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HIGHLIGHTS

- **Sporadic locally heavy rainfall experienced over Malawi…**
- **Land preparation was in progress in most areas…**
- **More areas to receive significant rainfall during 01 to 10 December 2012…**

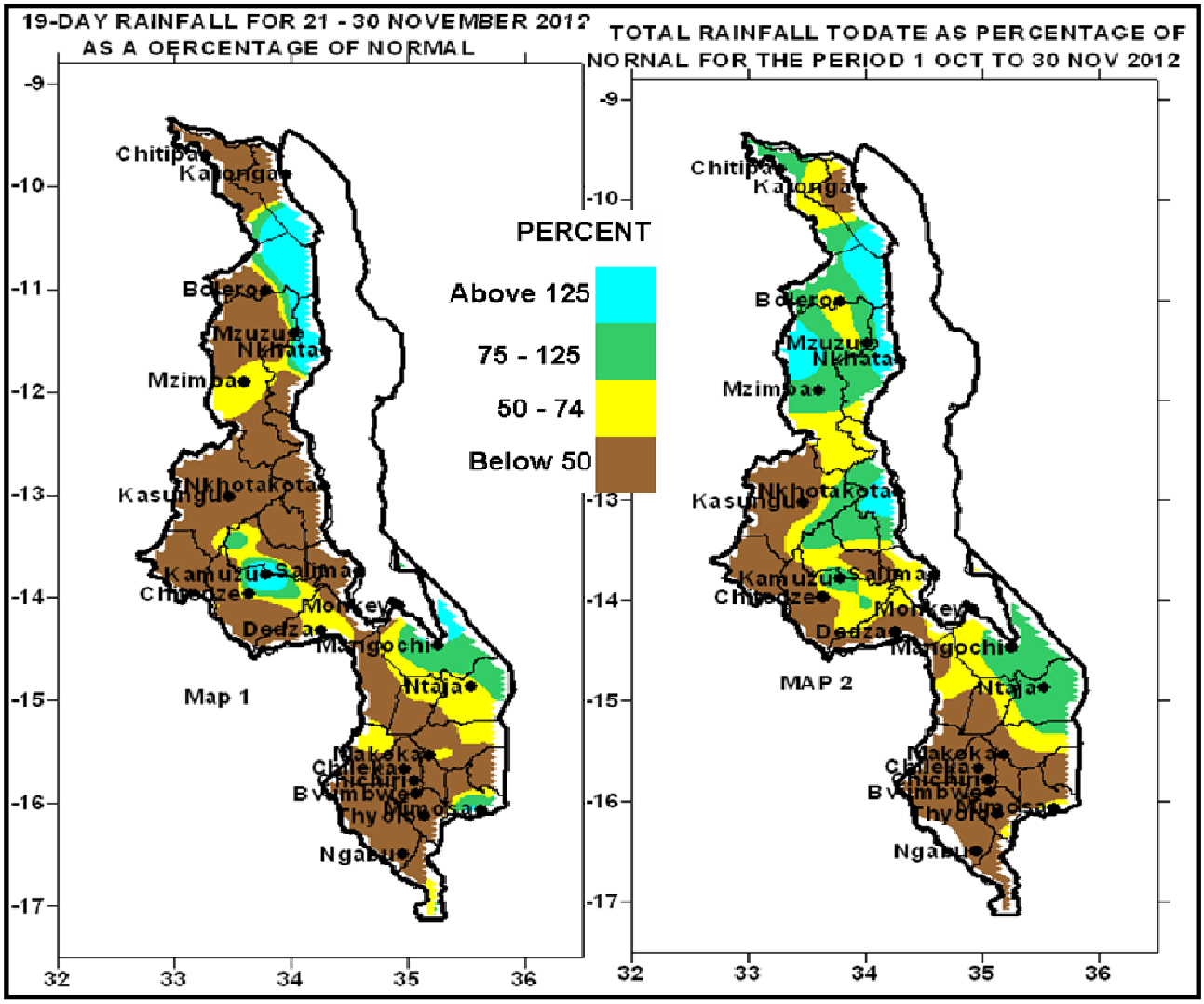

Figure 1: Rainfall Maps for Malawi for 21-30 November 2012

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1.0 WEATHER SUMMARY AND IMPACTS

