10-Day Rainfall & Agromet Bulletin

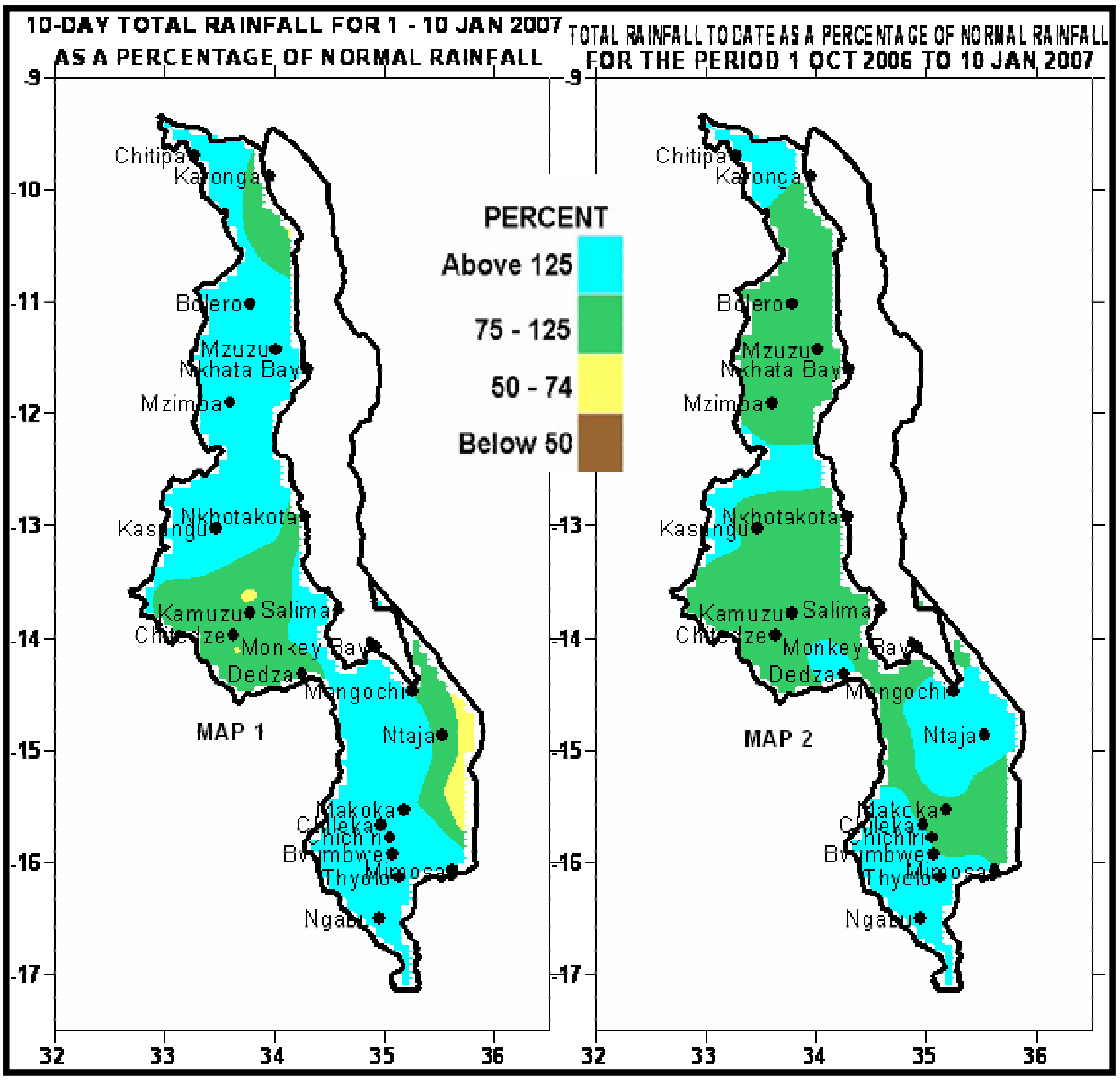
Department of Meteorological Services

Period: 01 – 10 January 2007 | Season: 2006/2007 | Issue No.10

Release date: 13 January 2007

HIGHLIGHTS

- **High rainfall cause floods in Chikwawa and Nsanje in southern Malawi…**
- **Maize crop mostly in good condition at vegetative stage…**
- **More rains expected during 11 – 20 January, 2007…**
- **El Nino conditions likely to continue during January - March 2007…**



All inquiries should be addressed to: The Director of Meteorological Services, P.O. Box 1808, Blantyre, MALAWI
Tel: (265) 1 822 014 Fax: (265) 1 822 215 E-mail: metdept@metmalawi.com Homepage: www.metmalawi.com

1. WEATHER SUMMARY

1.1 RAINFALL SITUATION

During the first ten days of January 2007, a low pressure area in Mozambique Channel caused continuous high rainfall intensities which resulted in floods in Chikwawa and Nsanje districts over southern Malawi while both main rain bearing systems, moist Congo Air mass and Inter Tropical Convergence Zone maintained widespread rainfall over northern and central Malawi. Good spatial and temporal rainfall distribution was experienced over the country with most areas registering over eight rainy days. Due to high rainfall intensities some areas particularly in southern Malawi registered high ten day cumulative rainfall amounts. For instance in Chikwawa, Kasinthula Research reported 466mm (741% of normal), Nchalo had 329mm (641%), Ngabu Met 335mm (551%) while in Nsanje district, Nsanje Boma registered 293mm (516%). See Table 1.

