10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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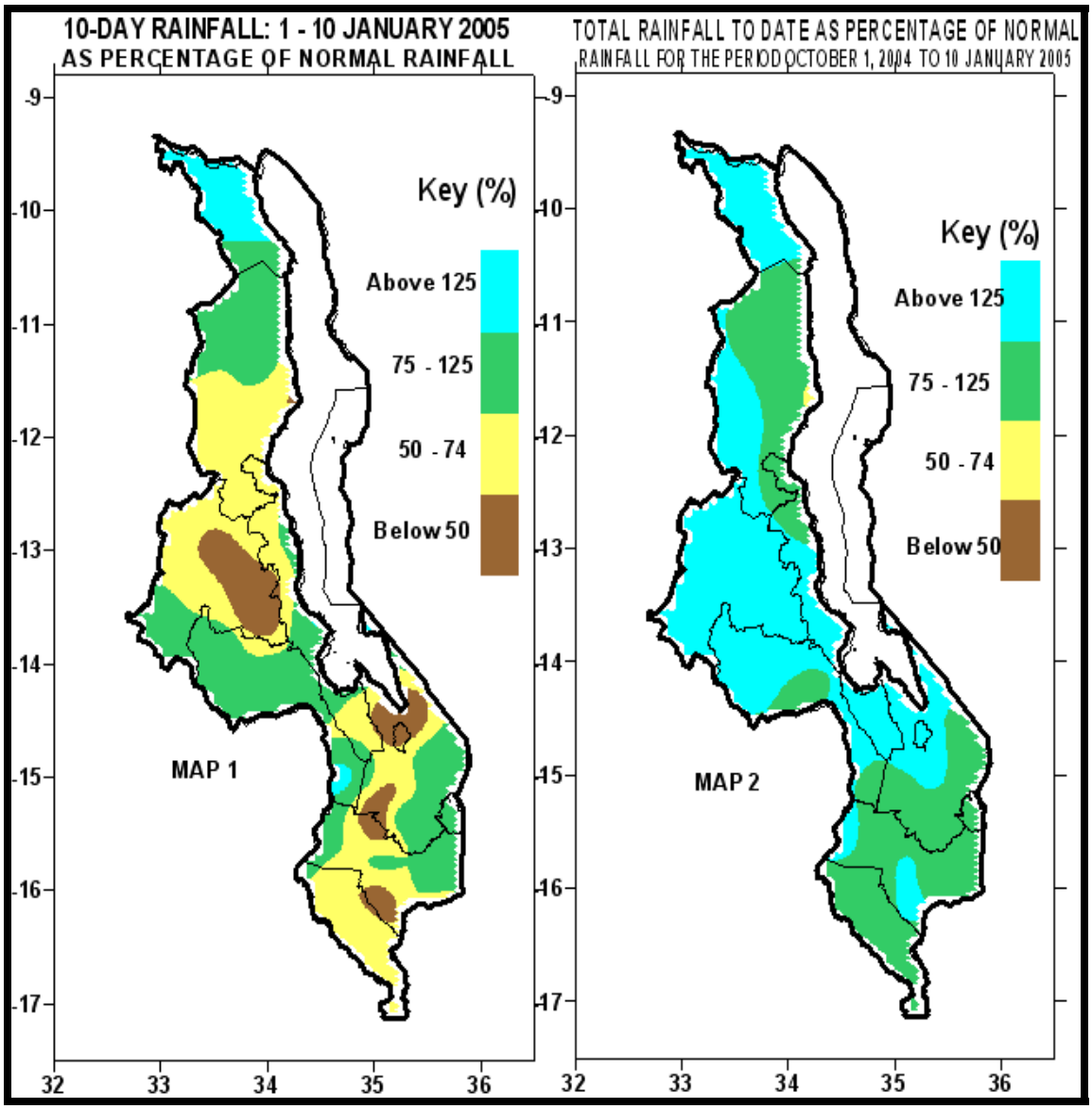
HIGHLIGHTS

- **Slight reduction of rainfall experienced in most parts of Malawi …**
- **Crops range from vegetative to flowering…**
- **Widespread rains to continue over Malawi in the next 10-days…**



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

In the first 10-days of January 2005 Inter-Tropical Convergence Zone and Congo Airmass were mostly confined to Northern and Central areas. Most areas in the South were under the influence of a ridge of high pressure which was occasionally punctuated by a trough of low pressure from a low pressure cell in Mozambique Channel. This resulted in widespread rains and scattered thunderstorms to be experienced over the north and some parts of central Malawi where most areas reported between 5 and 8 rainy days, while the south experienced localised dry spells. Most places along Shire river registered 1 to 2 rainy days during the entire period.

