Malawi 10-Day Rainfall & Agrometeorological Bulletin

Department of Climate Change and Meteorological Services

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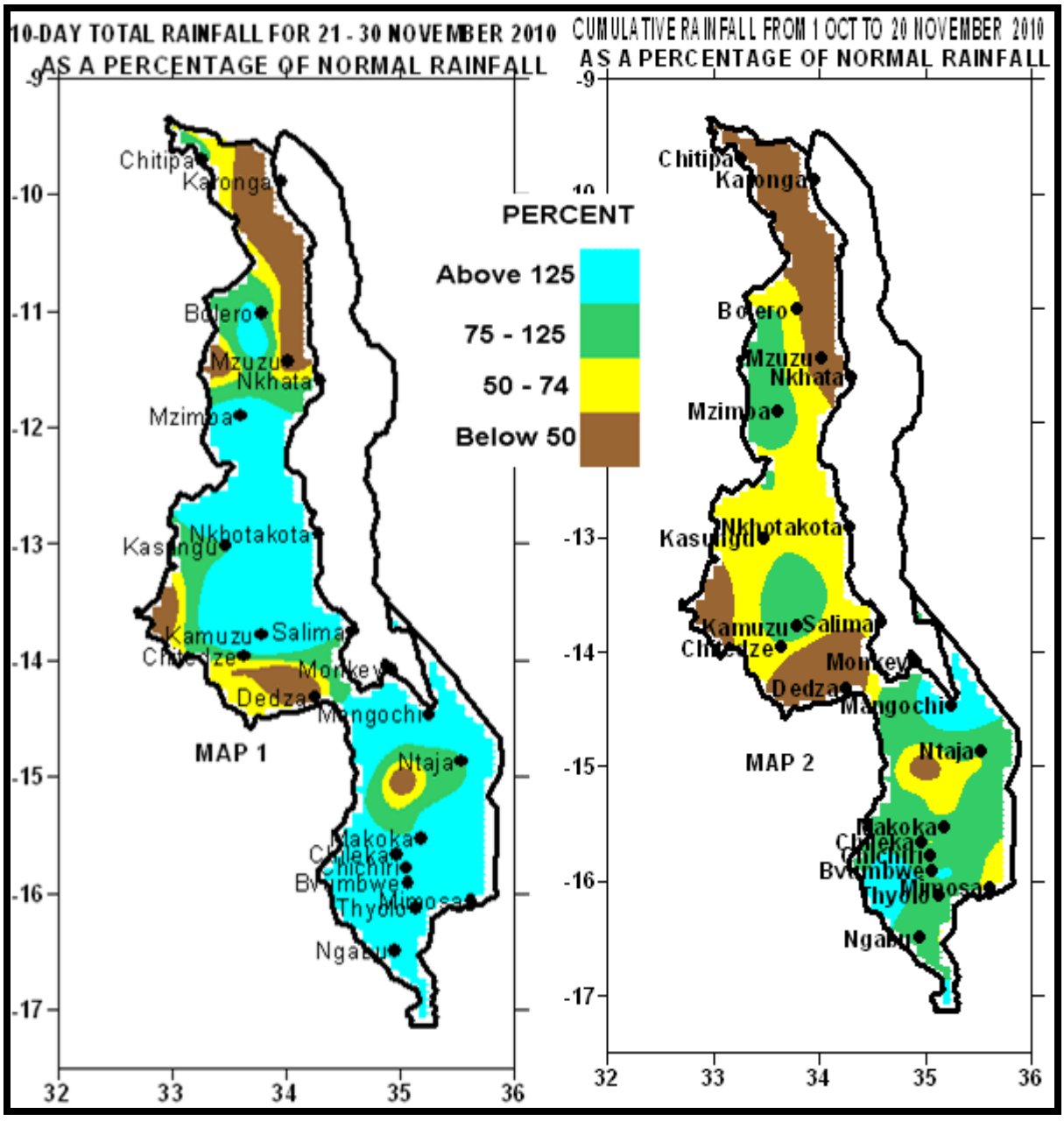
HIGHLIGHTS

- **Mostly dry in the North as South and Centre register good planting rains …**
- **Good rains prompted farmers in the south and centre to begin planting crops…**
- **Mostly wet weather expected during 01 – 10 December, 2010…**



