Malawi 10-Day Rainfall & Agrometeorological Bulletin

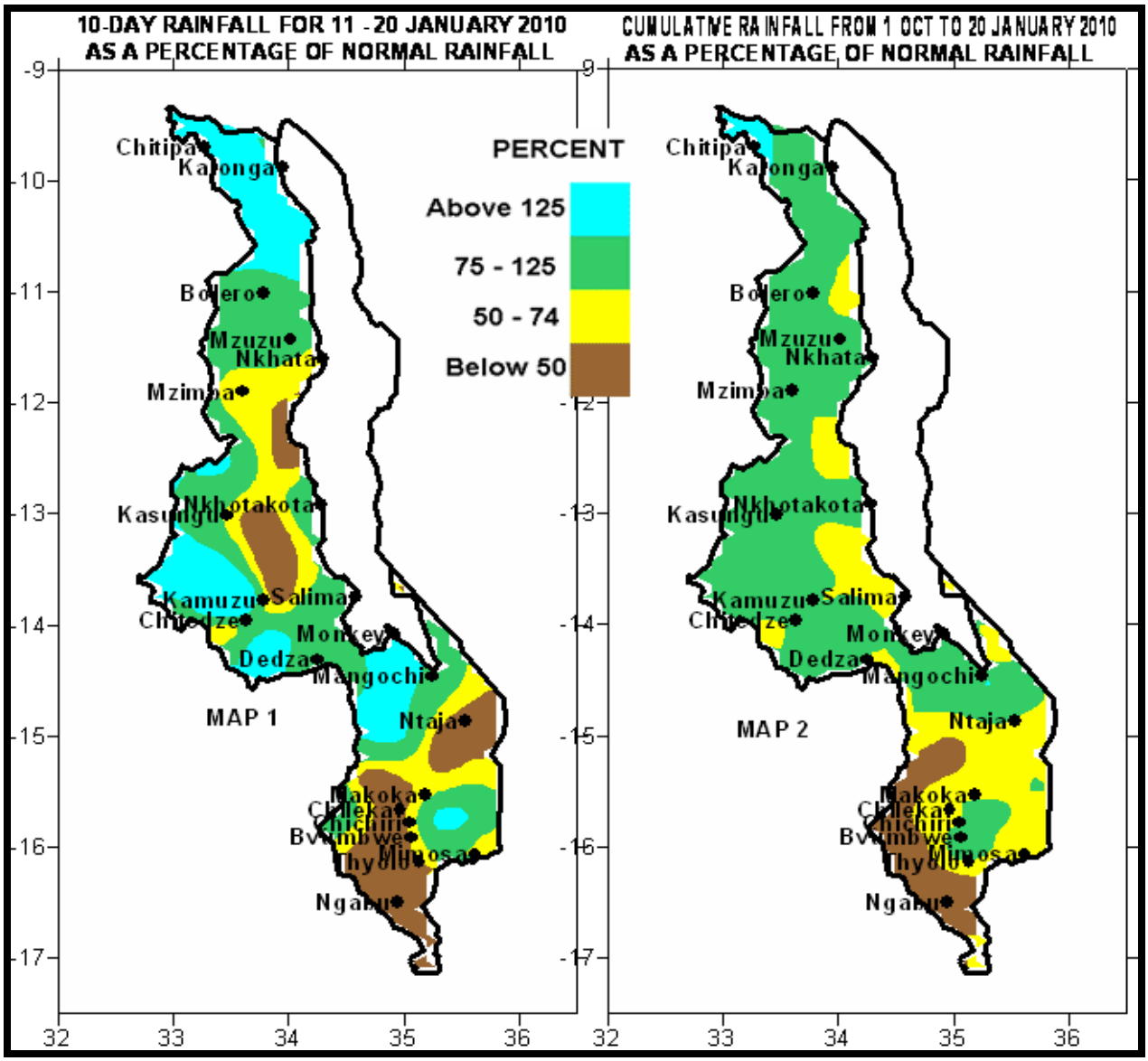
Department of Climate Change and Meteorological Services

Period: 11 – 20 January 2010 | Season: 2009/2010 | Issue No.11

Release date: 25 January 2010

HIGHLIGHTS

- **Good rainfall persisted in northern half of Malawi…**
- **Prolonged dry spells continued to affect crops in southern Malawi …**
- **Good rains to be confined to the south during 21 - 31 January, 2010...**



All inquiries should be addressed to: The Director of Climate Change and Meteorological Services, P.O. Box 1808, Blantyre, MALAWI
Tel: (265) 1 822 014/106 Fax: (265) 1 822 215 E-mail: metdept@metmalawi.com Homepage: www.metmalawi.com

1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

In the second ten days of January 2010, most of northern Malawi continued to receive good rainfall except for a few areas particularly in Mzimba and Nkhata Bay where below average rainfall was reported. Central Malawi also generally enjoyed good rainfall amounts save for a few pockets in Dowa and Ntchisi where mostly below average rainfall (yellow and brown colours on Map 1) was received.. On the other hand far below average rainfall situation persisted in Nsanje, Chikwawa, Mwanza and Neno districts in southern Malawi. More details are in Map 1 and Table1.