Generally reduced amounts of rainfall were experienced over Malawi during the first 10-days of January 2005 compaired with the last 10-days of December 2004. However, more areas in the centre and south including some parts of Mzimba and Nkhata Bay districts received below 75% of the expected 10-day rainfall for the period. The highest rainfall deficit was at Mangochi where only 4% of the expected rainfall was received. Higher rainfall amounts were confined to highlands and the extreme northern areas. Areas which received total 10-day rainfall of above 100mm included Lifuwu in Salima (128.2mm), Dzonzi Forest in Ntcheu (126.1mm), Chitipa Met (116.1mm) and Nkhota Kota Met and Lujeri Tea Estate in Mulanje which reported 103.8mm and 103.1mm respectively **(Map 1 and Table 1).**

Cumulative rainfall from 1st October 2004 up to 10 January 2005 shows that most areas of Malawi have received normal (75 – 125%) to above normal (Above 125%) rainfall except at Nkhata Bay which has reported 49%**(Map 2 and Table 1).**

1.2 MEAN AIR TEMPERATURE

Mean maximum temperatures demonstrate that warm to hot weather prevailed over the country during the first 10-days of January 2005. Daily average maximum temperature ranged from 22.4°C at Dedza to 33.3°C at Ngabu in lower Shire Valley. The highest absolute maximum air temperature was 35.5°C, reported at Ngabu while the lowest absolute minimum temperature was 15.3°C reported at Bvumbwe and Dedza.

1.3 MEAN DAILY WIND SPEEDS

Mean daily wind speeds observed at a height of 2 meters were generally light. The values ranged from 0.1m/s (0.4km/hr) to 2.0m/s (7.2km/hr) at Chitedze and Ntaja respectively (See Table 2 for more details).

1.4 MEAN RELATIVE HUMIDITY

First 10-days of January 2005 were drier than the last 10-days of December 2004. Mean daily relative humidity values ranged from 52% at Mimosa to 84% at Kasungu and Kamuzu International Airport while during the last 10-days of December 2004 the daily average relative humidity values ranged from 77% at Karonga to 90% at Nkhotakota.

2. AGROMETEOROLOGICAL ASSESSMENT

The slight reduction in rainfall during the first 10-days of January following excessively wet conditions in most areas in the last 10-days of December 2004 facilitated weeding, fertilizer application and crop photosynthesis. This was supported by the good sunshine hours that were experienced over most areas.

The performance of rainfall since the season started has been very encouraging. No serious dry spells have been reported. In some areas, however incessant heavy rains resulted in localised leaching of soil nutrients, flooding and waterlogging.

Crops ranged from vegetative to flowering stages. Early maturing hybrid maize varieties that were planted mid November in some parts of Malawi have reached flowering and cobbing stages. Planting of tuber crops is on going in most parts of the country.

The destruction of Maize crops by army worms reported in our bulletin issue number 9, to have occurred in Chitipa and Karonga by Malawi News Agency (MANA) is under control according to reports from Ministry of Agriculture.

3. SEASONAL OUTLOOK

The 2004/05 seasonal forecast update for January to March 2005 indicate good rainfall prospects for Malawi. However, high rainfall intensities would result in floods in low lying areas. Localized dry spells of different magnitudes are still expected to occur.

4. FORECAST FOR 11 – 20 JANUARY 2005

Meanwhile weather systems show that Equatorial trough and Congo Airmass will be mainly active over the country. Therefore widespread rains and scattered thunderstorms which will be locally heavy will persist over Malawi during 11 – 20 January 2005.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 1 OF JANUARY 2005: PERIOD 1 – 10

