REPUBLIC OF MALAWI

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

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In support of national early warning systems and food security

Be wise be weather-wise

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HIGHLIGHTS

- **Moderate to heavy rains experienced over Malawi…**
- **Agricultural activities were enhanced in most parts of Malawi…**
- **Most areas likely to receive good rains during 01 to 10 December 2015…**

1.0 WEATHER SUMMARY

During the last ten days of November 2015, a combination of mid-level westerly trough and local convergence ahead of pressure rises had caused moderate to locally heavy rainfall with fairly good spatial distribution over some parts of Malawi.

1.1 RAINFALL SITUATION

During the period 21 to 30 November 2015 moderate to heavy rains fell over most parts Malawi. As a result most areas in Malawi had recorded above average and well distributed rainfall. While most areas had recorded less than three rainy days areas like Mzuzu in the north had recorded seven rainy days. Stations that had registered cumulative rainfall amounts of more than 120mm were mostly from the south where Mulanje Agric had 306mm, Lujeri Tea Estate 188mm, Toleza Farm in Balaka 145mm, Mimosa Met 128mm and Nsanje Agric reported 121mm while in the north 150mm was deposited at Chintheche Agric. Other areas that reported significant cumulative rainfall amounts of at least 50mm included 91mm recorded at Mzuzu Met, Balaka Agric (Bazale) 83mm, Nkhata Bay Met (Mkondezi) 74mm, Makoka Met 66mm, Mangochi Met 61mm, Chitipa Met 56mm, Ngabu Met 55mm and Phalula Agric 50mm. These high rainfall amounts have signalled the onset of the 2015/16 main rains. The onset is usually between mid-November over southern half of Malawi and in December elsewhere.

1.3 AIR TEMPERATURE

During the last ten days of November 2015, average daily maximum temperatures in Malawi were above 27°C Average maximum temperatures had ranged from 27.5°C at Mzuzu Met in Mzimba to 36.4°C at Ngabu Met in Chikwawa while average minimum temperatures had ranged from 17.0°C at Mzuzu Met to 25.4°C at Monkey Bay Met. The highest maximum temperature was still recorded at Ngabu (42.8°C) in Chikwawa while the lowest temperature was 14.5°C recorded at Mzuzu Airport. For more details see Table 1.

1.4 WIND SPEEDS

Average wind speeds measured at a height of two metres above the ground level across the country varied from 3.2Km per hour at Nkhata Bay Met to 13.7km per hour at Chileka International Airport. More details are in Table 1.

1.5 RELATIVE HUMIDITY

During the last ten days of November 2015, air over Malawi had become fairly moist. Daily average relative humidity values collected from various stations in Malawi had ranged from 45% at Mimosa Met to 87% at Bvumbwe Met. Details are on the Table 1.

1.6 SUNSHINE HOURS

There was a slight drop in hours of bright sunshine during the last ten days of November 2015 due to an increase in cloudiness. The daily average hours of bright sunshine across Malawi were between 7.0 and 11.0 hours. Details are on the Table 1.

2. AGROMETEOROLOGICAL ASSESSMENT

Moderate to heavy rains that fell during the last ten days of November 2015 had enhanced agricultural activities in most parts of Malawi and farmers were propelled to start planting crops. The rains have also improved water resources, pasture availability for animal production, soil moisture reserves and have supported seed germination and growth and development of crops. Land preparation and procurement of farm inputs were in progress in most parts of Malawi.

3. PROSPECTS FOR 2015/16 RAINFALL SEASON

The rainfall outlook for the 2015/16 season is that most parts of Malawi are likely to receive normal to above normal rainfall amounts during the season. However, a few areas particularly in the Shire Valley are likely to receive low rainfall amounts towards the end of season.

4. OUTLOOK FOR 01 – 10 DECEMBER 2015

Models for short to medium range weather forecasts show that more areas in Malawi are likely to receive good rainfall amounts during the first ten days of December 2015.

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TABLE 1: AGROMETEOROLOGICAL PARAMETERS FOR 21 TO 30 NOVEMBER 2015

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^{-2} p/day
KARONGA ADD										
Chitipa	30.0	19.4	34.0	16.2	10.8	63	7.2	7.3	5.9	9.2
Karonga	33.9	24.1	36.2	22.0	6.5	56	7.0	7.8	6.3	9.0
MZUZU ADD										
Bolero	32.1	20.7	35.3	18.7	7.2	53	7.3	7.5	6.1	9.3
Mzimba	30.3	18.6	35.9	16.5	4.0	63	7.9	7.0	5.5	9.7
Mzuzu	27.5	17.0	32.1	14.5	5.8	70	7.6	6.6	5.2	9.5
Nkhata Bay	33.5	21.2	37.7	19.6	3.2	67	8.2	7.5	6.0	9.9
KASUNGU ADD										
Kasungu	33.8	20.3	33.6	18.5	9.4	47	9.5	8.7	7.0	10.7
LILONGWE ADD										
Chitedze	32.5	19.6	35.4	16.3	4.7	48	9.6	8.0	6.3	10.8
Dedza	28.3	18.0	31.3	17.0	13.0	52	7.4	7.6	6.1	9.4
KIA	31.4	19.1	34.2	16.0	7.6	48	8.7	7.9	6.3	10.2
SALIMA ADD										
Nkhota kota	32.9	24.3	36.4	22.5	10.8	51	10.5	9.6	7.8	11.4
Salima	34.6	24.5	37.0	22.2	11.9	47	9.7	9.4	7.7	10.8
MACHINGA ADD										
Makoka	31.4	19.7	35.5	15.0	7.2	52	10.0	8.3	6.6	11.1
Mangochi	35.7	23.3	39.5	20.0	4.7	54	8.8	8.4	6.8	10.3
Monkey Bay	34.3	25.4	37.0	22.4	12.2	49	10.1	9.9	8.1	11.1
BLANTYRE ADD										
Bvumbwe	29.1	18.5	33.5	14.6	7.6	87	8.0	6.8	5.3	9.8
Chichiri	30.3	19.9	34.7	15.7	7.9	50	7.5	7.5	6.1	9.4
Chileka	33.6	20.4	37.7	17.0	13.7	50	9.0	9.0	7.4	10.4
Mimosa	32.8	19.1	38.5	14.8	5.4	45	8.0	7.6	6.1	9.8
SHIRE VALLEY ADD										
Ngabu	36.4	24.3	42.8	20.4	13.3	52	11.0	10.5	8.6	11.7

Glossary of some terms on this table

- Eo = Potential Evaporation, Et = Potential Evapotranspiration and 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