# 10-Day Rainfall & Agromet Bulletin

## Department of Meteorological Services

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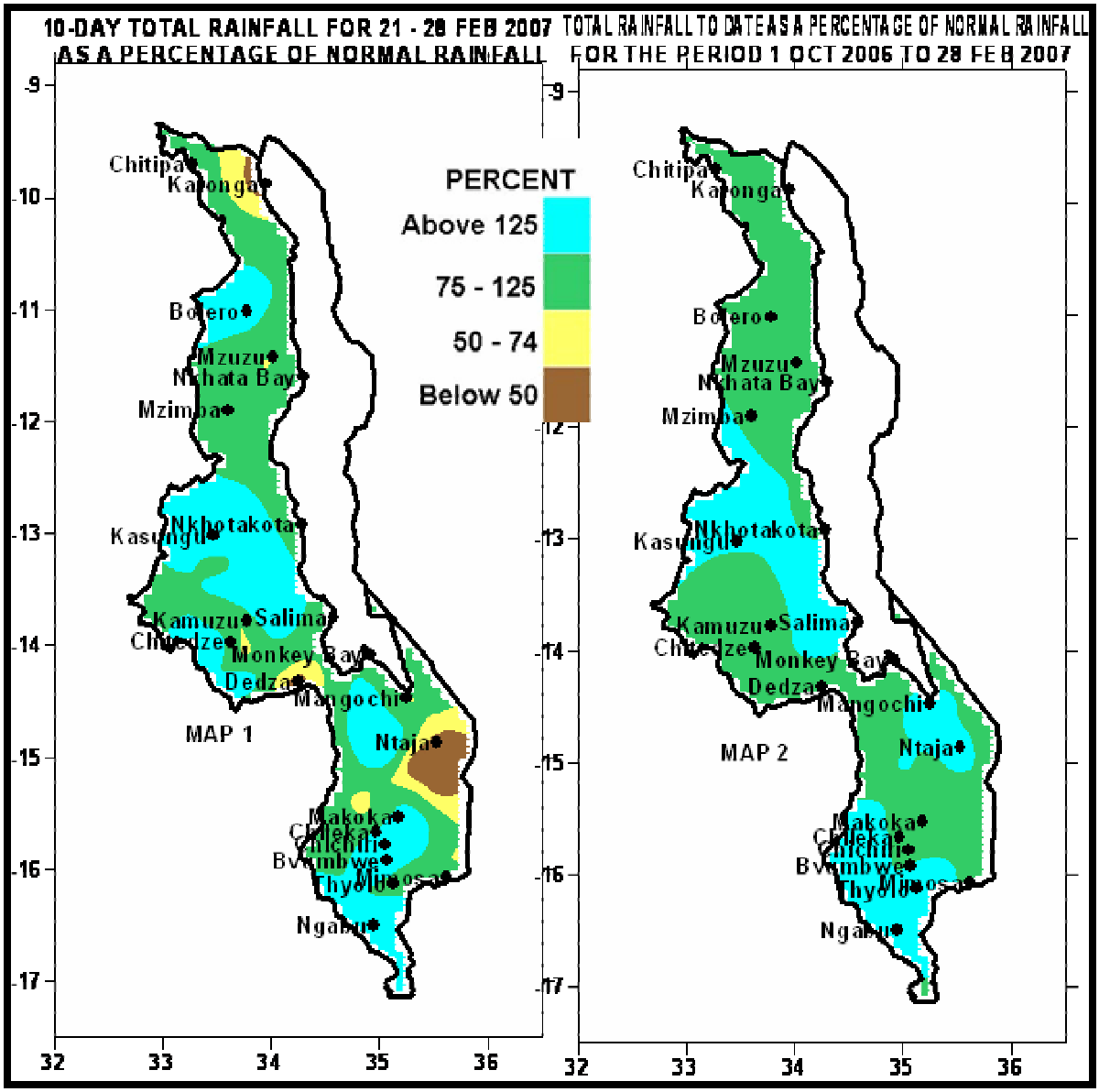
## HIGHLIGHTS

