



REPUBLIC OF MALAWI

Department of Climate Change and Meteorological Services

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In support of national early warning systems



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HIGHLIGHTS

- *Mostly dry conditions prevailed during the last ten days of April 2013...*
- *Average seasonal rainfall amounts received in during 2012/13 season...*
- *Occasional generally light rainfall expected in May and June 2013...*

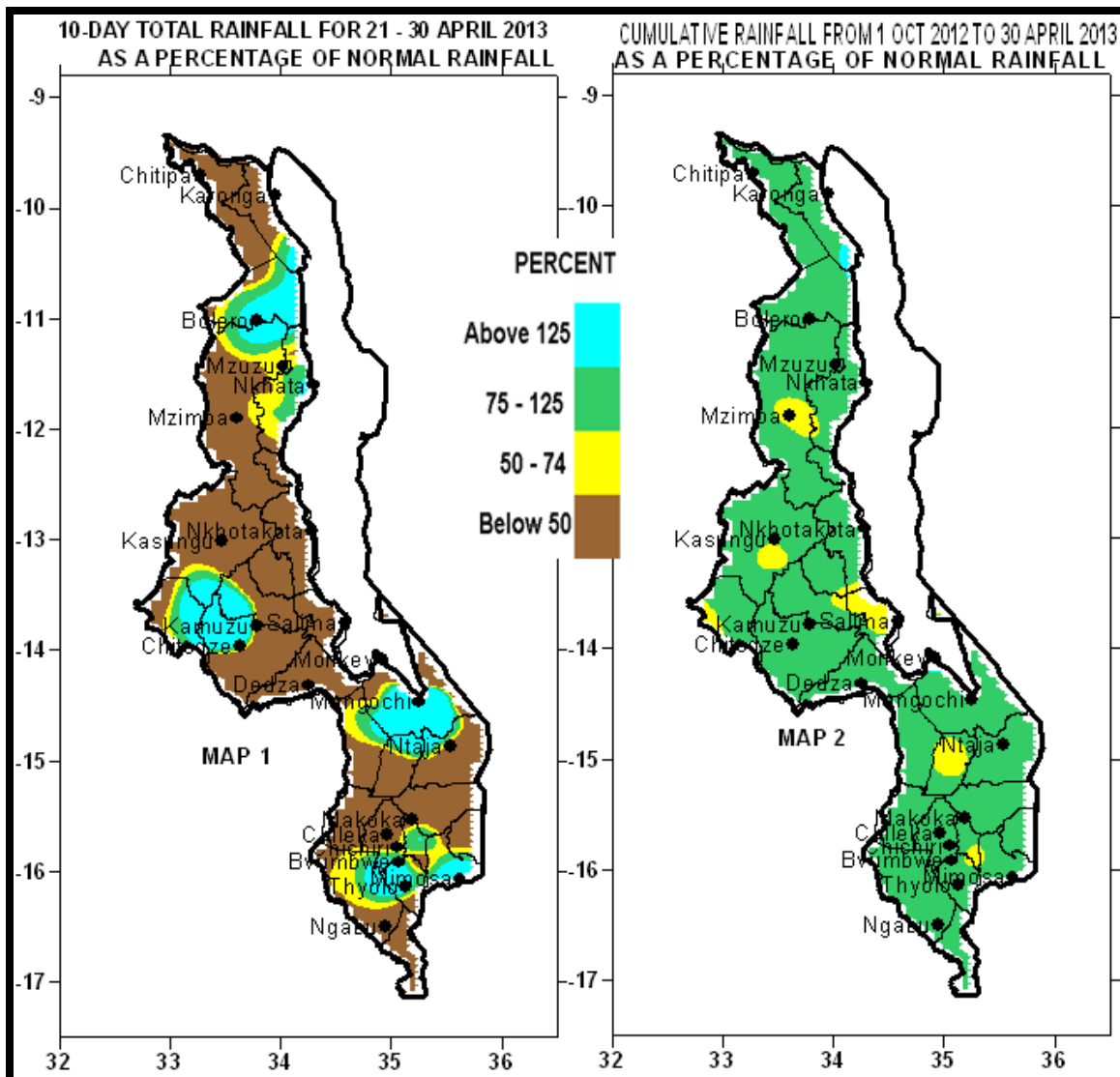


Figure 1: Rainfall Maps for Malawi for 21 – 30 April 2013

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1.0 WEATHER SUMMARY AND IMPACTS