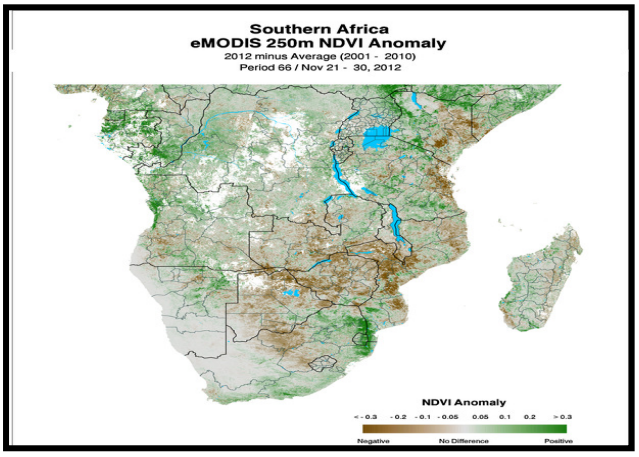
1.1 RAINFALL SITUATION

During the last ten days of November 2012, most areas in Malawi had stayed dry. However, the airmass had remained fairly moist and unstable as a result sporadic locally heavy rainfall was experienced in some parts of country particularly over highlands. A few stations had recorded rainfall amounts of more than 50mm and included areas such as Lujeri and Mulanje Boma in the south, Kamuzu International Airport in the centre and in the north such high rainfall amounts were reported at Nkhata Bay Met in Nkhata Bay and Vinthukutu Agric in Karonga see more details in Table 1. During the period under rewiew, most areas had recorded one to two rainy days. The highest number of rainy days was recorded at Namwera Agric in Mangochi see Table 1. Map 1 shows that during the last ten days of November 2012 a few areas in Malawi had registered above 125% of their long term average rainfall amounts while most areas became dry conditions prevailed in most areas. Generally most parts of Malawi became were relatively drier during the period under review compared to the period 11 to 20 November 2012.

Map 2 on page 1 gives an idea of the performance of rainfall for the country since 1 October 2012. From the map, it is clear that a few areas particularly over the northern half of the country have received more rains than expected while most areas of the south have received less than expected long term average rainfall amounts. A few stations that so far had registered over 200% cumulative rainfall were confined to the north, some of which include: Nkhata Bay Met and Vinthukutu Agric in Karonga district. For more details refer to Table 1.

1.2 VEGETATION CONDITION

Figure 2: Vegetation Condition over Southern Africa



The vegetation diference from long term average map for Southern Africa for the period 21 to 30 November 2012 shows slight improvement compared with the previous dekads (Figure2). The negative anomaly is due to low rainfall received in most parts of the region as a result of poor start of the rainy season. Vegetation condition anomaly over Malawi shows negative vegetation anomaly in the south as a result of delayed onset of the rainy season compared to climatological start of the rainy season and positive anomaly in the north as a result of early onset of the rainfall season.

1.3 AIR TEMPERATURE

Generally hot conditions prevailed over the country during the period 21 to 30 November 2012. Mean maximum temperatures ranged from around 24°C at Dedza to about 37°C at Ngabu while mean minimum temperatures ranged from around 17°C at Dedza to 24°C at Monkey Bay (Table 2). The mean maximum temperatures was lower than the previous dekad while the mean minimum temperature remained the same.

1.4 WIND SPEEDS

Mean wind speeds at a height of two metres above the ground level were generally lower than the previous dekad ranged from 1.0 to 3.9 metres per second. The lowest mean wind speed (1.0 m/s) was reported at Nkhata Bay while the highest mean wind speed (3.9 m/s) was recorded at Chitipa. Refer to Table 2.

1.5 RELATIVE HUMIDITY

During the period 21 to 30 November 2012, air over Malawi was slightly moist compared to the previous dekad. Mean daily average relative humidity values ranged from 47% at Ngabu in Shire Valley to 76% at Makoka in Zomba. This was as a result of few isolated rainfall that was experienced during the dekad. For details refer to Table 2.

2. AGROMETEOROLOGICAL ASSESSMENT

Land preparation continued in most areas. The rainfall that was received during the previous and in this ten day period had inspired farmers to speed up land preparations in readiness for the main planting rains which have delayed in some parts of the country. In some Extension Planning Areas (EPAs) where significant rainfall amounts have been received, farmers

were reported to have planted crops and the maize crop ranged from planting to vegetative stages.