STATION NAME ***SOUTHERN REGION***	DEKADAL TOTAL RAINFALL mm	DEKADAL NORMAL mm	DEKADAL TOTAL AS % NORMAL	TOTAL TO DATE mm	NORMAL TO DATE mm	TOTAL TO DATE AS % NORMAL	RAINY DAYS ≥ 0.3 mm
Bvumbwe Met.	45.4	77.4	59	541.0	423.1	128	6
Chancellor College	96.6	107.0	90	641.2	548.9	117	3
Chichiri Met.	68.8	76.7	90	591.0	429.5	138	5
Chikwawa Boma	28.0	60.8	46	291.9	297.1	98	2
Chileka Airport	51.4	68.3	75	360.5	370.2	97	3
Kasinthula Res. Stn.	40.3	62.9	64	355.6	291.5	122	1
Liwonde Township	25.2	60.1	42	384.8	296.9	130	4
Lujeri Tea Estate	103.1	135.4	76	742.5	813.6	91	4
Makoka Met	26.9	76.2	35	438.6	395.4	111	4
Mangochi Met.	2.5	60.5	4	405.1	311.5	130	1
Mimosa Met.	33.7	91.4	37	580.5	565.8	103	3
Monkey Bay Met.	64.9	64.9	100	538.5	357.2	151	7
Mulanje Boma	89.8	108.4	83	672.6	632.5	106	5
Mwanza Boma	61.3	72.1	85	539.0	397.0	136	2
Nchalo Sucoma	36.5	50.6	72	281.1	276.2	102	2
Ngabu Met.	41.7	60.8	69	299.1	326.6	92	3
Ntaja Met.	78.5	69.9	112	429.5	346.5	124	3
Phalula Agric	10.1	54.0	19	426.0	349.8	122	2
Toleza Farm	49.6	62.5	79	468.1	325.4	144	3
Thyolo Met	16.3	66.6	24	691.2	453.3	152	5
Zomba RTC	94.9	73.0	130	568.7	481.1	118	6
CENTRAL REGION							
Chitedze Met.	89.0	77.6	115	480.4	369.8	130	6
Dedza Met	99.1	79.1	125	319.7	361.2	89	5
Dowa Agric	11.8	82.0	14	424.2	316.8	134	5
Dwangwa Sugar Corp.	55.6	79.4	70	384.5	419.8	92	6
Dzonzi Forest	126.1	70.9	178	502.2	389.4	129	6
L.I.A. Met.	53.6	65.7	82	575.8	304.7	189	5
Kasungu Met	30.9	68.3	45	544.8	334.7	163	4
Lifuwu	128.2	64.7	198	646.9	369.9	175	5
Mlangeni Njolomole	61.8	84.7	73	439.4	374.7	117	6
Natural Res. College	62.3	87.2	71	597.3	343.6	174	6
Nkhotakota Met	103.8	109.8	95	454.8	427.1	106	7
Ntcheu - Nkhande	78.2	92.9	84	640.8	424.3	151	6
Ntchisi Boma	42.1	76.1	55	577.6	317.2	182	6
Salima Met	81.3	101.2	80	578.5	396.9	146	6
Dedza RTC	72.1	75.4	96	476.5	346.9	137	5
NORTHERN REGION							
Chikangawa forest	55.4	87.0	64	470.5	391.6	120	7
Chitipa Met	116.1	76.7	151	600.9	380.2	158	5
Karonga Met.	100.4	66.1	152	521.9	308.7	169	8
Mzimba Met	54.7	89.4	61	510.2	351.7	145	7
Mzuzu Met.	56.8	67.4	84	454.9	429.7	106	5
NkhataBay Met.	22.7	61.4	37	291.5	599.4	49	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	25.8	16.0	22.7	15.3	1.6	78
CHICHIRI	26.4	16.8	28.5	17.6	0.7	75
CHILEKA	28.6	20.7	30.7	18.8	1.0	78
NTAJA	28.7	21.0	31.0	20.3	2.0	74
CHITEDZE	26.4	18.3	28.6	16.0	0.1	76
CHITIPA	26.7	17.6	29.4	16.8	1.3	79
DEDZA	22.4	15.8	24.4	15.3	1.0	80
KASUNGU	26.8	18.8	28.9	16.7	1.4	84
KARONGA	31.6	22.4	33.4	20.2	1.3	80
K I A	26.3	17.2	28.2	15.8	1.0	84
MAKOKA	27.1	18.6	29.3	17.2	1.1	81
MANGOCHI	30.3	22.1	32.4	20.5	0.9	78
MIMOSA	30.2	19.8	31.6	18.6	1.1	52
MONKEY BAY	28.4	22.6	30.4	21.6	1.3	83
MZIMBA	25.3	17.6	27.7	16.8	0.7	80
MZUZU	26.0	17.8	27.7	16.7	1.6	80
NGABU	33.3	23.7	35.5	22.0	1.0	75
NKHATA BAY	29.2	21.3	31.4	20.7	1.0	80
NKHOTAKOTA	27.8	21.2	29.6	19.5	1.3	82
SALIMA	28.4	21.1	30.4	20.0	1.4	83
THYOLO	28.0	18.9	29.1	18.0	1.1	79

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