10-Day Rainfall & Agromet Bulletin

Department of Meteorological Services

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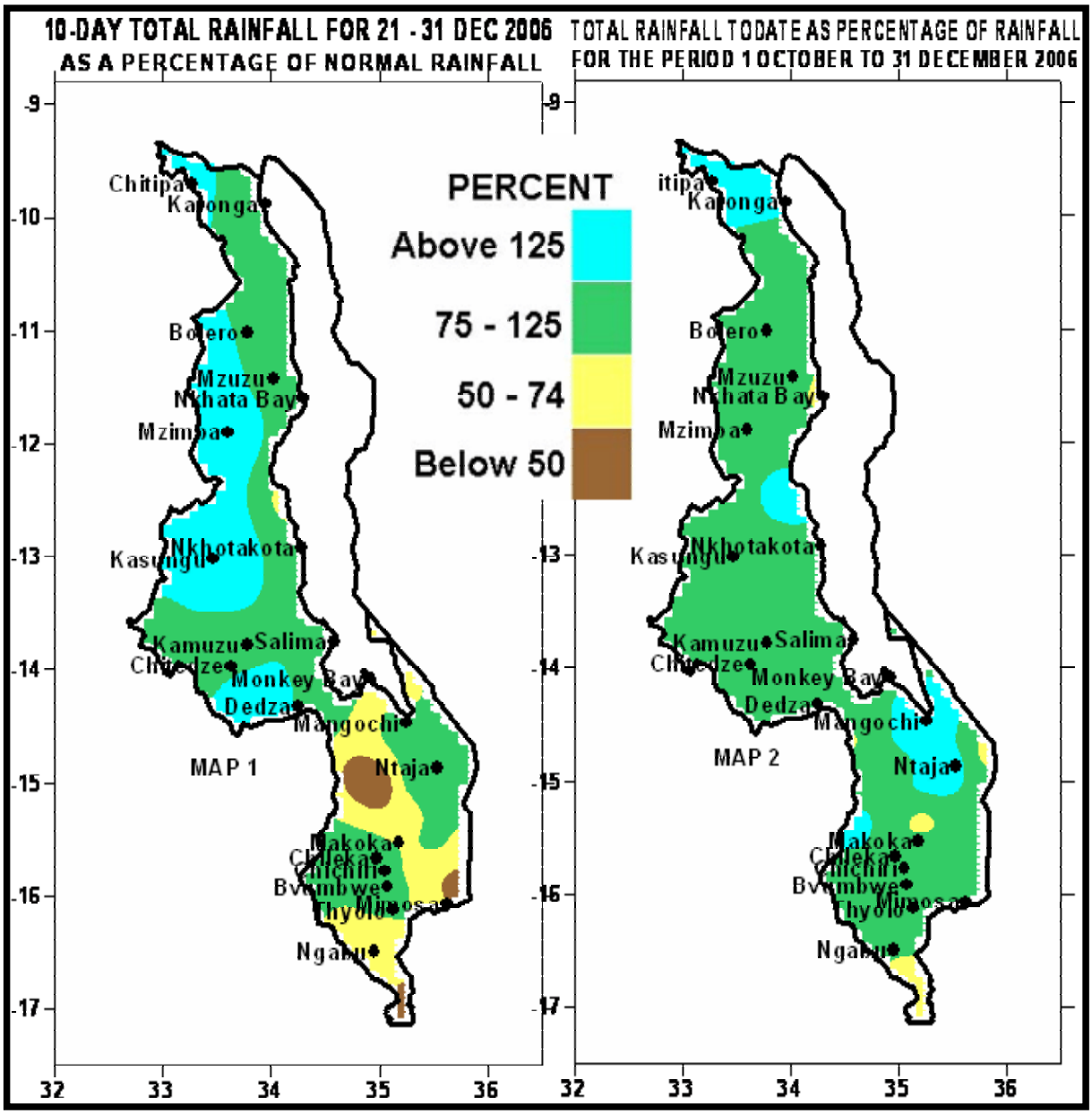
HIGHLIGHTS