Map 2 shows the performance of cumulative rainfall from 1st October 2006 to 10 January 2007. The map suggests that most areas in Malawi have received over 75% of the expected rainfall amounts (green and light blue colours).

1.2 MEAN AIR TEMPERATURE

During the first ten days of January 2007 cloudy to overcast conditions caused a drop in mean daily maximum temperatures over most areas in Malawi. This time higher mean daily maximum temperatures were confined to northern Lakeshore areas. The lowest maximum was reported at Dedza (20.9°C) while the highest was reported at Karonga (30.3°C). At the same time, mean daily minimum temperatures ranged from 14.2°C at Dedza to 23.0°C at Ngabu (Table 2).

1.3 MEAN DAILY WIND SPEEDS

Mean daily wind speeds at a height of two meters above the ground were still light. The highest wind speed was reported at Chileka (2.6 m/s or 9.4 Km/hr) while the lowest wind speed was recorded at Chichiri and Kasungu (0.6m/s or 2.2 Km/hr). See Table 2.

1.4 MEAN RELATIVE HUMIDITY

Mean daily relative humidity values indicate that humid conditions prevailed over most parts of Malawi. The highest was registered at Chichiri (91%) while the lowest was registered at Chitipa (73%). See Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

The first dekad of January received substantial amount rainfall covering most parts of the country. Most areas received rainfall above 100mm which was sufficient to satisfy daily requirements of crops. However, there were areas particularly over southern Malawi that received over 200mm. Huge amounts of rainfall such as these always cause problems for both rural and urban communities. The worst affected districts were Nsanje and Chikwawa districts where floods left hundreds homeless and crops and livestock were destroyed. Apart from these problems the rains supported crop growth and development to continue. The rains also continued to improve water resources and soil moisture reserves and pasture availability for communal grazing. The general crop stand in the fields was reported in good condition with Maize reported at various stages of development. In the south and some parts centre maize is mostly at vegetative stage while in the north ranges from germination to early vegetative stage. Some of the hybrid maize that was planted mid November particularly over low altitudes in some parts of the south and centre had started tasseling. So far no major incidences of pests and diseases have been reported.

3. PROSPECTS OF 2006/07 SEASON

EL NIÑO WATCH: The recent atmospheric circulation and precipitation patterns indicate El Niño conditions in the tropical Pacific Ocean will likely continue during January-March 2007 and then weaken during April-May 2007. El Niño is **sometimes** associated with reduced rainfall in parts of southern Africa. Although there are still chances for normal rains, these areas however need to be on alert, and should be closely monitored for the remainder of the season. At the same time over East Africa El Niño has been associated with good and high rainfall. However, the effects of El Niño on Malawi rainfall indicate mixed pattern. During some El Nino seasons such as 1997/98, most parts of the country experienced normal to above normal rainfall while in some El Niño seasons like 1982/83, 1991/92 and 1994/95 Malawi experienced localised droughts. So far good rains continue over most parts of Malawi.

4. OUTLOOK FOR 11 – 20 January 2007

Meanwhile, models for medium range forecasts indicate that a low pressure area in Mozambique Channel is expected to maintain Congo Air over Malawi. Therefore mostly wet conditions are expected to continue over the country during the period 11 – 20 January 2007.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 1 OF JANUARY 2007: PERIOD 01 - 10

