



10-day Weather and Agrometeorological Bulletin



Produced in support of national early warning systems

Period: 11 – 20 April 2014

Crop Season: 2013/14

Issue No.20

Release date: 23rd April 2014

HIGHLIGHTS

- Mostly dry conditions prevailed during the period 11 to 20 April 2014...
- Average seasonal rainfall amounts recorded during 2013/14 season...
- Mainly dry weather expected during the period 21 to 30 April 2014...

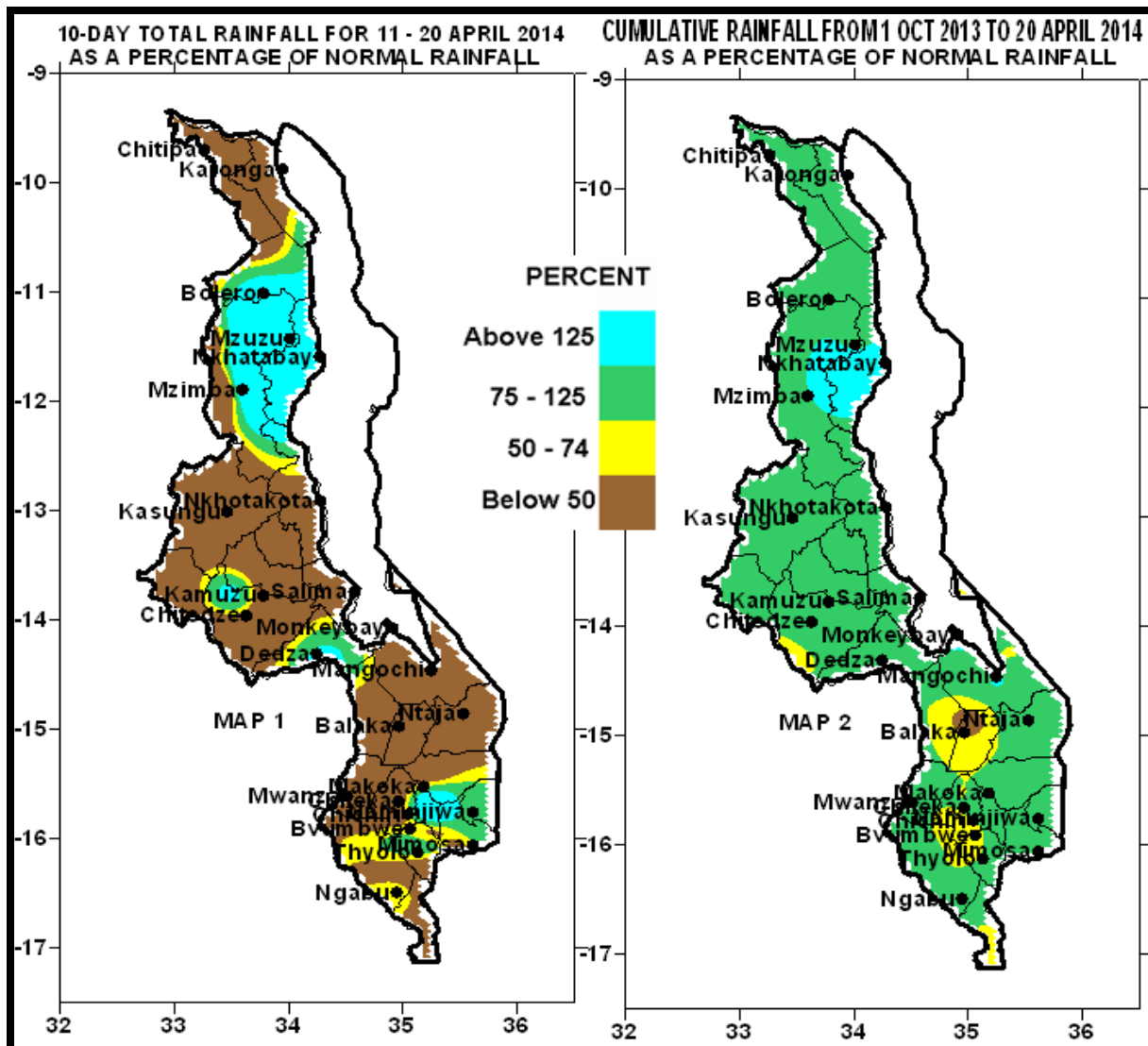


Figure 1: Rainfall Maps for Malawi for 11 to 20 April 2014

1.0 WEATHER SUMMARY AND IMPACTS

1.1 RAINFALL SITUATION

During the second ten days of April 2014, the main rain belt was over East Africa signalling the end of the main rainfall season in Malawi. As a result below average cumulative rainfall and dry weather prevailed over most parts of Malawi except for very few places over highlands and along the lakeshore. A few places that had registered significant cumulative rainfall amounts in excess of 100mm were confined to northern Malawi and had included Chintheche Agric 207mm, Chikangawa Forest 207mm, Mzuzu Airport 187mm and Nkhata Bay Met 156mm. For more details refer to Table 1.

Map 2 shows the cumulative rainfall performance across the country since the start of rainfall season in October 2013 up to 20th April 2014. The map shows that most areas in Malawi have recorded average cumulative rainfall amounts (green colour on Map 2) with a few pockets of below average cumulative rainfall (yellow colour) particularly in Balaka and Chikwawa districts in southern Malawi. For more details refer to Table 1 and Map 2.

1.2 AIR TEMPERATURE

Warm to temperatures had persisted over Malawi during the period 11 to 29th April 2014. Mean daily maximum temperatures had ranged from 21.7°C at Dedza to 30.3°C at Ngabu. The highest absolute maximum temperature for the period was still recorded at Ngabu (32.7°C) while the lowest absolute minimum temperature was recorded at Bvumbwe (11.2°C). For more details see Table 2.

1.3 WIND SPEEDS

Mean wind speeds at a height of two metres above ground level had continued to be light and from variable direction. The mean daily wind speeds had ranged from 0.3 to 4.6 metres per second. The lowest mean wind speed was observed at Kasungu while the highest mean wind speed was reported at Chitipa. More details are in Table 2.

1.4 RELATIVE HUMIDITY

