



REPUBLIC OF MALAWI

Ministry of Natural Resources Energy and Mining  
Department of Climate Change and Meteorological Services

# 10-day Weather and Agrometeorological Bulletin

*In support of national early warning systems and food security*



Be wise be weather-wise

Period: 01 – 10 December 2014

Season: 2014/2015

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## HIGHLIGHTS

- Moderate to heavy rains experienced mostly in the south...
- Farmers were prompted to start planting crops ...
- Generally reduced rainfall expected during 11 to 20 December 2014...

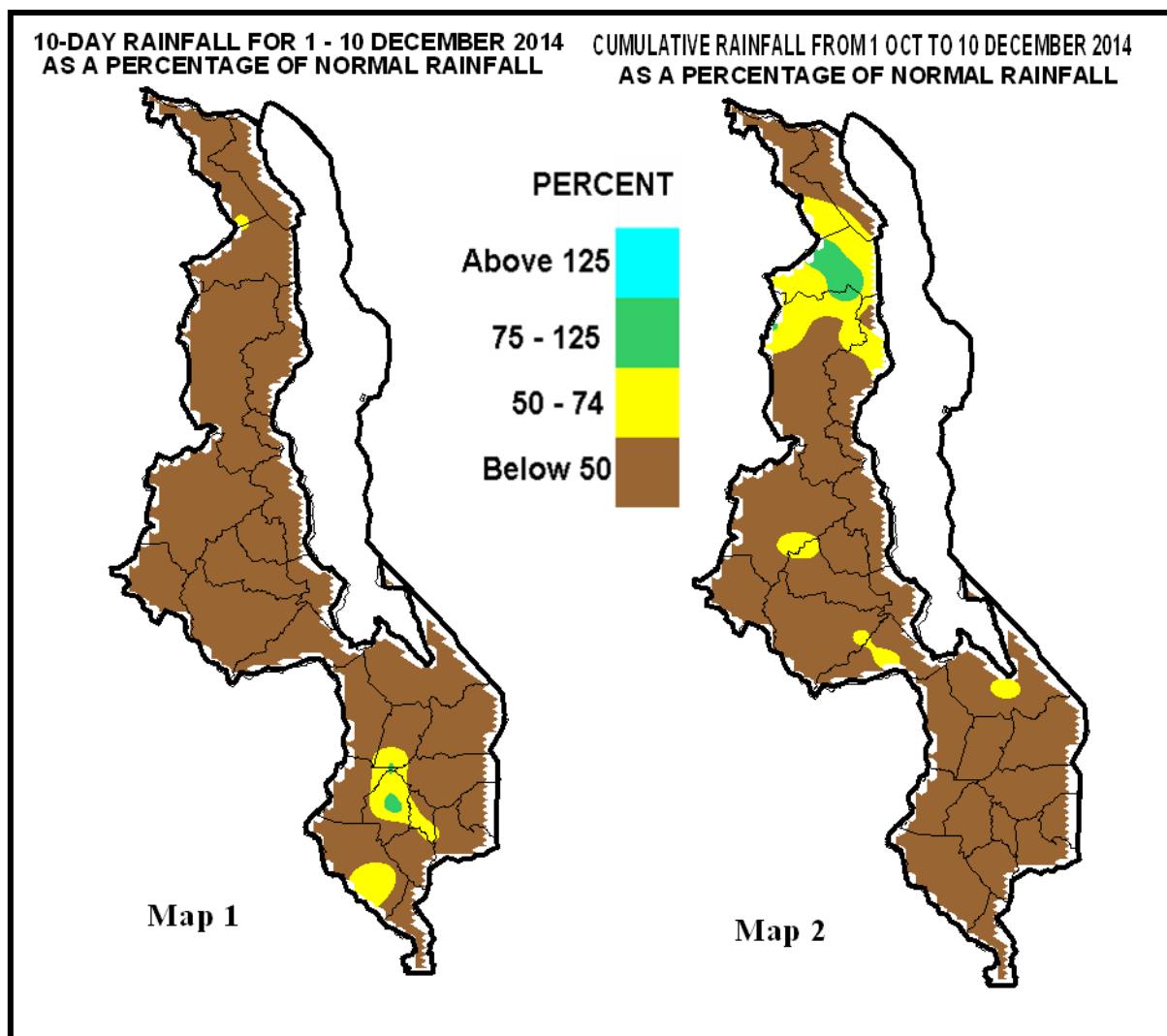


Figure 1: Rainfall Maps for Malawi for 01 – 10 December 2014

## 1.0 WEATHER SUMMARY

During the first ten days of December 2014 rainfall was mainly confined to Agricultural Development Divisions in southern and northern Malawi while dry conditions persisted in central region.