- **Good rains fell over most parts of Malawi, reduced in the south…**
- **Maize crop mainly at vegetative stage in most parts of Malawi…**
- **Widespread rains expected to continue during 1 – 10 January, 2007…**
- **El Nino conditions likely to continue until early 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 last ten days of December 2006, Tropical Cyclone Bondo moved southwest wards from the northern tip of Madagascar before filling up within Mozambique Channel. This movement while causing relatively dry conditions over some parts of southern Malawi confined moderate to heavy rains to northern and central Malawi. Generally the spatial and temporal distribution of rainfall was better over northern and central Malawi than in the south. Some parts of the north for instance registered up to ten rainy days while within the same period only one to two rainy days were reported in some parts of the south. See Table 1. Below average 10-day rainfall amounts were experienced in lower Shire Valley, Balaka and Mulanje in southern Malawi (Map 1 brown and yellow colour). Areas with ten day total rainfall amounts of higher than 150mm included Zomba RTC in the south and Chitipa Met (See Table 1).

Cumulative rainfall performance mid way through 2006/07 rainfall season suggest that by 31 December 2006 most areas in Malawi had received normal to above normal rainfall amounts (green and light blue colours on Map 2) with pockets of below normal rainfall (yellow colour) confined to some parts of the south.

1.2 MEAN AIR TEMPERATURE

During the last ten days of December 2006 mean daily maximum temperatures over Malawi ranged between 25.0°C and 36.3°C at Chitipa and Ngabu respectively. At the same time, mean daily minimum temperatures ranged from 16.3°C at Mzuzu to 27.5°C at Ngabu (Table 2).

1.3 MEAN DAILY WIND SPEEDS

Mean daily wind speeds, measured at a height of two meters above the ground were light. The highest wind speed was reported at Chileka (2.7 m/s or 9.72 Km/hr) while the lowest wind speed was recorded at Chichiri in Blantyre (0.5m/s or 1.8 Km/hr). See Table 2.

1.4 MEAN RELATIVE HUMIDITY

Due to persistence of wet surface conditions, mean daily relative humidity values continued to be high over most areas. The highest was registered at Chileka Airport (87%) while the lowest was registered at Mimosa (70%). See Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

Good rains fell over most parts of the country, thereby allowing positive crop development that has already been occurring in many areas to continue. The rains have also improved water resources and soil moisture reserves and pasture availability for communal grazing. The major field activities were mainly weeding and basal fertiliser application. Planting of crops was being finalised in the south and some parts of the centre while still going on in the north. Planting of crops in the north sometimes continue into January and mid February.

The general crop stand in the fields particularly for maize in most areas was reported in good condition at various stages of development ranging from mainly at vegetative stage in the south and centre to germination and early vegetative stage in the north. Some of the hybrid maize that was planted mid November particularly over some parts of the south and centre was at advanced vegetative stage. So far no major incidences of pests and diseases have been reported.

3. PROSPECTS OF 2006/07 SEASON

EL NIÑO WATCH: An El Niño condition was detected in September 2006, and is likely to continue until at least early 2007. El Niño is **sometimes** associated with reduced rainfall in parts of southern Africa including southern Angola, Botswana, Lesotho, southern Madagascar, southern Malawi, Mozambique, Namibia, South Africa, Swaziland, southern Zambia and Zimbabwe. 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. Therefore, every El Niño event is likely to affect the quantity and distribution of rainfall in Malawi differently.

4. OUTLOOK FOR 1 – 10 January 2007

Meanwhile, models for medium range forecasts indicate that a low pressure area in Mozambique Channel is expected to maintain both Congo Air mass and Inter Tropical Convergence Zone within Malawi. Therefore scattered to widespread rains are expected to continue over the country during the period 1 – 10 January 2007.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 3 OF DECEMBER 2006: PERIOD 21 - 31