During the second ten days of April 2014, the amounts of moisture in the atmosphere had remained started declining. The mean daily relative humidity values ranged from 67% at Salima to 85% at Mimosa as opposed to 70% at Salima and 88% at Mzuzu Airport during the first ten days of April 2014. More details are on the Table 2. High relative humidity values promote rotting of cereal crops.

2. AGROMETEOROLOGICAL ASSESSMENT

Dry conditions that prevailed over most parts of country during the period 11 to 20th April 2014 had facilitated harvesting and drying of matured crops. Maize crop was mostly at drying and harvesting stages. Harvesting of maize which is the staple food for Malawians was in progress throughout the country. This has significantly improved household food security as most farm households had food from their own production. The rains that fell in a few places apart from supporting growth and development of roots and tuber crops have also increased prospects for residual moisture and irrigated farming.

The second round results from the maize yield forecasting model suggest that despite late start of the planting rains, localised prolonged dry spells and low rainfall in March, Malawi is expected to produce **3,283,676MTs** of maize from the rain-fed crop. This estimate is down by **18%** from first round estimate figure of **3,993,980MTs**. However, this is not the official estimate figure. For official agricultural production estimates please contact Ministry of Agriculture and Food Security. Although the food security picture at national level looks good, some households will still experience food shortages especially in districts like Karonga, Balaka and some parts of Nsanje, Rumphi and Mzimba districts where some households will not harvest enough maize to take them to the next harvesting season.

3. PROSPECTS FOR 2013/14 RAINFALL SEASON

The rainfall outlook for October 2013 to March 2014 had suggested that *Malawi would experience average to above average total rainfall amounts*. However, a comparison of rainfall observations for the period and the 1971–2000 climatology (map 2) has shown that the country has experienced average seasonal rainfall amounts with few pockets of below average amounts. The analysis also shows that most of the rainfall was received in January and February 2014. Meanwhile as the main rainfall season is tailing off over Malawi. Meanwhile mostly dry conditions are expected over Malawi and rains will be confined a few places over highlands and along the lakeshore between April to June 2014.

