



# 10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services



Period: 21 – 31 October 2007

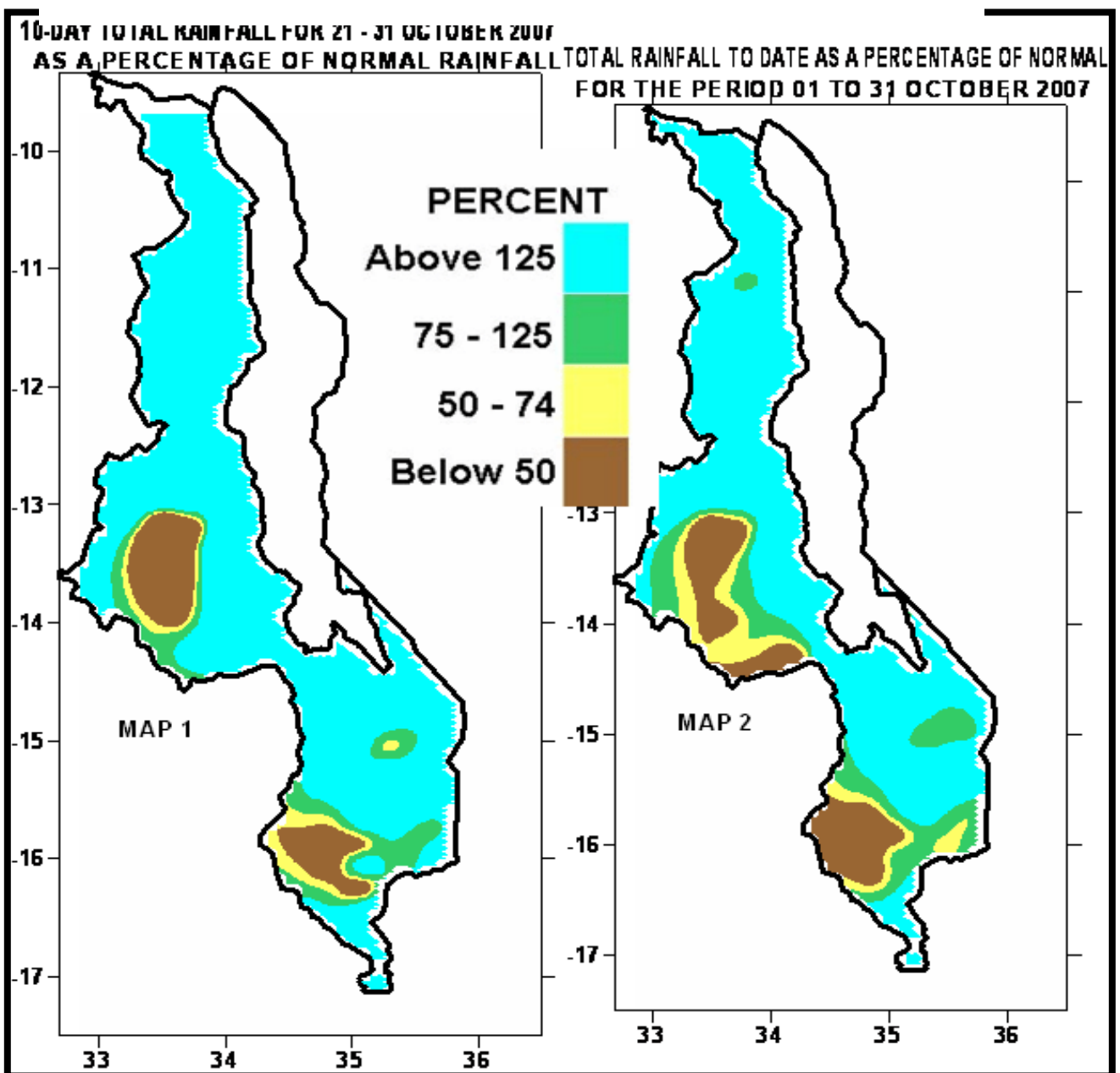
Season: 2007/2008

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## HIGHLIGHTS

- Good rainfall amounts experienced in some parts of Malawi...
- Farmers in the south and parts of the centre prompted to start planting crops...
- Spatial temporal distribution of rainfall to improve during 1 – 10 November ...