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	17.5	73.1	**24**	351.3	297.1	**118**	2
Chancellor College	84.5	106.5	**79**	508.7	441.9	**115**	7
Chichiri Met.	60.0	73.4	**82**	404.2	352.8	**115**	6
Chileka Airport	81.7	64.8	**126**	318.5	301.9	**105**	4
Chingale Agric	50.5	81.5	**62**	179.3	292.1	**61**	2
Kasinthula Res. Stn.	33.9	53.0	**64**	190.2	228.6	**83**	2
Liwonde Township	40.4	55.2	**73**	318.2	236.8	**134**	3
Lujeri Tea Estate	49.1	125.3	**39**	576.1	678.2	**85**	4
Makoka Met	31.8	72.1	**44**	254.4	319.2	**80**	8
Mangochi Met.	75.8	67.1	**113**	517.9	251.0	**206**	4
Mimosa Met.	56.8	95.7	**59**	351.3	474.4	**74**	5
Namiasi Agric	49.2	74.6	**66**	349.7	231.2	**151**	3
Naminjiwa Agric	41.3	82.8	**50**	250.4	332.2	**75**	1
Nchalo Sucoma	22.4	45.4	**49**	227.7	225.6	**101**	5
Neno Agric	94.0	81.2	**116**	554.2	336.0	**165**	3
Ngabu Met.	39.0	65.2	**60**	207.4	265.8	**78**	3
Nsanje Boma	31.1	70.5	**44**	156.1	294.1	**53**	2
Ntaja Met.	77.5	64.4	**120**	431.7	276.6	**156**	4
Satemwa Tea Est. No.1	88.6	78.1	**113**	440.5	432.9	**102**	5
Thyolo Met	88.4	84.4	**105**	445.5	386.7	**115**	6
Zomba R.T.C	158.9	91.6	**173**	603.3	408.1	**148**	9
CENTRAL REGION							
Bunda College	140.5	74.3	**189**	261.0	305.7	**85**	5
Chitedze Met.	48.0	71.5	**67**	304.5	292.2	**104**	7
Dwangwa Sugar Corp.	49.1	88.7	**55**	505.4	340.4	**148**	6
K.I.A Met	68.7	63.6	**108**	195.7	239.0	**82**	9
Kasungu Met	107.9	50.9	**212**	270.3	266.4	**101**	6
Mchinji Boma	93.6	82.9	**113**	383.0	328.0	**117**	7
Mkanda Met	71.2	72.6	**98**	406.4	329.2	**123**	7
Mlangeni Njolomole	54.1	72.3	**75**	168.1	290.0	**58**	3
Ntcheu - Nkhande	52.9	93.9	**56**	321.5	331.4	**97**	8
Salima Met	69.1	86.9	**80**	243.8	295.7	**82**	5
NORTHERN REGION							
Bolero Met	76.3	66.1	**115**	208.2	244.4	**85**	9
Chikangawa forest	126.8	85.6	**148**	298.5	304.6	**98**	9
Chitipa Met	152.4	102.7	**148**	418.7	303.5	**138**	10
Karonga Met.	53.9	70.9	**76**	315.2	242.6	**130**	7
Mzimba Met	138.2	74.4	**186**	276.3	262.3	**105**	8
Mzuzu Met.	75.0	82.6	**91**	319.1	362.3	**88**	10
NkhataBay Met.	68.2	80.5	**85**	350.9	538.0	**65**	6

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR DEKAD 3 OF DECEMBER 2006

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED m/s	RH %
BOLERO	27.5	18.8	29.6	17.8	0.7	80
CHICHIRI	27.8	19.4	28.9	18.2	0.5	76
CHILEKA	26.6	24.2	31.5	21.0	2.7	87
NTAJA	29.8	22.3	32.0	21.5	1.4	76
CHITEDZE	27.6	19.2	30.0	17.5	0.7	83
CHITIPA	25.0	18.1	27.0	17.0	1.5	82
KASUNGU	27.2	19.5	29.6	18.5	1.1	83
KARONGA	30.4	22.3	32.0	21.3	1.5	75
K I A	26.7	18.6	29.2	17.7	1.6	79
MAKOKA	28.7	23.9	29.3	19.0	1.0	78
MANGOCHI	30.9	23.1	34.5	22.5	1.4	76
MIMOSA	31.6	20.5	33.2	19.0	1.2	70
MZIMBA	25.5	17.3	28.1	16.4	0.9	82
MZUZU	25.4	16.3	26.6	17.1	1.9	82
NGABU	36.3	27.5	37.5	24.3	2.3	80
NKHATA BAY	30.8	21.7	33.1	20.3	0.8	79
SALIMA	30.1	21.9	31.2	20.6	2.0	80

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