10-Day Rainfall & Agromet Bulletin

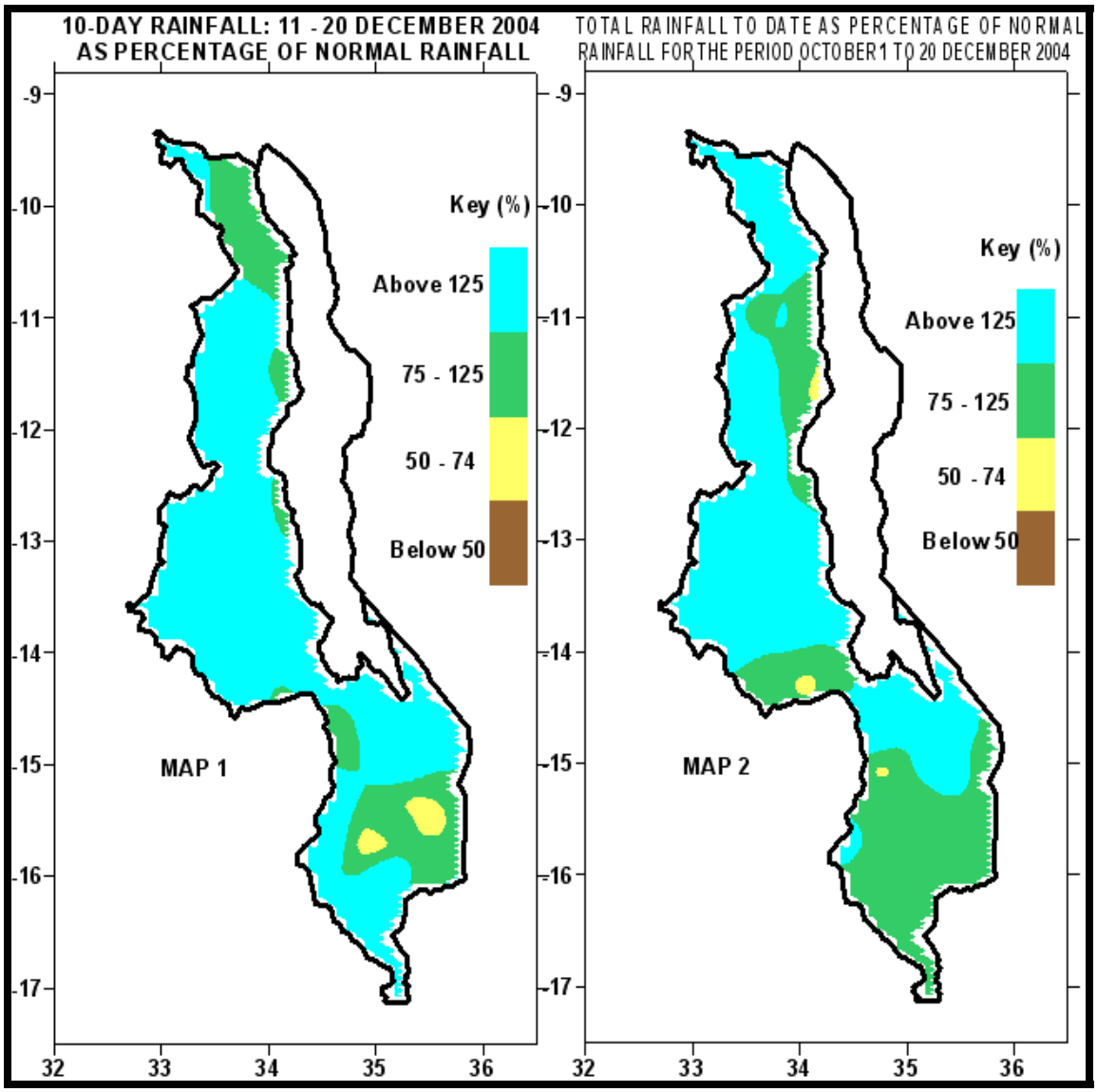
Department of Meteorological Services

Period: 11 – 20 December 2004 Season: 2004/2005 Issue No.8

Release date: 24 December 2004

HIGHLIGHTS

- **Heavy rains dampen central and northern Malawi …**
- **Weeding and fertilizer application continues…**
- **Widespread rains with local heavy downpours expected during 21 - 31 December 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 second 10-days of December Congo Airmass and Inter-Tropical Convergence Zone remained active over Malawi. As a result widespread rains and scattered thunderstorms which were locally heavy downpours occurred during the period except towards the end of period when a ridge of high pressure caused some dry spells over southern areas.