### 1.1 RAINFALL SITUATION

Moderate to heavy rainfall was experienced in southern and northern Malawi during the period 1<sup>st</sup> to 10<sup>th</sup> December 2014. Some areas in the south had registered high rainfall amounts in excess of 30mm. Such areas included Chichiri Met which recorded 46mm in two days, Chileka Airport had 55mm in two days, Chizunga Factory reported 38mm in one day, Mulanje Boma received 35mm in one day, Phalula Agric had 52mm in two days and Thuchila Agric registered 32mm in one day while in the north 36mm was recorded at Chelinda(Nyika) in two days and Nkhata Bay Met had recorded 36.4mm in two days.

Map 2 in Figure 1 indicates cumulative rainfall performance from 01 October 2014 to 10 December 2014. The map shows that most areas in Malawi were still very dry (brown colour) while a few areas in northern Malawi received average rainfall amounts (green colour).

### 1.2 AIR TEMPERATURE

Generally hot temperatures continued to be experienced over the country during the first ten days of December 2014. Mean maximum temperatures had ranged from 26°C at Dedza to 37°C at Ngabu. Compared to the previous dekad, maximum temperatures this time were slightly lower due to increased cloud cover. Mean minimum temperatures had ranged from around 14.7°C at Dedza to 24.2°C at Monkey Bay (Table 1). The highest absolute maximum temperature for the period was 39.6°C, observed at Ngabu in Shire Valley on 5<sup>th</sup> December 2014.

### 1.3 WIND SPEEDS

Mean wind speeds at a height of two metres above the ground level ranged from 2.9 to 13.7 Kilometres per hour. The lowest mean wind speed was reported at Nkhata bay while the highest mean wind speed was recorded at Chitipa Refer to Table 1.

### 1.4 RELATIVE HUMIDITY

During the period under review, air over Malawi was slightly moist. Daily average relative humidity values had ranged from 45% at Ngabu Met to 68% at Mzuzu. Details are on the Table 1.

### 1.5 SUNSHINE HOURS

The mean durations of bright sunshine hours across Malawi were lower due to increased cloud cover. Some areas had reported daily average sunshine hours of less

than seven hours per day. The highest mean sunshine hours were still observed in Shire Valley and along the shores of Lake Malawi. Details are on the Table 1.

### 1.6 VEGETATION CONDITION

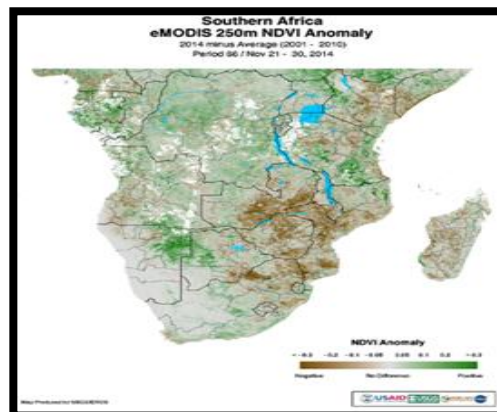


Figure 2:

#### Vegetation Condition over Southern Africa

Vegetation condition for Southern Africa up to the end of November 2014 showed that most parts of the region including Malawi were experiencing below average vegetation conditions (Figure 1). As such, natural pastures are likely to be in poor condition.

## 2.0 AGROMETEOROLOGICAL ASSESSMENT AND IMPACTS

Moderate to heavy rains that fell in most parts of the Agricultural Development Divisions in the south and some parts of the north had prompted farmers to start planting crops. As such the major on-farm agricultural activities included land preparation and procurement of farm inputs and equipment and planting of crops.