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1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the period 21 to 30 November 2010, the Inter Tropical Convergence Zone got established over southern and central Malawi. As a result moderate to heavy falls were reported in many areas. Places that reported in excess of 85mm in the southern Malawi included Nsanje Agric (140mm), Thuchila Agric (135mm), Mpemba (134mm), Chichiri (123mm) and Mimosa and Thyolo (107mm), Zomba RTC (95mm) and Chancellor College in Zomba (85mm) while in the Centre region such high figures were reported at Ntcheu – Nkhande (89mm) and Kasiya Agric (87mm) in Lilongwe. The north on the other hand remained mostly dry. A few areas that registered significant rainfall included Bolero in Rumphi 30mm, Chitipa Met 37mm, Mbawa 52mm, Mzimba Met 43mm and 38mm at Zombwe. More details are in Table 1 and Map 1.
Map 2 shows a mixed pattern for cumulative rainfall performance for the period 1st October to 30th November 2010. Generally average to above average rainfall performance in the south except around Balaka, mostly below average rainfall performance in the centre and north.

1.2 MEAN AIR TEMPERATURE

Mean maximum air temperatures at most places were generally hot. Very hot conditions were confined to lower Shire Valley and Ngabu reported average daily maximum temperature of 36°C. The lowest absolute minimum temperature was reported at Kamuzu International Airport (14°C). See more details in Table 2.

1.4 MEAN WIND SPEEDS

Average wind speeds at a height of two metres above the ground ranged from 0.8 m/s (2.9 Km/h) at Chichiri to 3.6 m/s (13Km/h) at Ngabu. See more details in Table 2.

1.5 MEAN RELATIVE HUMIDITY

During the period 21 to 30 November 2010, air over Malawi became relatively most. Most areas reported daily average relative humidity values of above 50%. Very few areas reported daily average relative humidity values of less than 50%. Such areas included Kasungu and Bolero. The highest daily average relative humidity value was reported at Bvumbwe in Thyolo (73%). More details are in the Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

Good rainfall amounts that were received particularly in the south and centre prompted farmers to start planting crops. In Malawi, generally planting rains are expected by mid-November in the south and December in the northern half. By 30th November 2010, planting rains had not yet started in most parts of the north and a few areas in the centre while in most of the south planting had started 10-days late.
Land preparation, acquisition of farm inputs and planting were the major agricultural activities for farmers. Distribution of vouchers for the government sponsored agricultural inputs (fertilizer and seeds) subsidy program to help increase access to agricultural inputs and hence boost agricultural production was still in progress in other parts of the country.

3. PROSPECTS OF 2010/11 RAINFALL SEASON

Updated climate forecast still suggests that during 2010/2011 rainfall season, a greater part of Malawi is likely to experience normal to above normal total rainfall amounts that will result in floods in some areas as *La Nina* conditions have become fully established over the eastern equatorial Pacific Ocean. In simple terms the seasonal rainfall will be adequate to support water resources and agricultural production in most parts of Malawi. high rainfall intensities will result in flooding especially in low lying areas.

4. OUTLOOK 01 – 10 DECEMBER 2010

Medium range forecast products indicate that both main rain bearing systems namely the Inter Tropical Convergence Zone and Congo Air mass will become more active during the first ten days of December 2010. As a result most areas in Malawi are likely to experience good rainfall distribution and amounts. These rains are likely to facilitate land preparation, planting and germination of most crops.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 21 – 30 NOVEMBER 2010 AT SELECTED STATIONS

