
Mzuzu Met.	32.3	67.9	444.9	497.6	89	5
NkhataBay Met.	94.9	109.3	426.0	708.7	60	6

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 2 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	27.2	18.0	29.8	17.3	1.5	74	N/A			
CHICHIRI	27.3	19.0	30.0	17.1	1.3	78	5.8	6.0	4.7	8.4
CHILEKA	30.4	21.3	33.3	18.5	2.8	71	6.1	6.9	5.6	8.6
NTAJA	30.1	21.5	32.6	20.4	1.8	76	7.3	7.1	5.6	9.4
CHITEDZE	25.1	18.5	30.2	17.0	0.4	71	N/A			
CHITIPA	26.9	17.9	29.5	16.9	1.7	76	N/A			
DEDZA	23.6	16.4	26.0	14.7	1.2	75	5.6	5.5	4.3	8.3
KASUNGU	28.1	19.3	30.3	17.6	1.5	79	6.7	6.4	5.0	9.0
KARONGA	30.2	22.9	31.5	21.0	1.6	74	6.4	6.8	5.4	8.7
L I A	27.0	17.3	29.2	15.3	1.1	80	5.4	5.6	4.4	8.1
MANGOCHI	32.5	22.7	35.5	21.6	1.3	72	N/A			
MIMOSA	32.3	20.5	35.2	18.0	1.2	73	N/A			
MONKEY BAY	30.8	23.3	33.0	21.4	1.7	71	N/A			
MZIMBA	27.4	17.6	29.3	15.2	0.8	74	N/A			
MZUZU	27.2	17.1	29.1	15.8	1.4	83	N/A			
NGABU	37.4	26.1	41.0	24.0	2.8	62	8.4	9.3	7.7	10.1
NKHATA BAY	30.3	21.1	31.7	20.2	1.3	79	N/A			
NKHOTAKOTA	29.5	22.2	31.1	20.6	1.0	79	N/A			
SALIMA	30.3	24.1	32.4	21.0	1.3	76	7.0	7.0	5.6	9.2
THYOLO	30.1	20.2	33.0	17.0	1.6	74	N/A			

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).
- N/A means data not available due to lack of Sunshine Cards