Cumulative rainfall performance (Map 2), by 20th January 2010, indicated that most areas in the centre and north had received three quarters of the expected rainfall amounts (Green colour on Map 2). while most of the districts in southern Malawi had received below average rainfall (yellow and brown clours on Map 2) with some of them registering less than half of the expected rainfall.

1.2 MEAN AIR TEMPERATURE

Mean maximum air temperatures observed in the country ranged from 25.5℃ at Dedza to 37.5℃ at Ngabu in Chikwawa district. The highest mean maximum temperature was still reported at Ngabu (39.4℃). At the same time, mean minimum temperatures ranged from 16.7℃ at Dedza to 24.7℃ at Ngabu. The lowest observed temperature during this period was 13.7℃, reported at Mzuzu Airport (see Table 2).

1.4 MEAN WIND SPEEDS

Average wind speeds, measured at two metres above the ground were still low during the period under review. The lowest speed was 0.5 m/s (1.8 Km/h) reported at Chitedze while the highest was 2.9 m/s (10.4 Km/h) recorded at Ngabu in Chikwawa (Refer to Table 2).

1.5 MEAN RELATIVE HUMIDITY

During the second ten days of January 2010, average daily relative humidity values ranged from 64% observed at Ngabu to 85% reported at Dedza. More details are in the Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

During the second ten days of January 2010, good rainfall continued over most parts of the centre and north. This rainfall continued to support basal and top dressing fertilizer applications as well as crop growth and development. However, in southern Malawi although there was slight improvement in rainfall performance, in some areas crops continued to experience soil moisture stress. Reports indicated that in selected areas in the south crops had reached permanent wilting point and farmers were reported replanting early maturing crop varieties where good rains had resumed. However, it is very unlikely that this crop would mature before the rains tail off in March 2010 particularly in southern Malawi.

Crops over Malawi were reported to be at various growth development stages. The early planted crop had reached flowering stage while the late planted crop was still at vegetative stage. The variations in crop developmental stages were mostly due to erratic and late start of rains in some parts of the country.

Despite the dry spells that have hit some parts of the country particularly southern Malawi, preliminary results from our Crop Water Satisfaction Index (WRSI) model suggest that it is still possible for Malawi to produce surplus maize at national level this season if good rains continue into March 2010 particularly in Kasungu, Lilongwe, Machinga and Mzuzu Agricultural Development Divisions (ADDs).

.

3. PROSPECTS FOR JANUARY TO MARCH 2010 RAINFALL

Most of dynamical and statistical model forecasts from advanced climate prediction centers indicate a continuation of the El Nino conditions into the middle of 2010. El Niño conditions are usually associated with below average and erratic rainfall over a greater part of Southern Africa and above normal rainfall over Eastern Africa. Most of Southern Malawi is currently experiencing below average rainfall due to prolonged dry spells. Crops in the affected areas had wilted some of them permanently due to soil moisture deficits. Overall crop production this season will be negatively affected by prolonged dry spells.

Most climate models still project that Malawi will receive normal to above normal rainfall amounts during January to March 2010,

4. OUTLOOK 21 – 31 JANUARY 2010

Models for medium term rainfall forecasts indicated that the active rain belt will cover southern and some parts of central Malawi during the last ten days of January 2010. Therefore northern half of Malawi will mostly likely experience reduced rainfall while more rains are expected over southern half of Malawi including the lower Shire Valley which has been experiencing erratic rains for sometime this growing season.

.