1.1 RAINFALL SITUATION

During the last ten days of April 2013, the main rain belt was over East Africa. As a result below average cumulative rainfall and dry weather prevailed over most parts of Malawi except at very few places. A few places that had registered significant and above average cumulative rainfall amounts in excess of 100mm included Chizunga Factory 102mm and Lujeri Tea Estate 145mm in the south, Kasiya Agric (117mm) in the centre and in the north such high intensity rainfall was recorded at Mkondezi in Nkhata Bay where Nkhata Bay Met had 161mm and Vinthukutu Agric in Karonga had 110mm. More details are on Table 1.

Cumulative rainfall performance from October 2012 up to 30 April, 2013 indicated that the 2012/13 rainfall season in Malawi has been generally good (green colour on Map 2) although localized rainfall deficits have also been experienced. Notable areas with rainfall deficits (yellow colour on map 2) were mostly confined around Balaka in the south, Salima in the centre and Mzimba in the north. For more details refer to Table 1 and Map 2.

1.2 VEGETATION CONDITION

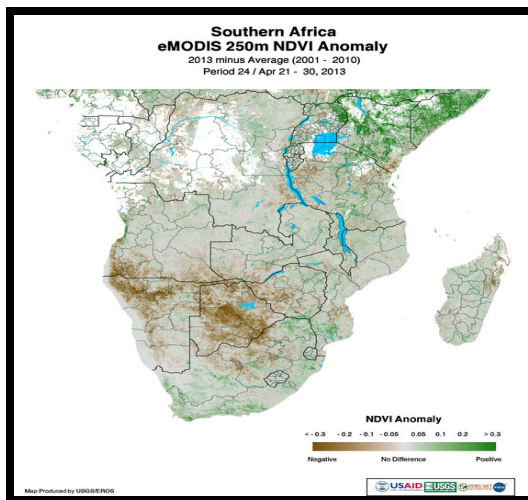


Figure 2: Vegetation Condition over Southern Africa

The vegetation difference from long term average map for Southern Africa for the period 21 to 30th April 2013 is shown in Figure 2. The larger part of

southern africa region had negative anomalies as the main rainfall season comes to an end and positive anomalies were mostly confined to East Africa due to active rain belt.

1.3 AIR TEMPERATURE

During the last ten days of April 2013, Malawi had experienced warm to hot temperatures during the day and cool to mild temperatures during the night and early morning. Reported mean daily maximum temperatures ranged from 22°C over highlands such as at Dedza to 31°C over low altitude areas such as Ngabu in Chikhwawa. The highest absolute maximum temperaure was registered at Ngabu (34°C) while the lowest absolute minimum temperature wasaround 10°C, reported at Dedza and Kasungu. More details are in Table 2.

1.4 WIND SPEEDS

Mean daily wind speed at a height of two meters above the ground, were generally light during the period under review. The highest wind speed was reported at Chitipa (5.0 m/s) while the lowest wind speed was recorded at Chitedze and Nkhata Bay (0.9 m/s). More details are in Table 2.

1.5 RELATIVE HUMIDITY

Mean Relative Humidity values continued to decline over most areas as dry weather crept in. Mean daily relative humidity values ranged from 60% to 83%. The lowest mean relative humidity value was reported at Chichiri in Blantyre district while the highest relative humidity was registered at Mzuzu Airport. See more details in Table 2.

2.0 AGROMETEOROLOGICAL ASSESSMENT

Dry conditions that prevailed over most parts of the country during the last ten days of April 2013 continued to facilitate harvesting and drying of matured crops. Harvesting of maize which is the staple food for Malawians was in progress throughout the country. This has improved in food security at household level as most farm families had food from their own production. The rainfall performance during the 2012/13 growing season

has been generally good without prolonged dry spells in most areas. This resulted in average crop stand in most fields and average crop yields. However, crop production in few areas particularly in Mzimba and western parts of Rumphi district has been negatively affected by dry spells between mid February and mid March 2013. The worse affected crops included late planted and local maize.