Usually the onset of the main planting rains is expected to start from the south by mid-November and progress northwards reaching the north by December and early January. However, during this season there has been a delay in the start of the main rains. This delay in start of the mains rains will most likely result in reduced growing season and therefore farmers are encouraged to plant early maturing crop varieties.

## 3. OUTLOOK FOR 11 – 20 DECEMBER 2014

Models for short and medium term weather forecasts suggest that the main rain-belt is likely to shift to south of Malawi over Zambezi basin during the 11 to 20<sup>th</sup> December 2014. Therefore, the country will generally experience dry conditions during the forecast period.

**4 PROSPECTS FOR 2014/15 RAINFALL SEASON**

The rainfall forecast for the 2014/15 season is expected to be generally favourable for agricultural production as most areas are likely to receive normal rainfall amounts during the season. However, during the second half, there is a possibility that some areas

would experience normal to below normal rainfall amounts that are associated with dry spells.

Up until first ten days of December 2014 the start of the rainfall season had been erratic. There has been a delay in the establishment of the main rain bearing systems for Malawi. As a result generally below average rainfall has been recorded over Malawi.

**TABLE 1: AGROMETEOROLOGICAL PARAMETERS FOR THE PERIOD 01 TO 10 DECEMBER 2014**

ADD/ STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED Km/hour	RH %	SUN SHINE HOURS	Eo mm per day	Et mm per day	RAD- TION calcm <sup>-2</sup> p/day
<b>KARONGA ADD</b>										
Chitipa	29.0	19.5	31.2	18.5	13.7	62	4.9	6.7	5.5	7.7
Karonga	32.6	22.5	34.5	20.2	6.5	60	6.6	7.3	5.9	8.8
<b>MZUZU ADD</b>										
Bolero	32.0	21.4	34.0	19.8	7.2	54	7.5	7.6	6.2	9.4
Mzuzu	27.0	17.3	28.8	14.9	5.4	68	8.5	6.8	5.4	10.0
Mzimba	30.0	18.6	31.6	16.7	4.7	10	9.5	7.2	5.5	10.7
Nkhata Bay	32.8	21.2	34.6	19.8	2.9	67	8.5	7.5	6.0	10.0
<b>KASUNGU ADD</b>										
Kasungu	32.3	19.5	34.4	18.0	4.3	47	9.8	8.0	6.3	10.9
<b>LILONGWE ADD</b>										
KIA	30.2	18.0	32.2	16.1	7.2	52	9.9	8.0	6.3	11.0
Chitedze	31.7	19.0	33.8	17.4	4.7	52	9.3	7.8	6.2	10.6
Dedza	26.3	14.7	29.1	11.0	8.6	57	9.9	7.4	5.8	11.0
<b>SALIMA ADD</b>										
Salima	33.9	23.8	37.5	22.2	9.7	48	10.7	9.3	7.5	11.5
Nkhota kota	31.9	24.1	33.6	22.1	8.6	54	10.4	9.2	7.4	11.3
<b>MACHINGA ADD</b>										
Mangochi	35.5	23.2	37.6	19.0	7.6	48	9.9	6.9	5.4	11.0
Monkey Bay	33.6	24.2	35.6	19.1	10.4	48	10.5	9.6	7.8	11.4
Makoka	30.7	17.7	35.4	14.0	5.4	55	9.5	7.7	6.1	10.8
Ntaja	29.4	20.2	36.3	18.6	9.7	55	10.0	8.4	6.7	11.1
<b>BLANTYRE ADD</b>										
Bvumbwe	28.4	16.2	32.0	14.4	7.9	52	9.9	7.7	6.1	11.0
Chichiri	29.8	16.5	33.5	14.7	7.6	51	9.5	7.8	6.2	10.8
Chileka	33.3	19.6	37.7	17.4	13.3	47	10.3	9.3	7.6	11.3
Mimosa	32.8	16.8	36.3	13.6	5.4	52	9.0	7.7	6.1	10.4
<b>SHIRE VALLEY ADD</b>										
Ngabu	36.9	22.9	39.6	20.7	16.2	45	10.0	10.5	8.8	11.1

**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) = mps x 3.6