Central region received the highest rainfall. Areas with very high rainfall amounts were in Dowa, Ntchisi, Kasungu and Lilongwe districts. Highest 10-day rainfall amounts included Madisi in Dowa (509.6), KIA Met (281.7) and Kasungu Met (232.7). Some areas experienced up to 10 rainy days. See Table 1.
The incessant heavy rains which were experienced resulted in floods over some parts of central and northern areas. According the Malawi News Agency (MANA) floods were reported at Mponela in Dowa and Phwezi in Rumphi. It was reported that the floods claimed two lives in Rumphi and washed away crops and a bidge on M1 road in Dowa.
During the period under review due to high rainfall intensities most areas experienced above normal rainfall (above 125%) 10-day rainfall totals except some parts of the south and Karonga, Nkhata Bay and Nkhotakota where normal (75 – 125%) to below normal (below 75%) 10-day rainfall was experienced. Madisi in Dowa experienced the highest 10-day rainfall, 734% of normal. See Map 1 and Table 1.

Total rainfall from October up to 20 December indicate that Malawi has received normal to above normal rainfall except very few areas which have registered below 75% of normal rainfall. Nkhata Bay with only 35% was worst.. See Map 2 and Table 1 for more details.

1.2 MEAN AIR TEMPERATURE

Mean maximum temperatures indicate that Shire Valley with daily average maximum temperature of 32.7°C at Ngabu was the hottest place. The lowest average maximum air temperature was 23.4°C, registered at Dedza. Highest absolute maximum temperature of 36.6°C was reported at Ngabu while Dedza reported the lowest absolute minimum temperature of 14.0°C.

1.3 MEAN DAILY WIND SPEEDS

At 2 meters height, observed wind speeds were generally light. The values ranged from 0.7m/s (2.5km/hr) to 4.1m/s (14.8km/hr) at Mzimba and Bolero respectively (See Table 2 for more details).

1.4 MEAN RELATIVE HUMIDITY

Mean relative humidity values continued to increase over the country. On average the country had a relative humidity of 78%, indicating a moist atmosphere. The daily average relative humidity values ranged from 72% at Salima and Chitedze to 82% at Mzuzu.

2. AGROMETEOROLOGICAL ASSESSMENT

Most areas over central and north experienced good rainfall distribution in terms of both space and time to support healthy crop growth. Localized dry spells were experienced over the south where some areas registered up to 7 dry spell days such as Chileka Airport. Due to high temperatures that result in high evapotranspiration, wilting was experienced in most crops particularly maize. Weeding and fertilizer application have been the main farming activities across the country.

Crops are generally reported in good condition raising prospects of a good season. Maize ranges from germination to vegetative stages in most areas.

3. SEASONAL OUTLOOK

The 2004/05 seasonal forecast update for January to March 2005 indicate improved rainfall prospects for Malawi. High rainfall intensities that would result in floods and localized dry spells of different magnitudes are expected to occur within the same period.

4. FORECAST FOR 21 – 31 DECEMBER 2004

Meanwhile weather systems indicate that Inter-Tropical Convergence Zone and Congo Air will still be active over the country. However, a ridge of high pressure cell is expected to continue causing reduced weather activities over southern areas during the first three days of the forecast. Therefore generally widespread rains which will be locally heavy are expected to occur in most parts of the country during the period 21 to 31 December 2004.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 2 OF DECEMBER 2004: PERIOD 11 – 20