Second round results from the Agrometeorological Maize Yield assessment model suggest that despite late start of the planting rains and prolonged dry spells in a few areas, Malawi is expected to produce around 3.7 million Metric Tons of Maize this season which is an increase of 4% over 3rd estimate figure of 3.6 million Metric Tons. However, this is not the official figure. For official agricultural production estimates please contact Ministry of Agriculture and Food Security. The following is an assessment by Agriculture Development Divisions (ADDs):

2.1 SHIRE VALLEY ADD

Dry conditions that prevailed in the ADD during the period under review had facilitated harvesting and drying of crops matured crops. Water and pasture for livestock were reported readily available and this continued to improve livestock condition in the ADD. Maize crop was reported at harvesting stage. Harvesting of matured crops has improved household food security in the ADD.

2.2 BLANTYRE ADD

The dry weather continued to facilitate harvesting and drying of matured crops. Harvesting of Maize was being finalised in most parts of the ADD. This has greatly improved household food security in the ADD.

2.3 MACHINGA ADD

Dry conditions persisted in Machinga ADD during the period under review as the main rainfall season comes to an end. Most areas had registered nil rainfall and below average rainfall situation except areas around Mangochi Boma which had recorded above average rainfall situation during the entire period. The dry weather continued to facilitate harvesting and drying of matured crops. Harvesting of various crops was in progress in the ADD. This has improved household food security in the ADD

2.4 LILONGWE ADD

Most of Lilongwe ADD had experienced either nil rainfall or below average rainfall situation during the entire period as the main rains are tailing off. Dry weather continued to facilitate harvesting and drying of matured crops. Maize crop was at harvesting stage. Harvesting of matured crops was in progress in the

ADD. This continued to improve household food security in Lilongwe ADD.

2.5 SALIMA ADD

Salima ADD had either registered nil rainfall or far below average rainfall amounts. The Maize crop was reported to be at harvesting stage. Harvesting of matured crops was in progress in the ADD and this had improved household food security in the ADD.

2.6 KASUNGU ADD

Kasungu ADD had registered below average rainfall amounts. The Maize crop was reported at harvesting stage and harvesting of matured crops was in progress in the ADD and this had positively impacted on household food security.

2.7 MZUZU ADD

Most parts of Mzuzu ADD had had registered below average rainfall amounts. The Maize crop was reported to be mostly between drying and harvesting stages. Harvesting of matured crops was in progress in the ADD and this had positively impacted on household food security.

2.8 KARONGA ADD

Most parts of Karonga ADD had experienced dry conditions and below average rainfall amounts. The dry weather had facilitated harvesting and drying of matured crops. The Maize crop was reported to be mostly at harvesting stage. Harvesting of matured crops was in progress in the ADD and this had positively contributed to household food security.

3. PROSPECTS FOR 2012/13 RAINFALL SEASON

Updated climate prediction models suggest that neutral conditions (neither El Niño nor La Niña) have been established in the tropical Pacific and model forecasts and expert opinion suggest that neutral conditions are likely to persist into our winter season 2013.

As the main rainfall season is tailing off at the end of April, Malawi is expected to experience Chiperone type of rainfall during most of the period between May to June 2013. This type of rainfall mostly favours areas along the lakeshore and highlands

4. OUTLOOK FOR MAY AND JUNE 2013

A series of high pressure systems are expected to periodically induce cool and moist air from the Indian Ocean into Malawi. Therefore, occasional and generally light rainfall is expected particularly over highlands and along the Lakeshore during May and June 2013.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 3 OF APRIL 2013: PERIOD 21 – 30TH

