10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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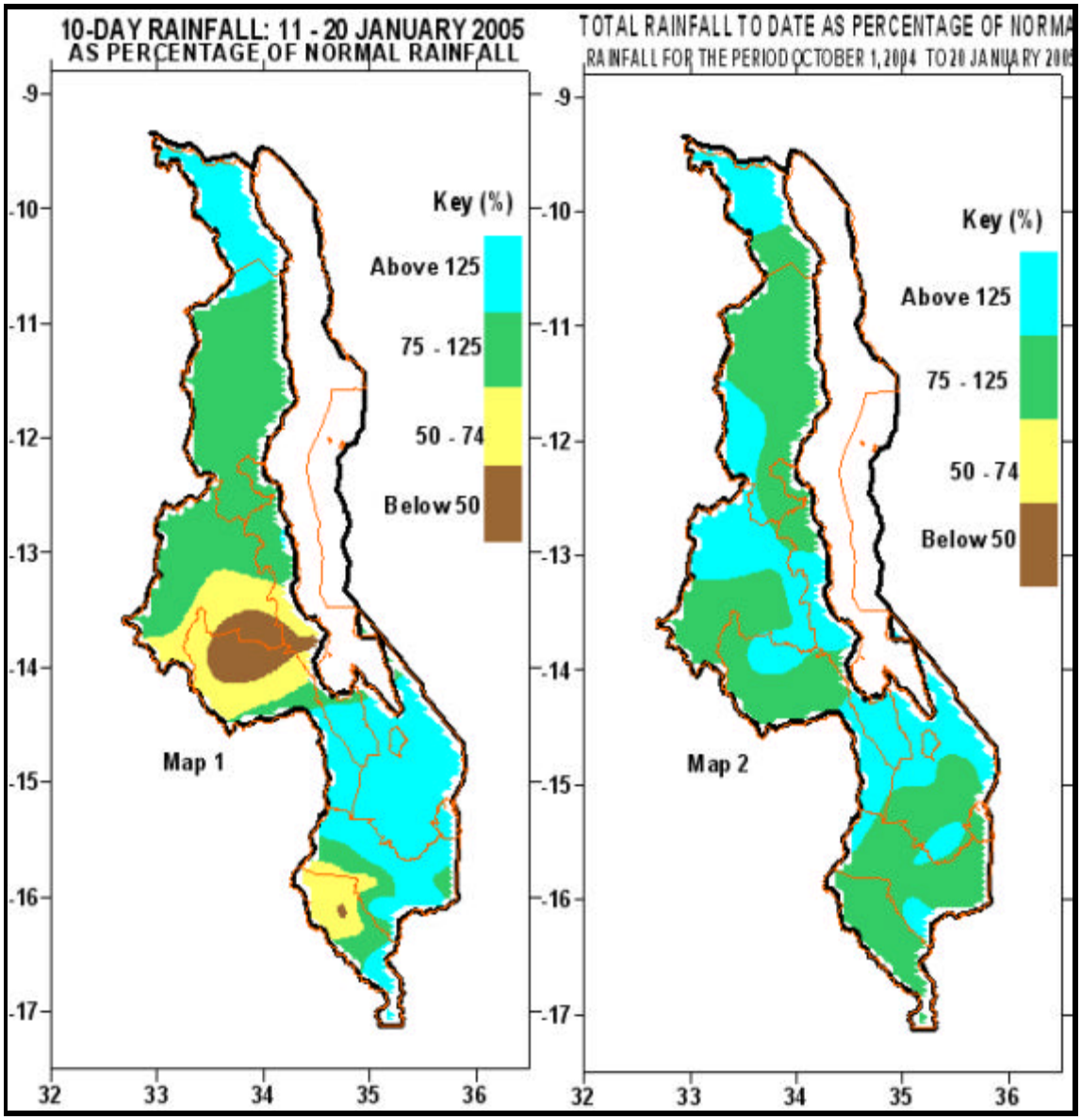
HIGHLIGHTS

- **An increase in rainfall experienced in most parts of Malawi …**
- **Crops range from vegetative to flowering…**
- **Locally heavy rains expected during 21 – 31 January 2005…**



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. WEATHER SUMMARY

1.1 RAINFALL

In the second 10-days of January 2005 Malawi was under the influence of the Inter-Tropical Convergence Zone and Congo Airmass. As a result widespread rains with thunderstorms which were locally heavy occurred over most parts of the country.