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
Balaka Township	70.4	52.8	133	206.8	224.0	92	4
Blantyre TownHall	23.0	71.8	32	183.2	256.4	71	2
Bvumbwe Met.	122.0	59.5	205	348.2	274.1	127	4
Chancellor College	38.8	90.0	43	402.4	335.4	120	4
Chikwawa Boma	56.8	56.2	101	194.2	178.0	109	4
Chileka Airport	21.1	57.3	37	196.4	237.1	83	3
Kasinthula Res. Stn.	78.7	46.3	170	236.3	175.6	135	4
Liwonde Township	96.2	57.6	167	282.9	181.6	156	6
Lujeri Tea Estate	143.9	126.8	113	508.9	552.9	92	6
Makoka Met	66.2	57.1	116	214.8	247.1	87	4
Mangochi Met.	101.5	52.3	194	316.5	183.9	172	4
Mimosa Met.	140.2	78.4	179	275.2	378.7	73	7
Monkey Bay Met.	124.3	83.7	149	248.7	197.7	126	7
Mulanje Boma	50.3	87.3	58	342.0	428.4	80	2
Mwanza Boma	140.4	62.5	225	349.4	249.0	140	7
Nchalo Sucoma	94.8	45.3	209	201.0	180.2	112	4
Ngabu Met.	72.2	48.0	150	193.1	200.6	96	5
Ntaja Met.	100.9	62.8	161	264.8	212.2	125	5
Toleza Farm	81.0	61.2	132	262.7	197.9	133	4
Thyolo Boma	136.0	81.2	167	300.2	279.5	107	5
Thyolo Met	125.5	78.7	159	383.0	302.3	127	5
Zomba RTC	32.9	95.0	35	379.0	316.5	120	5
CENTRAL REGION							
Chitedze Met.	121.7	66.9	182	302.4	220.7	137	9
Dedza Met	75.8	71.4	106	125.1	204.5	61	7
Dwangwa Sugar Corp.	80.8	70.2	115	260.6	251.7	104	6
K.I.A. Met.	281.7	58.0	486	385.8	175.4	220	10
Kasungu Met	232.7	84.7	275	321.9	215.5	149	7
Lifuwu	117.0	66.3	176	334.7	200.9	167	9
Madisi Agric	509.6	69.4	734	589.8	173.4	340	10
Mlangeni Njolomole	61.6	69.0	89	241.0	217.7	111	5
Ntcheu – Nkhande	75.1	74.7	101	455.8	237.5	192	5
Ntchisi Boma	146.6	67.5	217	358.2	166.4	215	8
Salima Met	188.4	84.5	223	315.2	208.8	151	6
Dedza RTC	95.4	66.5	143	254.0	199.0	128	7
NORTHERN REGION							
Bolero Met	63.6	49.6	128	180.8	178.3	101	7
Chikangawa forest	133.0	56.3	236	277.0	219.0	126	7
Chitipa Met	101.0	67.7	149	340.8	200.8	170	6
Karonga Met.	48.8	85.8	57	314.1	171.7	183	8
Mzimba Met	159.7	68.5	233	379.1	187.9	202	7
Mzuzu Met.	90.5	82.6	110	284.8	279.7	102	6
NkhataBay Met.	55.8	98.8	56	162.0	457.5	35	8

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 2 OF DECEMBER 2004

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
BVUMBWE	25.7	13.2	22.7	14.6	1.3	78
BOLERO	27.7	17.7	32.3	18.4	4.1	73
CHILEKA	28.7	20.5	32.2	19.5	1.8	80
NTAJA	28.3	21.3	31.0	20.5	1.4	80
CHITEDZE	26.7	18.5	28.9	17.8	0.4	72
CHITIPA	27.8	17.2	29.1	16.9	1.3	79
DEDZA	23.4	16.1	25.7	14.0	0.9	79
KASUNGU	27.0	19.2	30.0	17.3	1.5	81
KARONGA	29.9	22.3	32.5	21.6	1.3	78
K I A	26.8	17.7	29.9	14.9	1.2	81
MAKOKA	26.7	18.6	29.7	17.2	1.2	80
MANGOCHI	30.3	22.1	33.0	21.0	1.3	77
MIMOSA	29.5	19.5	32.8	18.0	1.0	79
MONKEY BAY	29.9	22.5	32.2	21.1	1.7	79
MZIMBA	26.6	17.5	29.4	16.9	0.7	78
MZUZU	26.3	17.8	30.0	16.6	1.3	82
NGABU	32.7	23.4	36.6	21.0	1.9	77
NKHATA BAY	29.9	21.8	34.2	21.5	1.8	81
NKHOTAKOTA	28.3	22.1	30.8	19.0	1.9	78
SALIMA	29.2	21.5	31.2	19.4	1.9	72
THYOLO	27.1	19.0	30.0	17.1	1.2	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