REPUBLIC OF MALAWI

Department of Climate Change and Meteorological Services

10-day Weather and Agrometeorological Bulletin

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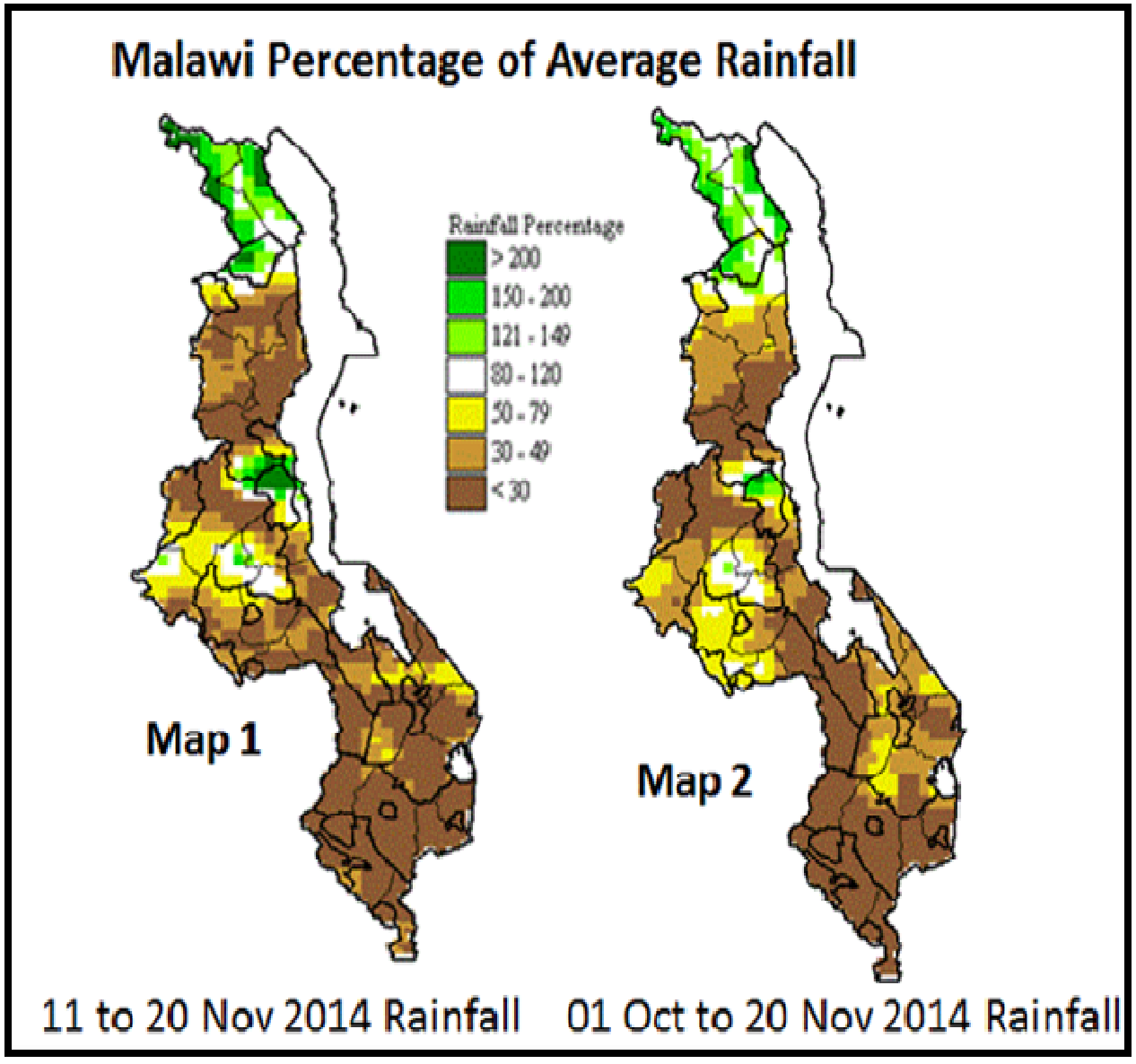
HIGHLIGHTS

- **Hot and dry weather persisted over most parts of Malawi …**
- **Land preparation and mobilization of farm inputs still in progress…**
- **Sporadic rains to persist during last ten days of November 2014…**



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1.0 WEATHER SUMMARY AND IMPACTS