STATION NAME	DEKADAL TOTAL RAINFALL mm	DEKADAL NORMAL mm	DEKADAL TOTAL AS PERCENTAGE OF NORMAL	TOTAL TO DATE mm	NORMAL TO DATE mm	NORMAL TODATE AS PERCENTAGE OF NORMAL	RAINY DAYS ≥ 0.3 mm
SOUTHERN REGION							
Balaka Township	0.0	6.8	0	427.2	849.5	50	0
Bvumbwe Met.	15.6	16.5	95	1150.4	1082.9	106	5
Chancellor College	0.6	11.0	5	1308.0	1268.8	103	1
Chichiri Met.	4.0	16.7	24	1346.1	1095.3	123	4
Chikwawa Boma	9.4	6.9	136	842.8	750.2	112	2
Chikweo Agric.	0.5	9.6	5	756.3	1045.7	72	1
Chileka Airport	0.0	8.8	0	933.4	872.4	107	0
Chingale Agric	0.0	5.7	0	805.4	910.3	88	0
Chiradzulu Agric	21.8	11.8	185	807.5	965.6	84	2
Chizunga Factory	101.7	18.2	559	1173.6	1308.9	90	5
Kasinthula Res. Stn.	0.0	10.7	0	668.5	708.4	94	0
Lujeri Tea Estate	145.0	63.0	230	2411.1	1983.7	122	8
Mpilipili (Makanjila)	1.3	4.8	27	651.9	877.1	74	1
Makhanga Met	0.0	5.9	0	993.9	708.8	140	0
Makoka Met	0.0	10.4	0	736.1	959.5	77	0
Mangochi Met.	53.6	5.0	1072	793.7	697.9	114	1
Masambanjati Agric	45.9	28.4	162	1304.8	1305.1	100	2
Mimosa Met.	62.4	36.9	169	1588.5	1412.3	112	8
Monkey Bay Met.	0.2	1.5	13	817.3	562.9	145	0
Mpemba Vet	9.1	11.3	81	1260.1	1102.4	114	3
Mulanje Boma	72.7	29.6	246	1714.0	1688.7	101	4
Mwanza Boma	3.1	10.6	29	981.3	999.1	98	1
Namiasi Agric	0.0	1.7	0	657.1	742.5	88	0
Naminjiwa Agric	0.0	5.4	0	1013.8	943.7	107	0
Namwera Agric	0.0	8.4	0	959.5	1035.5	93	0
Nchalo Sucoma	5.0	8.6	58	632.9	643.1	98	2
Neno Agric	0.0	14.5	0	1250.0	1083.1	115	0
Ngabu Met.	4.2	11.6	36	744.0	747.9	99	1
Nsanje Boma	4.5	18.3	25	1010.2	1066.7	95	1
Ntaja Met.	0.4	15.1	3	867.5	887.5	98	1
Phalula Agric	0.0	3.5	0	757.2	815.3	93	0
Satemwa Tea Est. No.1	23.0	17.9	128	776.1	1067.2	73	6
Thyolo Boma	52.4	24.7	212	1203.0	1148.4	105	6
Thyolo Met	34.1	16.5	207	1184.6	1173.9	101	5
Zomba RTC	2.8	13.6	21	1230.8	1187.1	104	2
CENTRAL REGION							
Bunda College	0.0	9.8	0	920.6	881.5	104	0
Chileka Namitete	2.5	13.9	18	837.5	921.2	91	2
Chitedze Met.	0.3	6.5	5	879.9	874.5	101	1
Dedza Met	0.1	8.6	1	795.3	923.7	86	0
Dowa Agric	0.0	2.8	0	655.0	872.3	75	0
Dwangwa Sugar Corp.	0.0	33.3	0	1054.9	1320.4	80	0
Dzonzi Forest	0.0	5.4	0	1242.3	978.8	127	0
Kaluluma DTC	0.0	3.7	0	673.1	809.8	83	0
K.I.A Met	0.0	6.1	0	953.8	838.1	114	0
Kasiya Agric	117.0	12.6	929	982.6	948.1	104	2
Kasungu Met	0.0	4.0	0	599.1	770.4	78	0
Lifuwu	1.2	11.7	10	794.4	1228.3	65	1
Lisasadzi	0.0	6.4	0	552.3	811.9	68	0
Malomo Agric	0.0	14.9	0	719.2	825.8	87	0
Madisi Agric	0.0	3.6	0	724.2	827.9	87	0
Mchinji Boma	0.0	10.2	0	681.6	1003.4	68	0
Mkanda Met	0.0	7.1	0	679.5	863.8	79	0
Mlangeni Njolomole	2.4	4.7	51	790.1	958.2	82	1
Mponela Agric	0.0	2.6	0	681.0	786.9	87	0
Mtakataka Airwing	0.0	2.4	0	591.4	806.3	73	0
Nathenje Agric	9.0	13.2	68	1014.5	865.0	117	1
Natural Res. College	3.4	11.5	30	818.5	848.8	96	2
Nkhotakota Met	1.8	34.5	5	1295.1	1432.3	90	2
Ntcheu - Nkhande	2.9	7.2	40	1028.2	1035.0	99	2
Salima Met	0.0	9.2	0	693.6	1205.0	58	0
Dedza RTC	0.0	5.1	0	888.3	979.0	91	0
NORTHERN REGION							
Baka Res. Stn.	15.6	41.0	38	1034.2	1317.8	78	2
Bolero Met	8.4	4.2	200	738.5	629.1	117	2
Bwengu Agric.	21.4	7.4	289	762.9	758.8	101	2
Chikangawa forest	18.0	22.0	82	827.8	1090.5	76	2
Chitipa Met	0.0	4.2	0	830.2	940.0	88	0
Chintheche Agric	75.4	82.6	91	1481.0	1683.4	88	3
Emfeni Agric	0.0	4.4	0	645.1	806.0	80	0
Ekwendeni Agric.	0.0	9.4	0	702.8	807.2	87	0
Euthini Agric.	0.0	14.0	0	720.5	775.4	93	0
Karonga Met.	4.5	25.9	17	1084.8	980.8	111	4
Lupembe	0.0	12.7	0	862.2	822.6	105	0
Mbawa Res. Stn	0.0	7.3	0	798.5	801.2	100	0
Mzimba Met	0.0	9.1	0	542.2	885.3	61	0
Mzuzu Met.	44.6	43.6	102	1070.6	1074.6	100	5
NkhataBay Met.	161.3	81.9	197	1771.1	1393.8	127	5
Rumphi Boma	23.0	8.3	277	679.1	728.3	93	2
Vinthukutu Agric	109.5	53.3	205	1528.3	1120.5	136	5
Zombwe Agric	6.0	8.5	71	765.0	744.4	103	1

