Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services

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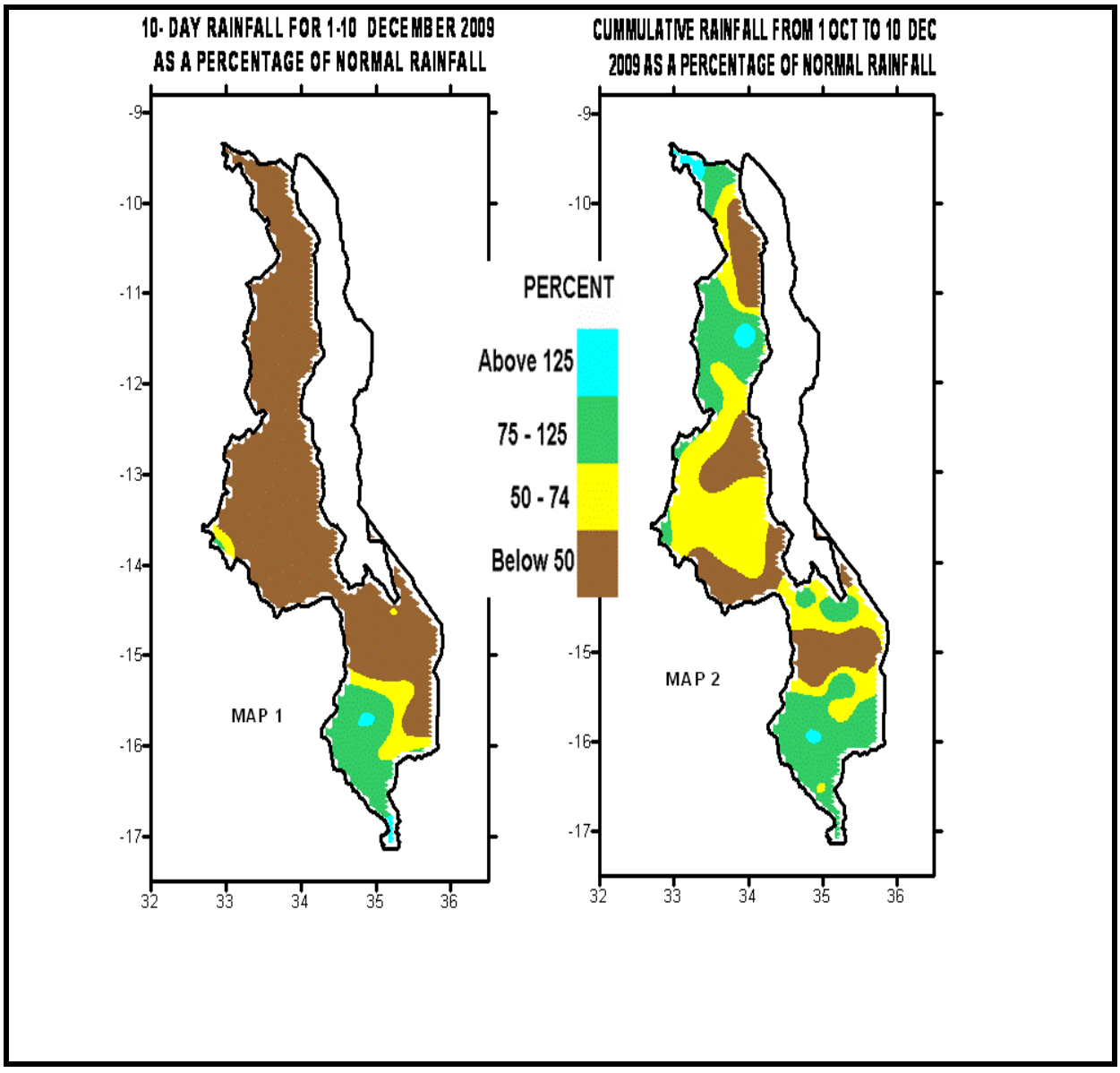
HIGHLIGHTS

- **Dry conditions experienced over most parts except a few in the south…**
- **Weeding was the major agricultural activity mainly over the south…**
- **A pick in rainfall activities over Malawi during 11 to 20 December 2009…**



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1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

Rains favored the southern parts of Malawi while central and northern areas of the country were mainly dry during the first ten days of December 2009 (Refer to Table 1 and Map 1). Areas that received rainfall amounts over 50 mm during this period included: Lujeri and Mimosa in Mulanje (99 mm and 88 mm, respectively), Mpemba and Chichiri in Blantyre (84 mm and 82 mm), Chancellor College in Zomba (78 mm), Chileka (75 mm), Bvumbwe in Thyolo (58 mm), Makoka in Zomba (55 mm) in the southern region and only Mchinji (73 mm) in the central region. Cumulatively, due to the dry conditions that prevailed in most areas, the percentages of rainfall received from 1 October 2009 decreased over larger parts of the country (Refer to Table 2 and Map 2). The number of rainy days reduced during the period under review compared to the last ten days of November 2009. See more details in Table 1.