**1. WEATHER SUMMARY****1.1 RAINFALL SITUATION**

During the last ten-days of October 2007, moist and unstable air mass covered most parts of Malawi. This improved temporal and spatial rainfall distribution and amounts over most parts of the country particularly over the south and some parts of the centre. Moderate to heavy rainfall was registered in most areas. Notable 10-day total rainfall amounts of more than 100mm in the south included Nsanje Agriculture (182mm), Lujeri Tea Estate 109mm and Nankumba Agriculture 107mm.

Total rainfall amounts for the period 21 – 31 October 2007 expressed as percentage of normal demonstrated very high figures in excess of 1000% in some parts of the country while cumulative rainfall amounts received since October 2007 expressed as a percentage of normal rainfall showed that significant rainfall (light blue colour on map 2) had been received in most parts of Malawi.. See Table 1.

**1.2 MEAN AIR TEMPERATURE**

Despite the rains, generally hot weather continued over Malawi during the period. Mean daily maximum temperatures ranged from 25.9°C at Bvumbwe to 34.7°C at Monkey Bay. At the same time mean daily minimum temperatures ranged from 114.1 °C at Bvumbwe to 225.6°C at Monkey Bay..

**1.3 MEAN DAILY WIND SPEEDS**

Mean wind speeds at a height of two meters above the ground were still light.. The highest wind speed was reported at Chitipa (5.8m/s or 20.9.4Km/hr). See Table 2.

**1.4 MEAN RELATIVE HUMIDITY**

There was a significant increase in moisture in the atmosphere. Most areas reported mean daily relative humidity values of over 50%. The highest was reported at Bvumbwe (72%) while the lowest was registered at Ntaja (50%).

**2. AGROMETEOROLOGICAL ASSESSMENT**

Good rainfall amounts fell in some parts of the country particularly in the south during the period under review. These rains encouraged most farmers to speed up land preparations, improved water resources and soil moisture reserves. At the same time, in the south and some parts of the centre where normal dates for onset of planting rains fall within the last twenty days of November, farmers who had already finalized land preparations and had seed were prompted to start planting crops.

The main agricultural activity during the period was land preparation in readiness for the onset of the main rains which are climatologically expected from mid November for the south and some parts of the centre and in December for the north. However, sometimes the country experiences uniform onset of the main rains.

**3. PROSPECTS OF 2007/08 SEASON**

Most climate models suggest that during 2007/08 rainfall season, a greater part of Malawi will experience normal to above normal total rainfall amounts with an increased chance of floods.

**4. OUTLOOK FOR 01 – 10 NOVEMBER 2007**

A convergence ahead of pressure rises is expected to become active over southern and some parts of central Malawi. Therefore expect spatial distribution of rainfall to improve mainly over the south and some parts of central region during the first ten days of November 2007

**TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR  
DEKAD 3 OF OCTOBER 2007: PERIOD 21 - 31**

| STATION NAME           | DEKADAL<br>TOTAL<br>RAINFALL | DEKADAL<br>NORMAL | DEKADAL<br>TOTAL<br>AS %<br>NORMAL | TOTAL<br>TO<br>DATE | NORMAL<br>TO<br>DATE | TOTAL<br>TODATE<br>AS %<br>NORMAL | RAINY<br>DAYS       |
|------------------------|------------------------------|-------------------|------------------------------------|---------------------|----------------------|-----------------------------------|---------------------|
|                        | mm                           | mm                |                                    | mm                  | mm                   |                                   | <sup>3</sup> 0.3 mm |
| <b>SOUTHERN REGION</b> |                              |                   |                                    |                     |                      |                                   |                     |
| Balaka Township        | 59.0                         | 18.7              | 316                                | 59.0                | 24.0                 | 246                               | 3                   |
| Bvumbwe Met.           | 4.7                          | 17.0              | 28                                 | 4.7                 | 31.4                 | 15                                | 3                   |
| Chancellor College     | 67.6                         | 18.4              | 367                                | 90.1                | 27.8                 | 324                               | 3                   |
| Chichiri Met.          | 20.0                         | 20.3              | 99                                 | 20.0                | 33.6                 | 60                                | 3                   |
| Chikwawa Boma          | 1.6                          | 9.0               | 18                                 | 1.6                 | 16.4                 | 10                                | 1                   |
| Chileka Airport        | 14.7                         | 18.6              | 79                                 | 15.2                | 29.0                 | 52                                | 2                   |
| Chiradzulu Agric       | 17.8                         | 9.6               | 185                                | 42.0                | 20.0                 | 210                               | 3                   |
| Chizunga Factory       | 15.0                         | 22.9              | 66                                 | 30.0                | 42.4                 | 71                                | 2                   |
| Lujeri Tea Estate      | 109.2                        | 42.1              | 259                                | 113.0               | 100.0                | 113                               | 2                   |
| Makoka Met             | 68.2                         | 14.2              | 480                                | 68.6                | 26.9                 | 255                               | 3                   |
| Mimosa Met.            | 33.5                         | 31.0              | 108                                | 33.5                | 60.7                 | 55                                | 5                   |
| Monkey Bay Met.        | 1.6                          | 5.8               | 28                                 | 1.6                 | 8.9                  | 18                                | 2                   |
| Mulanje Boma           | 55.5                         | 46.4              | 120                                | 55.5                | 101.9                | 54                                | 4                   |
| Namiasi Agric          | 13.7                         | 2.7               | 507                                | 25.7                | 10.1                 | 254                               | 1                   |
| Naminjiwa Agric        | 11.6                         | 20.9              | 56                                 | 15.5                | 31.9                 | 49                                | 1                   |
| Namwera Agric          | 43.0                         | 7.9               | 544                                | 43.0                | 14.2                 | 303                               | 2                   |
| Nankumba Agric         | 107.3                        | 6.3               | 1703                               | 107.3               | 10.7                 | 1003                              | 3                   |
| Nchalo Sucoma          | 7.0                          | 17.1              | 41                                 | 7.0                 | 27.5                 | 25                                | 1                   |
| Neno Agric             | 35.8                         | 25.4              | 141                                | 35.8                | 35.8                 | 100                               | 3                   |
| Ngabu Met.             | 25.7                         | 13.9              | 185                                | 27.3                | 26.4                 | 103                               | 2                   |
| Nsanje Boma            | 181.8                        | 13.9              | 1308                               | 189.1               | 28.5                 | 664                               | 2                   |
| Ntaja Met.             | 10.6                         | 8.1               | 131                                | 11.8                | 15.4                 | 77                                | 2                   |
| Satemwa Tea Est. No.1  | 45.7                         | 24.0              | 190                                | 45.7                | 49.0                 | 93                                | 2                   |
| <b>CENTRAL REGION</b>  |                              |                   |                                    |                     |                      |                                   |                     |
| Bunda College          | 17.6                         | 8.6               | 205                                | 17.6                | 19.5                 | 90                                | 5                   |
| Chileka Namitete       | 8.0                          | 10.0              | 80                                 | 8.0                 | 14.8                 | 54                                | 1                   |
| Chitedze Met.          | 0.1                          | 6.4               | 2                                  | 1.7                 | 10.8                 | 16                                | 0                   |
| Dowa Agric             | 4.0                          | 1.3               | 308                                | 4.0                 | 2.9                  | 138                               | 2                   |
| Dwangwa Sugar Corp.    | 8.9                          | 4.0               | 223                                | 27.9                | 10.7                 | 261                               | 2                   |
| Kaluluma DTC           | 32.6                         | 1.9               | 1716                               | 32.6                | 4.7                  | 694                               | 1                   |
| K.I.A Met              | 5.3                          | 9.4               | 56                                 | 13.3                | 11.1                 | 120                               | 2                   |
| Mchinji Boma           | 31.4                         | 12.3              | 255                                | 31.4                | 19.3                 | 163                               | 4                   |
| Mlangeni Njolomole     | 36.0                         | 13.7              | 263                                | 36.0                | 20.7                 | 174                               | 1                   |
| Ntcheu - Nkhande       | 18.0                         | 12.6              | 143                                | 26.5                | 22.6                 | 117                               | 2                   |
| Ntchisi Boma           | 25.0                         | 2.2               | 1136                               | 25.0                | 3.4                  | 735                               | 1                   |
| Salima Met             | 10.5                         | 0.9               | 1167                               | 10.5                | 6.1                  | 172                               | 2                   |
| Dedza RTC              | 32.7                         | 15.4              | 212                                | 32.7                | 28.5                 | 115                               | 2                   |
| <b>NORTHERN REGION</b> |                              |                   |                                    |                     |                      |                                   |                     |
| Baka Res. Stn.         | 13.0                         | 0.6               | 2167                               | 13.0                | 1.4                  | 929                               | 1                   |
| Bolero Met             | 5.3                          | 4.1               | 129                                | 5.3                 | 6.7                  | 79                                | 3                   |
| Bwengu Agric.          | 11.3                         | 3.3               | 342                                | 11.3                | 6.1                  | 185                               | 2                   |
| Chitipa Met            | 13.0                         | 3.5               | 371                                | 13.0                | 5.6                  | 232                               | 2                   |
| Euthini Agric.         | 44.0                         | 6.5               | 677                                | 44.0                | 8.9                  | 494                               | 1                   |
| Karonga Met.           | 14.0                         | 0.5               | 2800                               | 14.0                | 0.9                  | 1556                              | 1                   |
| Mzimba Met             | 12.2                         | 3.0               | 407                                | 13.9                | 4.7                  | 296                               | 4                   |
| Mzuzu Met.             | 83.7                         | 10.8              | 775                                | 91.3                | 34.1                 | 268                               | 3                   |
| Vinthukutu Agric       | 21.4                         | 3.4               | 629                                | 21.4                | 9.6                  | 223                               | 2                   |