There has been an increase in rainfall across the country except a few areas in the centre which still registered below normal rainfall. These areas included Kamuzu Airport, Natural Resources College, Chitedze and Salima Met along the Lakeshore Most areas reported between 5 and 8 rainy days except lower Shire Valley which had 4 rainy days during the period. Locally heavy rains which were registered in some parts of the country resulted in floodinfg that destroyed property and life and displacement of people. Areas which recorded significant 10-day total rainfall amounts of above 150mm included Dzonzi Forest in Ntcheu (255.9mm), Chancellor College (220.3mm), Zomba RTC (214.8mm), Makoka (184.5mm), Njolomole (175.0mm) and Mulanje Boma (162.2mm). See Map 1 and Table 1 for more details. According to reports from Malawi News Agency (MANA), in Ntcheu thirthy houses were destroyed by floods and a woman was killed.

Cumulative rainfall from 1st October 2004 up to 20 January 2005 shows that most areas of Malawi have received normal (75 – 125%) to above normal (Above 125%) rainfall. However, there have been pockets of below normal rainfall in some parts of the country such as Nkhata Bay which has received 58% of the expected rainfall **(Map 2 and Table 1).**

. MEAN AIR TEMPERATURE

Mean maximum temperatures show that Malawi remained warm to hot weather during the second 10-days of January 2005. Daily average maximum temperature ranged from 23.8°C at Dedza to 33.9°C at Ngabu in lower Shire Valley. The highest absolute maximum air temperature was 35.8°C, reported at Ngabu while the lowest absolute minimum temperature was 15.3°C reported at Bvumbwe.

. MEAN DAILY WIND SPEEDS

Mean daily wind speeds observed at 2 meters were generally light. The values ranged from 0.5m/s (1.8km/hr) at Chitedze to 1.8m/s (6.5km/hr) at Bvumbwe and Ngabu (See Table 2 for more details).

. MEAN RELATIVE HUMIDITY

The second 10-days of January 2005 became fairly moist. Mean daily relative humidity values ranged from 74% at Chichiri and Mzimba to 88% at Mimosa while during the first 10-days of January 2005 the daily average relative humidity values ranged from 52% to 84%.

. AGROMETEOROLOGICAL ASSESSMENT

Moderate to heavy rains which were experienced over most parts of Malawi caused flooding that washed away crops. For example at least 60Ha of crops were completely washed away in Ntcheu according to Malawi News Agency (MANA).

Apart from the army worm outbreak that occurred in Karonga and Chitipa in December 2004, reports from Ministry of Agriculture indicate that there was another outbreak of army worms in Rumphi, Lilongwe and Dedza which has since been put under control.

Currently crops ranged from vegetative to flowering stages across the country. Early planted maize in some parts of Malawi particularly in the south has reached flowering and cobbing stages. Planting of roots and tubers was still going on in most parts of the country.

Crop production in some parts of the country during this season is likely to be negatively affected amongst other by localised leaching of soil nutrients, flooding and waterlogging due to incessant heavy rains.

3. SEASONAL OUTLOOK

The 2004/05 seasonal forecast update for January to March 2005 indicate more rains are likely to come during the period. High rainfall intensities would result in flash floods and river flooding in low lying areas. Localized dry spells of different magnitudes are still expected.

. FORECAST FOR – JANUARY

Meanwhile weather systems indicate that the Inter Tropical Convergence Zone and Congo Airmass will be active over the southern half of the country during the period. The northern half of Malawi will experience a reduction in rainfall due to a weak ridge from the north. Hence, widespread rains with scattered thunderstorms that will be locally heavy are expected to occur over the country during the last 10-days of January 2005.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 2 OF JANUARY 2005: PERIOD 11 – 20