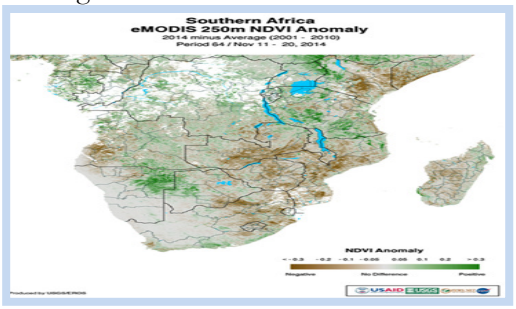
1.1 RAINFALL SITUATION

Dry weather continued to prevail over most parts of Malawi except at few places (Map 1) which recorded moderate to heavy rainfall. These rains were due to heating and incursions of moist and unstable air. Stations that had recorded significant cumulative rainfall amounts of at least 35mm in the south had included Makhanga 51mm, Mimosa 72mm, Mulanje Agric 52mm, Neno Agric 43mm, Satemwa Tea Estate 35mm while in the centre such high amounts were recorded at Dedza Met (Chongoni) 48mm, Lisasadzi 77mm, Mponela Agric 43mm and in the north Nkhata Bay Met had reported 89mm. 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 20 November 2014. Generally the map shows that by 20th November above average rainfall amounts had been received in some parts of 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 11t to 20 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 second ten days of November 2014 were generally warm to hot over Malawi with most stations reporting daily average maximum temperatures of above 30°C except over some few highlands. For instance Dedza had reported a mean daily average maximum temperature of 26°C, Mzuzu AND Bvumbwe 27°C. The highest maximum temperature was still recorded at Ngabu (42°C) in Chikwawa while the lowest minimum minimum temperature was 13°C recorded at Mzuzu 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 5.6 m/s at Chitipa. High wind speeds are good for wind power generation and Chitipa has been consistently reporting high wind speeds. More details are on Table 1.

1.5 RELATIVE HUMIDITY

During the period under discussion, the moisture in the atmosphere had slightly improved compared to the previous reporting period. Daily average relative humidity values had ranged from 47% at Kamuzu International Airport to 66% at Bvumbwe. Details are on the Table 1.

1.6 SUNSHINE HOURS

The mean durations of bright sunshine hours across Malawi remained were slightly lower than in the first ten days of November 2014 due to increased cloudiness. Most areas had reported daily average sunshine of between 5 and 9.5 hours per day. The highest mean sunshine hours was reported at Nkhotakota along the lakeshore (09.5). Details are on the Table 1.

2. AGROMETEOROLOGICAL ASSESSMENT

The high rainfall amounts that were received in sporadic areas during the period under discussion had prompted some farmers to start planting crops but at a very small scale. The mean onset dates for planting rains over southern Malawi and some parts of the centre are from mid-November. However, the rainfall performance has been sporadic and the amounts have been generally light. Meanwhile although most areas have remained dry the major agricultural activities in most parts of Malawi so far have been land preparation, procurement of farm inputs and equipment in readiness for the main planting rains which are expected soon. The rainfall that was received during the period continued to encourage farmers to finish land preparations on time to ensure timely planting.

3. PROSPECTS FOR 2014/15 RAINFALL SEASON

Although there has been a delay in onset of planting rains, 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 amounts 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.

4. OUTLOOK FOR 21 – 30 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 forecast period. Hence most areas in Malawi are expected to remain dry during the last ten days of November 2014

TABLE 1: AGROMETEOROLOGICAL PARAMETERS FOR 11 TO 20 NOVEMBER 2014

ADD/ STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %	SUN SHINE HOURS	Eo mm per day	Et mm per day	RAD-TION cal cm^{-2} p/day
KARONGA ADD										
Chitipa	30.2	19.9	32.4	17.6	5.6	48	9.0	9.2	7.6	10.3
Karonga	34.0	23.0	36.9	21.5	1.5	48	8.2	8.0	6.5	9.8
MZUZU ADD										
Bolero	31.5	22.1	34.9	19.0	2.0	50	9.6	8.4	6.7	10.8
Mzuzu	27.2	16.5	29.6	13.1	1.9	62	9.0	7.1	5.6	10.4
Mzimba	29.3	19.1	32.0	17.1	2.0	52	9.2	7.7	6.1	10.5
Nkhata Bay	33.5	19.2	36.3	17.6	0.9	60	8.9	7.6	6.0	10.3
KASUNGU ADD										
Kasungu	31.3	20.0	34.0	18.1	1.4	49	8.5	7.6	6.1	10.1
LILONGWE ADD										
KIA	29.4	22.2	32.1	15.5	2.5	47	8.9	8.2	6.6	10.3
Chitedze	30.5	18.6	33.4	15.7	1.5	55	8.0	7.2	5.8	9.7
Dedza	25.7	15.6	28.9	12.0	2.8	53	8.0	7.0	5.6	9.7
SALIMA ADD										
Salima	33.5	22.5	35.9	20.1	2.8	49	5.8	7.6	6.3	8.3
Nkhota kota	31.7	23.2	34.5	20.6	2.8	56	9.5	9.0	7.3	10.7
MACHINGA ADD										
Monkey Bay	33.3	24.3	36.5	21.5	2.7	52	9.2	8.9	7.3	10.5
Makoka	29.3	19.0	32.6	14.2	1.7	51	7.9	7.3	5.8	9.7
Ntaja	31.6	21.9	35.7	18.6	2.7	55	7.0	7.7	6.3	9.1
BLANTYRE ADD										
Bvumbwe	27.4	18.3	31.8	13.2	2.3	66	6.9	6.7	5.3	9.0
Chichiri	30.0	19.1	34.5	14.0	2.9	57	6.0	7.0	5.7	8.4
Chileka	32.0	21.7	36.2	16.8	4.0	72	5.2	6.9	5.7	7.9
Mimosa	32.0	19.2	36.9	16.1	1.6	60	7.9	7.4	5.9	9.6
SHIRE VALLEY ADD										
Ngabu	36.1	24.2	41.6	19.8	3.5	57	9.5	9.6	7.9	10.7

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