- **Favourable rains experienced over most parts of Malawi…**
- **Maize crop ranges from flowering to maturity stages …**
- **Widespread rains expected to continue during 01 – 10 March, 2007…**

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# 1. WEATHER SUMMARY

## 1.1 RAINFALL SITUATION

In the last dekad of February 2007, Tropical Cyclone Favio maintained active moist Congo Air and Inter Tropical Convergence Zone over Malawi. As a result most areas received normal to above dekadal rainfall amounts (green and light blue colours on Map 1) with good spatial and temporal distribution. Some areas particularly over the south and centre recorded more than twice the expected dekadal rainfall amounts and these areas in the south included Toleza Farm (263%) in Balaka, Chichiri (258%) in Blantyre, Nsanje (211%), Ngabu (203%) in Chikwawa, Chiradzulu and Mimosa (202%) and in the centre Kasungu (267%), Mwimba Research (223%) and Dowa Agric (222%). See Table 1.Very few areas that registered below normal dekadal rainfall amounts included areas around Karonga in the north, Dedza in the centre and Ntaja in the south (yellow and brown colours on Map 1).

Cumulative rainfall performance from October 2006 through February 28, 2007 has been generally normal to above-normal (green and light blue colours on Map 2) throughout Malawi.

## 1.2 MEAN AIR TEMPERATURE

During the third dekad of February 2007 mean daily maximum temperatures ranged from warm to hot . Higher mean daily maximum temperatures were confined to Shire Valley and Lakeshore areas. The highest absolute maximum temperaure was reported at Karonga (36.5°C) while the lowest absolute maximum temperature was registered at Dedza (25.6°C). At the same time, the lowest absolute minimum temperatures ranged from 14.5°C at Dedza and Bvumbwe to 21.9°C at Karonga (Table 2).

## 1.3 MEAN DAILY WIND SPEEDS

Mean daily wind speeds measured at a height of two meters above the ground remained generally light. The highest speed was still reported at Chileka (2.2 m/s or 7.9 Km/hr) while the lowest wind speed was recorded at Ntaja (0.6m/s or 2.2 Km/hr). See Table 2.

## 1.4 MEAN RELATIVE HUMIDITY

Most areas recorded high relative humidity values. Mean daily values ranged from 65% at Karonga to 84% at Bvumbwe.

# 2. AGROMETEOROLOGICAL ASSESSMENT

In the last dekad of February 2007, Malawi experienced an improvement in rainfall amounts and distribution. This brought soil moisture relief to some areas particularly over central Malawi where rainfall performance had been poor since early February 2007 and some crops had to survive on residual soil moisture

The general crop stand in the fields was reported in good condition with the maize crop ranging from flowering and cobbing to maturity and drying stages, and no major incidences of pests or diseases have been reported. A bumper harvest is expected again this year. The first round crop production estimates from Ministry of Agriculture and Food Security are putting a national production forecast of 3.15 million metric tonnes.

# 3. PROSPECTS OF 2006/07 SEASON

**EL NIÑO WATCH:** Most statistical and coupled model forecasts indicate that El Niño conditions are weakening and ENSO-neutral conditions are expected during the period March-May 2007. Updated rainfall forecast indicates greater likelihood of receiving normal to above normal rains over Malawi in March and April.

# 4. OUTLOOK FOR 01 – 10 March 2007

Meanwhile, short to medium-term forecasts indicate that both Congo Air and Inter Tropical Convergence Zone are expected to remain active over Malawi. Therefore widespread rains and occasional thunderstorms are expected over Malawi during the first ten days of March 2007.

## TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 3 OF FEBRUARY 2007: PERIOD 21 - 28

| STATION NAME | DEKADAL TOTAL RAINFALL | DEKADAL NORMAL | DEKADAL TOTAL AS % | TOTAL TO DATE | NORMAL TO DATE | TOTAL TODATE AS % | RAINY DAYS |
|---|---|---|---|---|---|---|---|
| **SOUTHERN REGION** | **mm** | **mm** | **NORMAL** | **mm** | **mm** | **NORMAL** | **³ 0.3 mm** |
| Balaka Township | 78.0 | 43.4 | **180** | 886.8 | 657.6 | **135** | 3 |
| Bvumbwe Met. | 103.5 | 52.0 | **199** | 910.1 | 800.9 | **114** | 6 |
| Chancellor College | 51.3 | 79.3 | **65** | 1086.6 | 1017.1 | **107** | 6 |
| Chichiri Met. | 130.9 | 50.7 | **258** | 968.1 | 810.3 | **119** | 7 |
| Chileka Airport | 36.6 | 44.7 | **82** | 813.8 | 683.1 | **119** | 5 |
| Chiradzulu Agric | 103.0 | 51.1 | **202** | 772.4 | 805.4 | **96** | 6 |
| Kasinthula Res. Stn. | 26.8 | 41.4 | **65** | 1103.6 | 529.2 | **209** | 6 |
| Liwonde Township | 28.5 | 54.8 | **52** | 679.7 | 646.2 | **105** | 2 |
| Lujeri Tea Estate | 69.7 | 110.3 | **63** | 1407.0 | 1451.5 | **97** | 7 |
| Makoka Met | 107.0 | 67.4 | **159** | 877.2 | 767.8 | **114** | 7 |
| Mangochi Met. | 32.8 | 45.5 | **72** | 1015.6 | 645.7 | **157** | 3 |
| Mimosa Met. | 121.7 | 60.3 | **202** | 1126.8 | 998.8 | **113** | 7 |
| Mulanje Boma | 81.3 | 85.8 | **95** | 1276.0 | 1114.9 | **114** | 5 |
| Naminjiwa Agric | 47.8 | 49.7 | **96** | 781.8 | 765.6 | **102** | 4 |
| Nchalo Illovo | 42.4 | 39.4 | **108** | 922.1 | 531.6 | **173** | 5 |
| Ngabu Met. | 90.8 | 44.7 | **203** | 889.9 | 592.9 | **150** | 7 |
| Nsanje Boma | 75.6 | 35.9 | **211** | 799.6 | 655.2 | **122** | 5 |
| Ntaja Met. | 21.8 | 55.9 | **39** | 1108.9 | 685.1 | **162** | 5 |
| Satemwa Tea Est. No.1 | 66.8 | 55.8 | **120** | 1242.7 | 909.8 | **137** | 6 |
| Toleza Farm | 110.5 | 42.0 | **263** | 800.6 | 655.6 | **122** | 4 |
| Thyolo Met | 64.3 | 42.8 | **150** | 1055.7 | 828.1 | **127** | 6 |
| Zomba RTC | 115.9 | 70.6 | **164** | 1305.6 | 919.8 | **142** | 6 |
| **CENTRAL REGION** | | | | | | | |
| Bunda College | 43.6 | 67.0 | **65** | 773.4 | 682.8 | **113** | 3 |
| Chileka Namitete | 135.5 | 60.4 | **224** | 775.9 | 737.7 | **105** | 6 |
| Dedza Met | 26.2 | 61.1 | **43** | 840.1 | 742.9 | **113** | 5 |
| Dowa Agric | 130.8 | 58.9 | **222** | 861.5 | 679.3 | **127** | 7 |
| Dwangwa Illovo Sugar. | 61.0 | 68.9 | **89** | 945.4 | 800.3 | **118** | 5 |
| K.I.A Met | 41.6 | 49.6 | **84** | 661.6 | 655.0 | **101** | 6 |
| Kasungu Met | 157.5 | 58.9 | **267** | 1128.6 | 706.7 | **160** | 7 |
| Mlangeni Njolomole | 41.4 | 47.6 | **87** | 701.5 | 768.7 | **91** | 3 |
| Mwimba Research | 176.8 | 79.4 | **223** | 953.6 | 723.1 | **132** | 5 |
| Nathenje Agric | 67.7 | 56.7 | **119** | 845.8 | 679.7 | **124** | 4 |
| Natural Res. College | 30.8 | 46.8 | **66** | 196.2 | 670.7 | **29** | 4 |
| Ntchisi Boma | 83.2 | 62.8 | **132** | 1536.5 | 679.7 | **226** | 5 |
| Salima Met | 67.5 | 80.0 | **84** | 1168.4 | 911.7 | **128** | 7 |
| Dedza RTC | 17.1 | 42.3 | **40** | 989.1 | 764.7 | **129** | 4 |
| **NORTHERN REGION** | | | | | | | |
| Bolero Met | 50.1 | 30.6 | **164** | 642.2 | 571.5 | **112** | 4 |
| Chitipa Met | 52.0 | 50.6 | **103** | 883.2 | 731.2 | **121** | 5 |
| Chintheche Agric | 57.5 | 76.6 | **75** | 730.6 | 950.6 | **77** | 4 |
| Karonga Met. | 16.3 | 60.3 | **27** | 607.5 | 586.3 | **104** | 4 |
| Mzimba Met | 48.1 | 50.1 | **96** | 805.3 | 676.5 | **119** | 6 |
| Mzuzu Met. | 38.0 | 51.8 | **73** | 832.5 | 746.9 | **111** | 6 |
| NkhataBay Met. | 31.2 | 24.6 | **127** | 909.6 | 954.0 | **95** | 4 |

## TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 3 OF FEBRUARY 2007

| STATION | MAX TEMP (°C) | MIN TEMP (°C) | ABS MAX (°C) | ABS MIN (°C) | WIND SPEED m/s | RH % |
|---|---|---|---|---|---|---|
| BOLERO | 28.3 | 18.0 | 31.0 | 17.0 | 1.0 | 78 |
| BVUMBWE | 22.6 | 18.7 | 28.2 | 14.5 | 1.1 | 84 |
| CHICHIRI | 25.7 | 18.5 | 28.8 | 16.5 | 0.7 | 82 |
| CHILEKA | 28.2 | 20.5 | 31.5 | 18.2 | 2.2 | 79 |
| NTAJA | 29.2 | 21.1 | 32.6 | 20.0 | 0.6 | 81 |
| CHITIPA | 27.8 | 17.7 | 30.1 | 15.6 | 1.7 | 76 |
| DEDZA | 23.4 | 15.7 | 25.6 | 14.5 | 1.1 | 75 |
| KASUNGU | 27.8 | 18.9 | 30.3 | 17.6 | 1.3 | 82 |
| KARONGA | 33.3 | 22.8 | 36.5 | 21.9 | 1.4 | 65 |
| K I A | 26.2 | 17.7 | 27.9 | 16.2 | 1.5 | 81 |
| MAKOKA | 27.4 | 18.6 | 30.4 | 16.8 | 1.2 | 79 |
| MANGOCHI | 28.0 | 22.2 | 31.8 | 21.8 | 1.5 | 78 |
| MIMOSA | 29.9 | 20.1 | 33.2 | 17.6 | 1.0 | 72 |
| MZIMBA | 25.9 | 17.0 | 28.5 | 16.4 | 1.4 | 79 |
| MZUZU | 26.7 | 17.4 | 30.3 | 15.3 | 2.0 | 78 |
| NKHATA BAY | 30.4 | 21.2 | 32.4 | 19.7 | 0.8 | 80 |
| SALIMA | 29.5 | 22.3 | 31.0 | 20.9 | 1.8 | 78 |

**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) = mpsx3.6