



REPUBLIC OF MALAWI

Department of Climate Change and Meteorological Services

10-day Weather and Agrometeorological Bulletin

In support of national early warning systems



Period: 01 – 10 November 2014

Season: 2014/2015

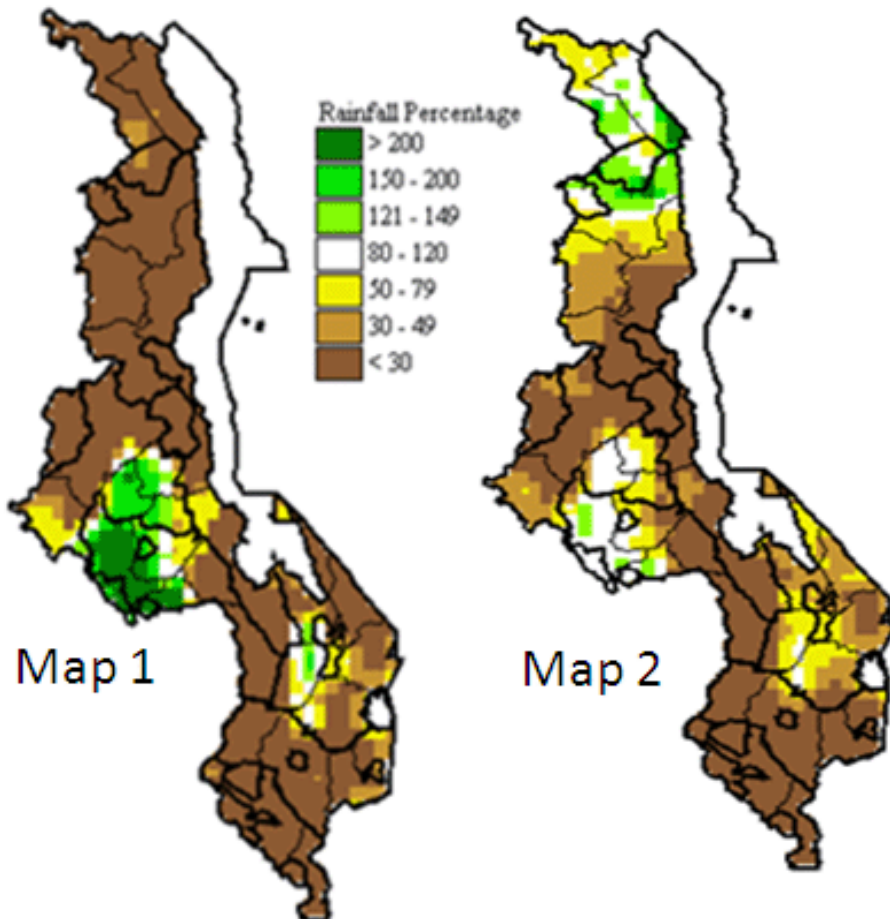
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HIGHLIGHTS

- Hot and dry weather continued to prevail over Malawi ...
- Land preparation and mobilization of farm inputs still in progress...
- More rains expected towards the end of 11 to 20 November 2014...

Malawi Percentage of Average Rainfall



01 to 10 Nov 2014 Rainfall

01 Oct to 10 Nov 2014 Rainfall

1.0 WEATHER SUMMARY AND IMPACTS

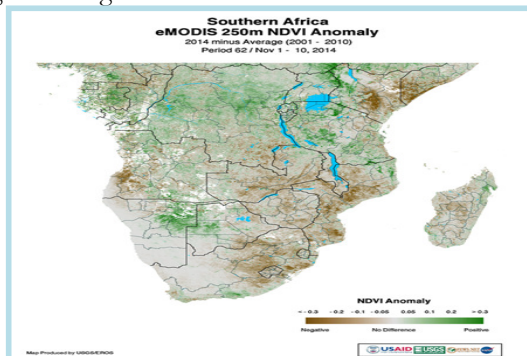
1.1 RAINFALL SITUATION

Dry weather prevailed over most parts of Malawi except for few places in southern and central areas (Map 1) where pre-season rains that are locally known as Chizimalupsya were reported. However, the amounts were generally light and far below long-term average. These rains were due to heating and incursions of moist and unstable air. Stations that had recorded significant cumulative rainfall amounts of at least 20mm were in the south and had included Bvumbwe Met. (22mm), Mangochi Met (25mm), Makoka Met (31mm) and Makhanga Agric (33mm). Sporadic rainfall performance is expected to persist over Malawi until when the main rain bearing systems are fully established over the country.

Map 2 indicates cumulative rainfall performance from 01 October 2014 to 10 November 2014. Generally the map shows that by 10th November higher cumulative rainfall amounts had been received in northern Malawi and a few areas in central Malawi (green colour) while most areas in Malawi were still very dry (brown colour).

1.2 VEGETATION CONDITION

Figure 1: Vegetation Condition over Southern Africa



The vegetation difference from long term average map for Southern Africa for the period 01st to 10 November 2014 shows that most parts of the region including Malawi are experiencing below average vegetation conditions (Figure 1). As such, pastures are likely to be in poor condition.

1.3 AIR TEMPERATURE

During the first ten days of November 2014 hot weather continued to prevail over Malawi with most stations reporting daily average maximum temperatures of above 30°C except over some highlands places like Dedza (27°C) and Makoka (29°C). The highest maximum temperature was still recorded at Ngabu (39.8°C) in Chikwawa while the lowest minimum temperature was 12.6°C recorded at Kamuzu International Airport. For more details see Table 1.