STATION NAME	DEKADAL TOTAL RAINFALL	DEKADAL NORMAL	DEKADAL TOTAL AS %	TOTAL TO DATE	NORMAL TO DATE	TOTAL TO DATE AS %	RAINY DAYS
SOUTHERN REGION	mm	mm	NORMAL	mm	mm	NORMAL	³ 0.3 mm
Balaka Township	159.3	52.5	**303**	510.6	349.6	**146**	6
Chancellor College	107.8	107.0	**101**	616.5	548.9	**112**	7
Chichiri Met.	153.6	76.7	**200**	557.8	429.5	**130**	9
Chileka Airport	134.1	68.3	**196**	452.6	370.2	**122**	8
Chiradzulu Agric	193.7	84.5	**229**	424.7	428.1	**99**	6
Kasinthula Res. Stn.	466.3	62.9	**741**	656.5	291.5	**225**	9
Liwonde Township	124.2	60.1	**207**	442.4	296.9	**149**	5
Lujeri Tea Estate	282.3	135.4	**208**	858.4	813.6	**106**	9
Makoka Met	104.5	76.2	**137**	362.4	395.4	**92**	8
Mangochi Met.	73.6	60.5	**122**	603.1	311.5	**194**	8
Mimosa Met.	235.7	91.4	**258**	587.0	565.8	**104**	8
Monkey Bay Met.	102.5	64.9	**158**	328.0	357.2	**92**	8
Mulanje Boma	291.8	108.4	**269**	883.7	632.5	**140**	9
Naminjiwa Agric	60.9	71.3	**85**	362.5	403.5	**90**	7
Namwera Agric	64.0	84.4	**76**	292.0	408.4	**71**	7
Nchalo Illovo	329.3	50.6	**651**	557.0	276.2	**202**	8
Ngabu Met.	335.3	60.8	**551**	542.7	326.6	**166**	9
Nsanje Boma	292.8	56.7	**516**	448.9	350.8	**128**	8
Ntaja Met.	67.4	69.9	**96**	499.1	346.5	**144**	9
Satemwa Tea Est. No.1	258.4	89.5	**289**	698.9	522.4	**134**	8
Zomba RTC	99.1	73.0	**136**	702.4	481.1	**146**	9
CENTRAL REGION							
Bunda College	57.5	78.5	**73**	422.5	384.2	**110**	8
Chitedze Met.	57.6	77.6	**74**	373.2	369.8	**101**	7
Dedza Met	71.7	79.1	**91**	463.3	361.2	**128**	8
Dowa Agric	63.0	82.0	**77**	192.6	316.8	**61**	7
Dwangwa Sugar Corp.	113.0	79.4	**142**	618.4	419.8	**147**	9
Kaluluma DTC	127.5	59.1	**216**	405.2	307.1	**132**	9
Kasungu Met	147.2	68.3	**216**	512.9	334.7	**153**	9
K.I.A Met	54.6	65.7	**83**	250.3	304.7	**82**	6
Mchinji Boma	106.3	82.0	**130**	489.3	410.0	**119**	9
Mkanda Met	69.6	57.2	**122**	476.0	386.4	**123**	7
Mponela Agric	51.0	70.2	**73**	285.5	279.1	**102**	7
Mwimba Research	97.8	49.6	**197**	430.8	332.2	**130**	5
Nathenje Agric	82.0	71.2	**115**	426.8	324.4	**132**	6
Nkhotakota Met	118.6	109.8	**108**	291.8	427.1	**68**	7
Ntcheu - Nkhande	141.7	92.9	**153**	463.2	424.3	**109**	9
Salima Met	237.8	101.2	**235**	481.6	396.9	**121**	9
NORTHERN REGION							
Bwengu Agric.	117.1	65.6	**179**	297.8	322.0	**92**	8
Chitipa Met	152.0	76.7	**198**	570.7	380.2	**150**	8
Karonga Met.	62.9	66.1	**95**	378.1	308.7	**122**	6
Mzimba Met	117.3	89.4	**131**	393.6	351.7	**112**	10
Mzuzu Met.	106.7	67.4	**158**	425.8	429.7	**99**	10
NkhataBay Met.	111.0	61.4	**181**	461.9	599.4	**77**	9
Vinthukutu Agric	52.7	83.4	**63**	302.9	353.1	**86**	5

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 1 OF JANUARY 2007

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
CHICHIRI	23.2	18.1	26.8	15.9	0.6	91
CHILEKA	25.4	20.1	28.8	17.9	2.6	89
NTAJA	26.4	21.0	28.1	18.1	0.9	87
CHITEDZE	24.8	18.9	26.8	17.9	0.8	87
CHITIPA	25.9	17.7	26.6	17.1	1.1	73
DEDZA	20.9	14.2	24.5	14.1	0.9	85
KASUNGU	25.2	21.8	27.9	18.5	0.6	90
KARONGA	30.3	22.7	34.3	22.0	1.4	77
K I A	24.3	18.4	26.2	17.2	1.8	88
MAKOKA	24.9	19.0	28.3	16.9	1.8	90
MANGOCHI	28.3	22.3	31.5	21.0	1.1	80
MIMOSA	24.7	19.7	32.4	18.3	1.0	81
MONKEY BAY	27.7	22.9	29.3	21.6	1.7	84
MZIMBA	25.1	17.3	27.0	16.0	1.4	85
MZUZU	25.7	18.0	27.7	17.4	2.1	81
NGABU	28.3	23.0	32.7	20.3	1.5	89
NKHATA BAY	29.5	21.6	31.6	21.1	0.7	85
NKHOTAKOTA	27.2	22.1	28.6	21.1	1.7	82
SALIMA	27.6	22.0	28.8	21.2	2.0	86

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