4. OUTLOOK FOR 21 TO 30 APRIL 2014

Models for short and medium term weather forecasts suggest that the main rains are tailing off. As a result occasional rainfall is expected mainly over northern highlands and along the lakeshore during the last ten days of April 2014.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR 11 TO 20 APRIL 2014

STATION NAME	ACTUAL DEKADAL TOTAL RAINFALL mm	DEKADAL NORMAL (EXPECTED) RAINFALL mm	ACTUAL TOTAL AS PERCENTAGE OF NORMAL (EXPECTED) RAINFALL	TOTAL ACTUAL RAINFALL TO DATE mm	NORMAL (EXPECTED) RAINFALL TO DATE mm	ACTUAL TODATE AS PERCENTAGE OF NORMAL	RAINY DAYS ≥ 0.3 mm
SOUTHERN REGION							
Balaka Township	0.0	11.8	0	462.2	842.7	55	0
Bvumbwe Met.	18.8	19.6	96	919.5	1066.4	86	6
Chichiri Met.	9.7	21.1	46	875.0	1078.6	81	5
Chikwawa Boma	6.4	8.1	79	575.4	743.3	77	2
Chikweo Agric.	0.0	7.9	0	782.7	1036.1	76	0
Chileka Airport	0.0	16.7	0	619.4	863.6	72	0
Chingale Agric	0.0	15.5	0	740.0	904.6	82	0
Chiradzulu Agric	41.6	11.9	350	753.7	953.8	79	4
Lujeri Tea Estate	83.3	70.2	119	N/A	1920.7	N/A	6
Makoka Met	8.9	14.1	63	777.6	949.1	82	2
Mangochi Met.	3.0	9.4	32	906.1	692.9	131	2
Masambanjati Agric	24.5	36.4	67	1078.0	1276.7	84	6
Mimosa Met.	38.1	43.6	87	1146.4	1375.4	83	8
Monkey Bay Met.	0.0	3.3	0	831.1	561.4	148	0
Mpemba Agric	4.8	18.5	26	731.8	1091.1	67	1
Mulanje Boma	22.1	52.8	42	1541.0	1659.1	93	3
Mwanza Boma	5.9	16.7	35	773.3	988.5	78	2
Namiasi Agric	0.0	3.2	0	546.5	740.8	74	0
Namwera Agric	0.0	20.4	0	817.8	1027.1	80	0
Nchalo Sucoma	0.0	10.2	0	460.1	634.5	73	0
Neno Agric	0.2	21.2	1	880.3	1068.6	82	0
Ngabu Met.	10.9	13.6	80	626.2	736.3	85	3
Nsanje Boma	0.0	26.2	0	674.1	1048.4	64	0
Ntaja Met.	0.3	14.0	2	1025.7	872.4	118	1
Phalula Agric	0.0	12.7	0	387.1	811.8	48	0
Satemwa Tea Est	32.5	24.4	133	1378.6	1049.3	131	8
Thuchila Agric	0.0	15.6	0	N/A	856.2	N/A	0
Thyolo Met	56.7	19.6	289	1255.1	1157.4	108	6
Zomba RTC	2.5	19.7	13	1000.4	1173.5	85	2
CENTRAL REGION							
Chitedze Met.	1.8	9.0	20	718.2	868.0	83	1
Dedza Met	14.7	10.3	143	916.2	915.1	100	3
Dowa Agric	0.0	9.6	0	725.9	869.5	83	0
Dwangwa	45.7	58.2	79	1124.6	1287.1	87	6
K.I.A Met	0.0	1.6	0	771.3	832.0	93	0
Kasiya Agric	12.5	7.3	171	672.6	935.5	72	1
Kasungu Met	0.0	5.6	0	728.8	766.4	95	0
Madisi Agric	0.0	11.6	0	708.6	824.3	86	0
Mkanda Met	0.0	3.4	0	729.6	856.7	85	0
Mlangeni Njolomole	0.0	14.0	0	732.1	953.5	77	0
Mponela Agric	0.0	5.3	0	497.7	784.3	63	0
Nathenje Agric	0.0	11.5	0	743.0	851.8	87	0
Nkhotakota Met	11.8	56.1	21	1602.7	1397.8	115	3
Ntcheu - Nkhande	0.0	16.8	0	N/A	1027.8	N/A	0
Salima Met	1.0	27.6	4	998.5	1195.8	84	1
Dedza RTC	12.3	6.4	192	845.1	973.9	87	3
NORTHERN REGION							
Bolero Met	24.4	10.8	226	564.7	624.9	90	6
Bwengu Agric.	33.4	17.5	191	605.1	751.4	81	5
Chikangawa forest	206.6	29.5	700	1919.8	1068.5	180	7
Chitipa Met	11.4	17.4	66	827.0	935.8	88	5
Chintheche Agric	207.1	128.5	161	1946.1	1600.8	122	5
Emfeni Agric	0.0	25.8	0	301.3	801.6	38	0
Euthini Agric.	3.5	13.3	26	808.4	761.4	106	1
Karonga Met.	4.4	59.2	7	813.3	954.9	85	5
Mbawa Res. Stn	0.0	12.3	0	615.9	793.9	78	0
Mzimba Met	11.3	13.9	81	886.4	876.2	101	4
Mzuzu Met.	187.5	65.6	286	1237.1	1031.0	120	8
NkhataBay Met.	152.1	96.0	163	1903.4	1311.9	145	7
Rumphi Boma	28.8	13.2	218	327.3	720.0	45	4
Vinthukutu Agric	92.8	73.5	126	1324.4	1067.2	124	6
Zombwe Agric	98.9	19.0	521	937.6	735.9	127	5