TABLE 1: DEKADAL RAINFALL SUMMARY FOR 11 – 20 JANUARY 2010 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
SOUTHERN REGION							
Balaka Township	102.5	70.2	146	196.5	403.7	49	5
Bvumbwe Met.	50.9	84.0	61	395.1	500.5	79	5
Chichiri Met.	43.7	74.8	58	397.8	741.0	54	5
Chikwawa Boma	13.9	61.2	23	144.6	387.9	37	2
Chileka Airport	17.8	63.9	28	339.9	416.7	82	4
Chiradzulu Agric	97.0	60.3	161	386.6	445.8	87	5
Chizunga Factory	20.0	70.9	28	533.0	644.7	83	2
Liwonde Township	21.5	63.0	34	205.5	355.1	58	1
Lujeri Tea Estate	43.3	127.7	34	750.9	941.3	80	4
Mpilipili	20.1	65.9	31	267.6	412.6	65	2
Makoka Met	37.3	79.4	47	336.6	458.8	73	5
Mangochi Met.	74.0	64.6	115	382.9	275.3	139	5
Mimosa Met.	67.1	93.8	72	485.8	655.5	74	3
Monkey Bay Met.	90.9	54.0	168	286.6	253.4	113	8
Mpemba Vet	26.9	88.8	30	469.6	545.3	86	3
Mulanje Boma	70.8	109.7	65	296.5	812.1	37	5
Mwanza Boma	83.1	69.9	119	194.6	471.5	41	3
Naminjiwa Agric	103.5	84.8	122	326.8	458.1	71	3
Nchalo Illovo	5.6	58.1	10	135.7	314.0	43	1
Neno Agric	24.2	95.7	25	210.1	510.9	41	6
Ngabu Met.	7.8	55.8	14	174.6	368.1	47	3
Nsanje Boma	13.0	97.8	13	275.0	528.7	52	2
Ntaja Met.	23.7	75.2	32	290.2	404.6	72	5
Phalula Agric	45.5	61.9	74	176.2	407.0	43	4
Satemwa Tea Est.No.1	61.5	61.5	100	557.6	478.9	116	4
Thyolo Met	36.4	84.0	43	333.7	517.7	64	4
CENTRAL REGION							
Chileka Namitete	23.5	61.3	38	282.3	445.9	63	3
Chitedze Met.	30.9	79.5	39	282.4	400.5	71	4
Dedza Met	38.2	69.3	55	272.3	405.5	67	3
Dwangwa Sugar Corp.	26.4	81.6	32	262.1	500.5	52	5
Kaluluma DTC	106.9	76.9	139	418.1	384.0	109	5
K.I.A Met	55.4	87.2	64	291.9	382.6	76	4
Kasiya Agric	177.0	53.9	328	549.3	473.4	116	5
Kasungu Met	40.0	62.3	64	347.3	344.2	101	5
Malomo Agric	22.3	125.7	18	273.0	379.7	72	6
Mlangeni Njolomole	85.4	82.4	104	284.2	438.5	65	4
Mponela Agric	18.0	68.1	26	321.0	350.2	92	5
Mtakataka Airwing	107.8	59.2	182	331.3	343.6	96	6
Nathenje Agric	87.5	57.7	152	446.0	368.9	121	9
Nkhotakota Met	163.0	105.9	154	593.8	528.9	112	8
Ntcheu - Nkhande	156.1	97.6	160	416.0	503.1	83	8
Salima Met	127.4	117.2	109	290.6	481.5	60	7
NORTHERN REGION							
Baka Res. Stn.	105.6	60.6	174	324.6	382.9	85	5
Bolero Met	49.4	52.0	95	328.4	290.2	113	5
Chitipa Met	103.9	65.9	158	553.4	398.2	139	6
Chintheche Agric	41.8	83.1	50	568.6	564.1	101	2
Emfeni Agric	54.7	61.1	90	331.2	374.3	88	6
Karonga Met.	52.4	55.3	95	253.1	331.7	76	0
Kavuzi Rosefalls	75.3	76.5	98	807.5	615.4	131	5
Lupembe	87.0	49.3	176	271.3	275.7	98	4
Mbawa Res. Stn	50.7	59.4	85	358.2	377.6	95	6
Mzimba Met	36.7	71.1	52	265.1	407.7	65	7
Mzuzu Met.	87.9	69.3	127	520.7	407.1	128	5
NkhataBay Met.	20.8	65.6	32	218.8	474.8	46	6
Vinthukutu Agric	129.9	69.0	188	309.0	382.4	81	4

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 – 20 JANUARY2010

STATION	MAX TEMP (℃)	MIN TEMP (℃)	ABS MAX (℃)	ABS MIN (℃)	WIND SPEED (m/s)	RELATIVE HUMIDITY (%)
BOLERO	29.1	16.8	31.1	15.3	N/A	76
BVUMBWE	26.9	18.6	28.2	17.9	1.7	75
CHICHIRI	28.1	19.2	30.0	18.0	0.6	75
CHILEKA	30.4	21.6	31.8	20.5	2.6	70
CHITEDZE	27.1	18.9	29.0	17.0	0.5	81
CHITIPA	27.7	17.6	29.8	16.4	0.7	77
K I A	26.3	17.9	28.7	16.5	1.3	75
KARONGA	30.8	22.6	31.8	21.4	1.1	74
KASUNGU	26.9	19.4	28.6	18.5	1.4	80
MAKOKA	28.5	19.2	30.1	17.6	1.1	80
MANGOCHI	N/A	23.0	N/A	21.5	0.9	76
MIMOSA	31.5	19.8	32.7	18.2	1.1	73
MONKEY BAY	29.1	22.5	31.3	21.5	1.6	78
MZIMBA	26.7	17.6	28.7	15.4	0.8	76
MZUZU	26.2	17.0	29.7	13.7	1.3	81
NGABU	37.5	24.7	29.4	22.6	2.9	64
NKHATA BAY	31.2	21.2	32.9	19.1	0.6	77
NKHOTAKOTA	28.4	22.3	31.0	20.5	N/A	79
NTAJA	29.6	21.9	32.5	21.0	1.6	75
SALIMA	28.7	22.2	31.3	20.9	1.6	77
THYOLO	29.3	21.5	30.0	N/A	N/A	76

Glossary of some terms on this table

- 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