STATION NAME	DEKADAL TOTAL RAINFALL	DEKADAL NORMAL	DEKADAL TOTAL AS %	TOTAL TO DATE	NORMAL TO DATE	TOTAL TO DATE AS %	RAINY DAYS
SOUTHERN REGION	mm	mm	NORMAL	mm	mm	NORMAL	[3] 0.3 mm
Balaka Township	100.2	52.2	192	449.2	401.8	112	6
Bvumbwe Met.	52.4	76.2	69	593.4	499.3	119	7
Chancellor College	220.3	92.3	239	861.5	641.2	134	8
Chichiri Met.	74.2	74.7	99	665.2	504.2	132	7
Chileka Airport	55.4	50.2	110	415.9	420.4	99	7
Kasinthula Res. Stn.	41.2	33.3	124	396.8	324.8	122	6
Liwonde Township	101.2	81.0	125	486.0	377.9	129	7
Lujeri Tea Estate	84.5	127.7	66	827.0	941.3	88	9
Makoka Met	184.5	73.7	250	623.1	469.1	133	8
Mangochi Met.	105.6	59.6	177	510.7	371.1	138	9
Mimosa Met.	136.8	70.7	193	717.3	636.5	113	5
Monkey Bay Met.	58.4	74.0	79	582.9	431.2	135	7
Mulanje Boma	162.2	81.1	200	834.8	713.6	117	8
Mwanza Boma	47.6	62.2	77	586.6	459.2	128	4
Nchalo Sucoma	18.4	35.8	51	299.5	312.0	96	4
Ngabu Met.	53.4	41.4	129	352.5	368.0	96	4
Satemwa Tea Est.No.1	91.9	55.0	167	778.4	577.4	135	7
Toleza Farm	99.6	66.8	149	567.7	392.2	145	5
Thyolo Met	83.7	68.3	123	773.3	521.6	148	6
Zomba RTC	214.8	90.9	236	783.5	572.0	137	7
CENTRAL REGION							
Chitedze Met.	27.6	62.8	44	508.0	432.6	117	6
Dedza Met	58.9	69.3	85	378.6	430.5	88	6
Dwangwa Sugar Corp.	75.2	86.3	87	459.7	506.1	91	6
Dzonzi Forest	255.9	81.9	312	758.1	471.3	161	7
K.I.A. Met.	24.8	83.2	30	600.6	387.9	155	5
Kasungu Met	56.8	72.2	79	601.6	406.9	148	6
Lifuwu	82.2	127.0	65	729.1	496.9	147	7
Mlangeni Njolomole	175.0	75.0	233	614.4	449.7	137	8
Natural Res. College	25.1	71.7	35	622.4	415.3	150	6
Nkhotakota Met	120.3	81.5	148	596.3	508.6	117	7
Ntcheu - Nkhande	131.1	97.5	134	771.9	521.8	148	7
Ntchisi Boma	56.4	81.0	70	634.0	398.2	159	7
Salima Met	56.0	124.9	45	634.5	521.8	122	5
Dedza RTC	94.6	87.2	108	571.1	434.1	132	8
NORTHERN REGION							
Chikangawa forest	98.4	83.1	118	568.9	474.7	120	6
Karonga Met.	123.4	60.0	206	645.3	368.7	175	8
Mzimba Met	52.0	70.1	74	562.2	421.8	133	6
Mzuzu Met.	49.3	67.9	73	504.1	497.6	101	6
NkhataBay Met.	119.7	109.3	110	411.2	708.7	58	7

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 1 OF JANUARY 2005

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
BVUMBWE	26.1	16.6	27.5	15.3	1.8	82
CHICHIRI	27.1	19.0	28.1	17.5	0.8	74
CHILEKA	28.5	21.0	29.6	20.0	1.0	82
CHITEDZE	26.7	16.7	27.7	17.5	0.5	73
DEDZA	23.8	16.4	25.2	16.0	1.3	78
KASUNGU	26.3	19.0	28.4	17.3	1.7	82
KARONGA	29.4	20.2	30.3	19.7	1.5	80
K I A	26.1	18.0	26.8	16.8	1.5	84
MAKOKA	26.7	19.3	28.1	18.5	1.1	85
MANGOCHI	31.2	22.2	33.0	20.9	0.8	79
MIMOSA	29.3	20.4	31.4	20.3	1.1	88
MONKEY BAY	30.2	22.3	31.7	21.2	1.3	79
MZIMBA	26.7	17.2	27.7	15.5	0.6	74
MZUZU	25.5	17.3	26.9	16.1	1.6	81
NGABU	33.9	24.2	35.8	23.3	1.8	75
NKHATA BAY	29.6	21.1	32.2	20.5	1.4	81
NKHOTAKOTA	28.4	21.8	29.8	20.4	1.4	81
SALIMA	29.6	21.6	30.9	20.3	1.6	77
THYOLO	28.7	20.2	29.8	18.8	1.4	78

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