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 11 TO 20 APRIL 2014

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED (m/s)	RH (%)	EVAP (mm)
KARONGA ADD							
Chitipa	25.0	17.4	26.5	17.1	4.6	77	N/A
Karonga	29.9	20.0	30.5	18.5	1.7	68	N/A
Bolero							
Bolero	26.1	16.6	28.0	13.5	N/A	75	N/A
Mzuzu	22.0	16.2	23.5	13.2	1.7	83	N/A
Mzimba	24.9	15.9	27.4	13.1	1.3	72	N/A
Nkhata Bay	27.8	19.7	27.7	18.1	1.0	82	N/A
Kasungu							
Kasungu	27.5	N/A	29.6	N/A	0.3	69	N/A
KIA							
KIA	24.8	15.2	26.6	13.4	1.6	75	4.8
Chitedze	25.5	15.6	27.7	13.9	0.6	74	N/A
Dedza	21.7	13.2	23.2	11.6	1.7	80	N/A
SALIMA ADD							
Salima	29.0	21.9	31.0	21.1	3.2	67	N/A
Nkhotakota	27.7	20.5	28.9	20.0	2.7	72	N/A
MACHINGA ADD							
Makoka	24.3	16.0	27.2	14.4	1.2	75	N/A
Mangochi	29.9	20.3	32.0	19.5	2.0	73	N/A
Monkey Bay	29.6	20.7	29.9	18.6	2.3	67	N/A
Ntaja	26.7	19.0	29.1	18.3	1.8	73	n/a
BLANTYRE ADD							
Chileka	26.7	17.7	28.5	15.5	2.8	72	N/A
Chichiri	23.4	15.8	25.5	14.5	2.1	79	N/A
Bvumbwe	22.3	12.2	25.2	11.2	2.4	80	N/A
Mimosa	26.5	18.1	30.0	15.2	1.1	85	2.5
SHIRE VALLEY ADD							
Ngabu	30.3	20.1	32.7	18.7	1.3	77	N/A

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