1.4 WIND SPEEDS

Mean wind speeds at a height of two metres above the ground level across Malawi had ranged from 0.9 m/s at Nkhata Bay to 5.9 m/s at Chitipa. High wind speeds are good for wind power generation and Chitipa has been consistently reporting strong wind speeds. More details are on Table 1.

1.5 RELATIVE HUMIDITY

During the period under review, air over Malawi remained generally dry. Daily average relative humidity values had ranged from 38% at Nkhota kota Met to 57% at Mzuzu, Makoka and Bvumbwe. Details are on the Table 1.

1.6 SUNSHINE HOURS

The mean durations of bright sunshine hours across Malawi remained high. Most areas had reported daily average sunshine of at least seven hours per day. The highest mean sunshine hours was reported at Mzuzu (11.4) in Mzimba district. Details are on the Table 1.

2. AGROMETEOROLOGICAL ASSESSMENT

The major on-farm agricultural activities in most parts of Malawi remained to be land preparation and procurement of farm inputs and equipment in readiness for the main planting rains. Most areas had remained dry except at a few places. The rainfall that was received during the period under discussion was still sporadic and continued to encourage farmers to finish land preparations on time to ensure timely planting, including water harvesting structures where ridging has been done.

3. PROSPECTS FOR 2014/15 RAINFALL SEASON

The rainfall forecast for the 2014/15 season is generally favourable for agricultural production. Most areas of the Malawi are likely to receive normal rainfall during the season. However, during the second half, there is a possibility that some areas will experience normal to below normal rainfall amounts that is associated with dry spells.

In view of the 2014/15 climate forecast, farmers in Malawi are advised to:

- finish land preparations on time to ensure timely planting, include water harvesting structures where ridging has been done,
- ensure adequate vegetative soil cover where conservation agriculture is practised,
- plant other drought tolerant food crops such as cassava, sweet potatoes, sorghum and millet, in the early days of the rainy season,
- plant early maturing crop varieties and apply adequate manure to improve soil moisture retention

4. OUTLOOK FOR 11 – 20 NOVEMBER 2014

Models for short and medium range forecasts indicate that the Inter Tropical Convergence Zone and Congo Airmass which are main rain bearing systems for Malawi are likely not going to get established during the second ten days of November 2014. However, a convergence ahead of pressure rises is expected to bring more rain showers and thunderstorms particularly to southern Malawi from 16 November 2014 onwards.

TABLE 1: AGROMETEOROLOGICAL PARAMETERS FOR 01 TO 10 NOVEMBER 2014

ADD/ STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %	SUN SHINE HOURS	E _o mm per day	E _t mm per day	RAD- TION cal cm ⁻² p/day
KARONGA ADD										
Chitipa	32.2	21.0	34.0	20.5	5.9	41	10.1	10.1	8.4	11.0
Karonga	34.9	22.4	37.0	21.3	1.9	46	10.4	9.0	7.2	11.2
MZUZU ADD										
Bolero	33.5	22.4	34.3	19.1	2.1	41	7.0	7.8	6.4	9.0
Mzuzu	28.4	15.5	29.2	13.5	1.7	57	11.4	7.8	6.0	11.9
Mzimba	31.3	18.7	32.7	16.6	1.9	46	11.0	8.4	6.6	11.6
Nkhata Bay	35.3	19.3	36.6	17.8	0.9	53	10.8	8.4	6.6	11.5
KASUNGU ADD										
Kasungu	32.9	20.2	34.3	18.7	1.5	45	9.5	8.1	6.4	10.7
LILONGWE ADD										
KIA	30.6	17.3	32.3	12.6	2.3	48	10.1	8.0	6.4	11.0
Chitedze	32.0	18.2	33.5	16.5	1.5	49	9.6	7.8	6.2	10.7
Dedza	27.0	16.4	28.5	14.8	3.0	54	9.0	7.5	5.9	10.3
SALIMA ADD										
Salima	34.4	22.4	36.2	20.2	2.3	48	10.5	9.0	7.3	11.3
Nkhota kota	33.5	23.9	35.8	22.1	2.6	38	10.6	9.6	7.8	11.4
MACHINGA ADD										
Monkey Bay	34.1	24.6	36.8	23.1	2.3	51	10.6	9.4	7.6	11.3
Makoka	28.8	18.8	31.2	17.1	1.6	57	8.9	7.4	5.8	10.3
Ntaja	32.0	21.0	36.6	19.2	2.6	51	8.0	8.0	6.5	9.7
BLANTYRE ADD										
Bvumbwe	29.8	17.3	32.9	14.4	2.2	57	7.4	7.0	5.6	9.2
Chichiri	29.9	19.1	34.5	16.0	2.0	52	6.5	6.9	5.6	8.7
Chileka	32.2	21.9	36.6	19.6	3.7	50	7.4	8.3	6.9	9.2
Mimosa	33.3	19.4	37.0	18.5	1.5	52	7.5	7.4	5.9	9.3
SHIRE VALLEY ADD										
Ngabu	37.8	24.4	41.9	22.5	4.6	47	11.0	11.0	9.2	11.6

Glossary of some terms on this table

- E_o = Potential Evaporation and Mean Temperature = (MAX + MIN)/2
- E_t = Potential Evapotranspiration and RH = Relative Humidity
- ABS Max = Absolute Maximum Temperature which is the highest temperature for the period
- ABS Min = Absolute Minimum Temperature which is the lowest temperature for the period
- To convert Meters Per Second (mps) to Kilometers per hour (Km/hr) = mpsx3.6