1.2 MEAN AIR TEMPERATURE

Mean maximum air temperatures observed in the country ranged from 28°C at Bvumbwe to37°C over Ngabu in the lower Shire Valley. The lowest mean maximum temperature was reported at Kamuzu International Airport (27°C). Mean minimum temperatures reported were in the range of 17°C at Mzuzu Airport to Monkey Bay (26°C) along the lake shore areas (details in Table 2).

1.4 MEAN WIND SPEEDS

Mean wind speeds at a height of two metres above the ground were between 0.8 m/s (2.9 Km/h) at Chichiri & Nkhata Bay and 3.0 m/s (10.4 Km/h) at Chileka and Kasungu.(Refer to Table 2).

1.5 MEAN RELATIVE HUMIDITY

During the first dekad of December 2009, relatively higher values of relative humidity were reported over southern Malawi compared to the Centre and North. The highest daily average relative humidity was reported at Bvumbwe (74%) while the lowest daily average relative humidity was 47%, recorded at Bolero in Rumphi. More details are in the Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

During the period under review, most parts of Malawi were dry except for parts of the southern region and Mchinji in the western central region. In the southern areas, the main agricultural activities that farmers were engaged in were weeding and basal fertilizer application. Over the central and northern areas, land preparation and acquisition of farm inputs continued. In areas where planting had taken place, the crops were water stressed during this period. In Malawi, planting rains are normally expected in November in the south and in December in the northern half. So far the onset of the rains appear sporadic such that by 10th December 2009, field reports suggested that although the growing season has started in some parts of the country, pockets of dry areas still existed in some parts of the country. Refer to Map 2.

3. PROSPECTS OF 2009/10 RAINFALL SEASON

Most climate models continue to indicate that during the first half of the season (October to December 2009); the northern half of Malawi is likely to receive normal to above normal rainfall while the Southern half will receive above normal to normal rainfall. These rains are likely to support planting, germination and growth and development of various crops in Malawi

During January to March 2010 the northern half of Malawi will receive above normal to normal rainfall while the Southern half will receive normal to above normal rainfall. The rains in the second half will be enough to support maturity of most crops.

4. OUTLOOK 11 – 21 DECEMBER 2009

During the period 11 to 20 December 2009, a zone of unstable weather is expected to sweep through Malawi. As a result, locally heavy thunderstorms and rain showers are expected over the southern areas during the first half of the period. These activities are expected to shift to the central and northern areas during the last half of the forecast period.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 01 – 10 DECEMBER 2009 AT SELECTED STATIONS