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR THE PERIOD 21 TO 30 APRIL 2013

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED (m/s)	RH (%)	EVAP (mm)
KARONGA ADD							
Chitipa	28.7	18.8	28.0	15.0	5.0	78	N/A
Karonga	30.0	20.4	32.2	18.7	1.5	70	N/A
MZUZU ADD							
Bolero	26.8	15.4	29.5	13.0	N/A	69	N/A
Mzuzu	23.7	14.7	26.7	13.1	1.6	83	N/A
Mzimba	27.5	15.7	30.0	13.9	2.0	64	N/A
Nkhata Bay	28.8	18.7	32.5	17.2	0.9	80	N/A
KASUNGU ADD							
Kasungu	29.3	13.9	32.1	9.9	1.2	64	N/A
LILONGWE ADD							
KIA	25.7	13.8	28.2	11.5	1.7	68	5.8
Chitedze	26.3	13.9	29.4	10.7	0.9	63	N/A
Dedza	22.2	12.7	25.4	9.7	2.0	72	N/A
SALIMA ADD							
Salima	29.5	21.4	32.3	20.4	3.4	63	N/A
Nkhotakota	28.0	20.4	30.1	18.7	2.8	64	N/A
MACHINGA ADD							
Makoka	26.0	15.7	29.7	13.2	1.7	70	N/A
Ntaja	27.4	18.2	31.2	15.5	2.0	63	N/A
Mangochi	29.4	19.2	33.5	17.0	1.8	70	N/A
Monkey Bay	29.7	20.7	32.4	18.2	2.5	61	N/A
BLANTYRE ADD							
Chileka	26.7	17.7	31.9	15.0	3.4	66	N/A
Chichiri	23.5	15.5	30.0	12.5	2.0	60	N/A
Bvumbwe	23.8	14.0	30.9	11.1	2.3	82	N/A
Mimosa	28.3	17.0	33.0	13.6	1.1	82	3.8
SHIRE VALLEY ADD							
Ngabu	31.1	N/A	33.8	N/A	1.2	67	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).
- convert Meters Per Second (mps) to Kilometers per hour (Km/hr) = mps x 3.6