**TABLE 2: AGROMETEOROLOGICAL PARAMETERS  
FOR DEKAD 3 OF OCTOBER 2007**

| STATION           | MAX<br>TEMP | MIN<br>TEMP | ABS<br>MAX | ABS<br>MIN | WIND<br>SPEED | RH |
|-------------------|-------------|-------------|------------|------------|---------------|----|
|                   | (°C)        | (°C)        | (°C)       | (°C)       | m/s           | %  |
| <b>BVUMBWE</b>    | 25.9        | 14.1        | 30.4       | 12.0       | 2.6           | 69 |
| <b>BOLERO</b>     | 31.0        | 19.3        | 32.6       | 17.0       | 1.2           | 53 |
| <b>CHICHIRI</b>   | 29.2        | 17.6        | 31.5       | 14.0       | 1.1           | 72 |
| <b>CHILEKA</b>    | 29.6        | 18.9        | 34.5       | 17.6       | 3.4           | 62 |
| <b>NTAJA</b>      | 30.6        | 19.6        | 33.6       | 18.2       | 3.0           | 50 |
| <b>CHITEDZE</b>   | 29.3        | 16.4        | 31.4       | 14.4       | 1.4           | 60 |
| <b>CHITIPA</b>    | 29.9        | 19.8        | 31.1       | 17.9       | 5.8           | 59 |
| <b>KARONGA</b>    | 32.5        | 23.6        | 34.0       | 22.0       | 2.8           | 55 |
| <b>K.I.A.</b>     | 27.1        | 16.1        | 29.0       | 14.2       | 2.3           | 67 |
| <b>MAKOKA</b>     | 27.5        | 16.3        | 30.6       | 14.4       | 1.5           | 66 |
| <b>MIMOSA</b>     | 30.2        | 16.9        | 35.5       | 14.6       | 1.5           | 69 |
| <b>MONKEY BAY</b> | 34.7        | 25.6        | 33.8       | 21.3       | 3.1           | 56 |
| <b>MZIMBA</b>     | 27.4        | 18.1        | 29.5       | 17.2       | 1.4           | 62 |
| <b>MZUZU</b>      | 26.4        | 16.2        | 28.5       | 11.8       | 2.3           | 71 |
| <b>NGABU</b>      | 34.1        | 22.2        | 39.8       | 19.6       | 3.7           | 53 |
| <b>SALIMA</b>     | 31.5        | 22.2        | 34.7       | 21.0       | 3.2           | 55 |

**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