STATION NAME	DEKADAL TOTAL RAINFALL	DEKADAL NORMAL	DEKADAL TOTAL AS %	TOTAL TO DATE	NORMAL TO DATE	TOTAL TODATE AS %	RAINY DAYS
SOUTHERN REGION	mm	mm	NORMAL	mm	mm	NORMAL	≥ 0.3 mm
Balaka Township	7.5	34.3	22	25.5	100.7	25	2
Bvumbwe Met.	70.2	43.7	161	120.3	128.6	94	4
Chancellor College	84.8	48	177	141.4	123.5	114	4
Chichiri Met.	123.3	75.9	162	173.4	301.6	57	4
Chikweo Agric.	56.9	25.7	221	88.5	84.7	104	3
Chileka Airport	80.5	43.9	183	112	123	91	3
Chingale Agric	56.1	36.2	155	62.1	88.7	70	4
Kasinthula Res. Stn.	63.5	20.4	311	76.7	80.4	95	4
Makhanga Met	15.7	28.5	55	46.2	92.7	50	3
Makoka Met	38	35	109	66.9	92.9	72	3
Mangochi Met.	36.9	16.9	218	94.1	45.4	207	3
Mimosa Met.	67.3	58.6	115	121.3	203.7	60	5
Monkey Bay Met.	11.7	8.1	144	21.5	22	98	3
Mpemba Vet	133.7	49.3	271	215.9	145.9	148	5
Ngabu Met.	79.1	32.8	241	94.9	88.3	107	2
Nsanje Boma	140.2	35.1	399	217.5	154.3	141	4
Ntaja Met.	29.2	29.6	99	54.8	73.8	74	3
Phalula Agric	26.4	40.7	65	93.1	114.1	82	3
Satemwa Tea Est. No.1	57.7	43.5	133	133.8	134.4	100	5
Thuchila Agric	134.7	28.4	474	134.7	95.1	142	2
Thyolo Met	107.1	44.7	240	171.3	143.6	119	6
Zomba RTC	95.1	46.5	205	166.4	110.5	151	3
CENTRAL REGION							
Chitedze Met.	6.8	32.5	21	56.6	86	66	2
Dedza Met	10.4	30	35	13.7	71.9	19	3
Kaluluma DTC	30.8	12.3	250	30.8	40.3	76	3
K.I.A Met	75.1	19.1	393	75.1	65.7	114	3
Kasiya Agric	87	31.8	274	91.5	109.7	83	4
Kasungu Met	28.3	25.3	112	37.1	52.9	70	5
Mkanda Met	2.7	30	9	22.9	85.9	27	1
Mlangeni Njolomole	72	29.9	241	90.1	89.8	100	4
Mtakataka Airwing	16.5	22.4	74	22.5	52.4	43	2
Nathenje Agric	0	29	0	0	73.6	0	0
Nkhotakota Met	29.7	25.5	116	29.7	55.9	53	2
Ntcheu - Nkhande	88.8	34.1	260	98.7	92	107	4
Salima Met	19.5	16.8	116	24.2	42.7	57	2
NORTHERN REGION							
Bolero Met	29.7	20.6	144	29.7	44	68	1
Bwengu Agric.	5	22.2	23	7	57.3	12	1
Chitipa Met	37	44.8	83	37	75.9	49	4
Karonga Met.	0	28.7	0	0	49.5	0	0
Mbawa Res. Stn	51.8	25.4	204	51.8	70.2	74	6
Mzimba Met	42.8	24.2	177	57.1	63.3	90	4
Mzuzu Met.	10.6	30.5	35	28	107.4	26	2
NkhataBay Met.	26.5	31.7	84	26.5	95.6	28	2
Zombwe Agric	38.5	19.5	197	38.5	60.2	64	2

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 21 – 30 November 2010

STATION	MAX TEMP (℃)	MIN TEMP (℃)	ABS MAX (℃)	ABS MIN (℃)	WIND SPEED m/s	RH %
BOLERO	32.1	21.1	34.8	18.6	N/A	49
BVUMBWE	27.3	17.8	31.1	16.0	1.9	73
CHICHIRI	29.0	19.1	32.5	17.2	0.8	68
CHILEKA	31.6	21.3	35.7	19.1	3.4	61
CHITEDZE	29.0	19.1	32.2	17.8	0.9	64
CHITIPA	30.5	16.8	33.1	17.1	1.7	58
DEDZA	25.2	16.8	27.8	15.3	1.6	71
K I A	28.2	17.4	31.3	14.1	1.6	62
KARONGA	34.0	24.5	36.0	23.0	2.0	52
KASUNGU	31.2	19.1	32.6	19.1	3.0	40
MAKOKA	29.1	19.2	32.7	17.6	2.4	70
MANGOCHI	N/A	23.5	N/A	20.9	1.6	61
MIMOSA	31.9	19.9	35.4	18.3	1.2	71
MONKEY BAY	33.7	24.6	36.2	21.0	2.2	56
MZIMBA	29.3	18.9	32.6	17.7	1.3	60
MZUZU	29.2	16.9	31.9	15.4	1.7	60
NGABU	36.2	22.1	38.2	20.6	3.6	63
NKHATA BAY	34.7	21.0	37.5	20.1	0.9	57
NKHOTAKOTA	32.2	24.1	35.7	21.9	2.2	58
NTAJA	32.3	21.8	35.6	20.0	2.6	64
SALIMA	32.3	24.5	35.6	22.7	2.6	60

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