STATION NAME	DEKADAL TOTAL RAINFALL (mm)	DEKADAL NORMAL RAINFALL (mm)	RAINFALL DEKADAL TOTAL (%)	TOTAL TO DATE (mm)	NORMAL TO DATE (mm)	RAINFALL TOTAL TODATE (%)	RAINY DAYS
SOUTH							
Balaka Township	1.5	38.1	4	16.5	138.7	12	1
Bvumbwe Met.	57.9	79.2	73	222.3	207.9	107	6
Chancellor College	78.2	99.5	79	137.3	223.1	62	1
Chichiri Met.	82.1	82.1	100	217	383.6	57	6
Chikweo Agric.	0	60.6	0	80.2	145.3	55	0
Chileka Airport	74.9	53.4	140	192.6	176.4	109	5
Chingale Agric	33.5	61.4	55	170.5	150.1	114	2
Chizunga Factory	72	105.8	68	346	263.4	131	3
Liwonde Township	18	60.8	30	34	123.2	28	2
Lujeri Tea Estate	98.7	109.9	90	535.6	426.1	126	4
Makoka Met	55.2	71.7	77	107.5	164.4	65	6
Mangochi Met.	15.9	30.7	52	93.9	76.2	123	2
Mimosa Met.	88.4	101.3	87	330	304.9	108	3
Monkey Bay Met.	0	28.6	0	12.2	50.6	24	0
Mpemba Vet	84.2	71.7	117	297	217.6	136	5
Namiasi Agric	0	50	0	42.6	89.5	48	0
Naminjiwa Agric	2.6	67.7	4	161.7	163.1	99	1
Nankumba Agric	21.5	60.9	35	113	124.1	91	2
Neno Agric	57	63.7	89	124	181.1	68	2
Ngabu Met.	43.2	48.9	88	95.3	137.2	69	4
Nsanje Boma	87	59.3	147	222.4	213.5	104	3
Ntaja Met.	8.1	52	16	27.1	125.8	22	3
Phalula Agric	24.4	50.6	48	28.2	164.7	17	3
Satemwa Tea Est. No.1	46.2	65.6	70	167.9	200.2	84	5
CENTRE							
Chileka Namitete	0	60.4	0	42.8	160.3	27	0
Chitedze Met.	1.4	44	3	74.5	129.9	57	1
Dedza Met	1.4	48	3	53.8	120	45	1
Dwangwa Sugar Corp.	0	76.6	0	44.6	168.8	26	0
Kaluluma DTC	13.4	68.3	20	70.1	108.6	65	1
K.I.A Met	0	32.7	0	75.4	98.4	77	0
Kasiya Agric	0	53.3	0	101.6	163	62	0
Kasungu Met	0	46.1	0	38.5	99	39	0
Mchinji Boma	72.9	69.3	105	154.7	182.7	85	4
Mkanda Met	12.5	42.9	29	96.5	128.8	75	3
Mtakataka Airwing	0.6	62.9	1	29.8	115.2	26	1
Nathenje Agric	0	38.9	0	65.5	112.5	58	0
Nkhotakota Met	0	76.2	0	57.4	132.2	43	0
Ntchisi Boma	12.9	78.3	16	89.2	140.5	63	1
Salima Met	0	62	0	20.4	104.8	19	0
NORTH							
Baka Res. Stn.	0	54.4	0	22.5	97.3	23	0
Bolero Met	0.5	27.5	2	51.4	71.5	72	1
Bwengu Agric.	0	29.8	0	16	87.1	18	0
Chitipa Met	0	42.5	0	167.4	118.4	141	0
Chintheche Agric	17	73.1	23	211.9	204.8	103	2
Karonga Met.	0	37.6	0	60.6	87.1	70	0
Mbawa Res. Stn	9	29.3	31	119	99.5	120	1
Mzimba Met	4.3	47.9	9	54.9	111.3	49	1
Mzuzu Met.	10	45.6	22	240.5	153.1	157	3
NkhataBay Met.	2	79.8	3	67.4	175.3	38	1

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 01 – 10 December 2009

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED (m/s)	RELATIVE HUMIDITY (%)
BOLERO	34.0	19.8	35.1	17.1	N/A	47
BVUMBWE	28.2	18.8	30.7	17.2	1.9	74
CHICHIRI	29.3	19.3	31.5	17.9	0.8	69
CHILEKA	31.7	22.0	34.6	19.6	2.9	69
CHITEDZE	31.4	19.8	32.8	18.8	1.2	60
CHITIPA	31.2	19.2	31.9	17.6	2.2	56
DEDZA	27.0	18.0	28.1	17.0	1.5	62
K I A	26.6	19.0	30.5	17.6	1.8	60
KARONGA	34.3	24.4	35.7	23.5	2.0	56
KASUNGU	32.1	20.8	33.2	19.1	3.0	57
MAKOKA	30.1	19.7	31.8	18.7	1.3	71
MANGOCHI	N/A	24.2	N/A	23.4	1.8	59
MIMOSA	32.6	20.3	35.0	18.1	1.5	58
MONKEY BAY	34.6	26.0	35.8	24.9	2.5	56
MZIMBA	31.2	19.0	32.3	17.5	1.3	53
MZUZU	28.9	17.1	30.0	15.8	1.7	68
NGABU	36.6	24.3	40.8	21.0	2.4	65
NKHATA BAY	35.7	21.0	36.6	20.1	0.8	58
NKHOTAKOTA	33.0	24.9	34.7	23.8	N/A	58
NTAJA	34.0	22.5	35.7	20.0	2.4	58
SALIMA	33.7	25.4	35.2	24.0	2.5	55

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) = mps x 3.6