2.1 SHIRE VALLEY ADD

enerally ADD remained hot and dry. Planting of rainfed crops has not yet started. Land preparation in readiness of the main rains was reported as the main agricultural activity during the period under review.

2.2 BLANTYRE ADD

Some parts of the ADD particularly in Mulanje, Thyolo, Phalombe Chiradzulu, Blantyre, Neno AND Mwanza districts, a few farmers had started planting rainfed crops following significant rainfall amounts that were received in the previous dekads as well as during the period under review. However, large portions of the ADD still remain dry and land preparation in readiness for the main rains and weeding were major agricultural activities during the period under review.

2.3 MACHINGA ADD

Significant rains have been received in very few areas in the ADD and farmers in such areas like Ntaja in Machinga, Songani, Sakata and Govala in Zomba were reported to have planted crops and maize crop was reported between germination and vegetative stage while farmers in some parts of Balaka and Mangochi just started planting crop during the period under review.

2.4 LILONGWE ADD

Some parts of the ADD particularly some EPAs in Dedza, Ntcheu and Lilongwe districts had recorded significant rainfall amounts which prompted some farmers to begin planting crops. Maize crop was reported between planting and vegetative stages at Ntcheu – Nkhande, Around Bunda and Kamuzu International Airport in Lilongwe.

2.5 SALIMA ADD

Up to the period under review Salima ADD had been largely dry except for a few areas in Nkhotakota district where reports indicated that some farmers had started planting. The major agricultural activity was land preparation in readiness of the main planting rains which in the ADD are normally experienced in December.

2.6 KASUNGU ADD

Some parts of the ADD particularly some EPAs in Mchinji and Dowa districts had received significant rainfall amounts which prompted some farmers in Mikundi and Chiotcha in Mchinji and around Mponela to begin planting crops. Maize crop in a few areas was reported between planting and vegetative stages.

2.7 MZUZU ADD

Most areas in the ADD were generally dry except for a few EPAs in Mzimba and Nkhata Bay districts that had received significant rainfall amounts which prompted a few farmers in areas like Mbawa, Euthini, Mzuzu and Zombwe to start planting crops. Maize crop in these areas was reported between germination and early vegetative stages. Land preparation in readiness for main planting rains was in progress in most EPAs in the ADD.

2.8 KARONGA ADD

Most areas in the ADD have been dry and planting of rain-fed crops has not yet started except for Karonga south around Vinthukutu Agric where planting of crops had just started. Land preparation in readiness of the main rains was reported as the main agricultural activity during the period under review.

3. PROSPECTS FOR 2012/13 RAINFALL SEASON

The summary of the 2012/2013 rainfall outlook is that ***"Normal total rainfall amounts are expected over most parts of Malawi during the 2012/2013 rainfall season***". The rainfall outlook indicates that the greater part of the country will experience normal to above normal total rainfall amounts during the period from October 2012 to March 2013.

This forecast covers the rainfall season from October 2012 to March 2013 and is relevant only to seasonal time-scales and relatively large areas. It does not fully account for local and month to month variations in distribution of rainfall such as localised dry spells and flash floods.

The seasonal forecast is issued to users as a planning tool. For day to day operations, users are advised to make use of the available short to medium range forecasts and the 10-day Rainfall and Agrometeorological bulletin issued by the Department.

4. OUTLOOK FOR 01 – 10 DECEMBER 2012

Models for short and medium range forecasts indicate that the main rain belt is likely to get established over Malawi within the period 1 to 10 December 2012. Therefore expect a significant improvement in rainfall performance starting from southern Malawi progressively moving northwards during the first ten days of December 2012.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 3 OF NOVEMBER 2012: PERIOD 21 – 30TH

STATION NAME	DEKADAL TOTAL RAINFALL mm	DEKADAL NORMAL mm	DEKADAL TOTAL AS PERCENTAGE OF NORMAL	TOTAL TO DATE mm	NORMAL TO DATE mm	NORMAL TODATE AS PERCENTAGE OF NORMAL	RAINY DAYS ≥ 0.3 mm
SOUTHERN REGION							
Balaka Township	17.0	34.3	**50**	35.5	100.7	**35**	2
Bvumbwe Met.	1.6	43.7	**4**	32.4	128.6	**25**	1
Chancellor College	30.7	48.0	**64**	90.3	123.5	**73**	4
Chichiri Met.	1.1	75.9	**1**	67.7	301.6	**22**	2
Chikwawa Boma	0.0	42.2	**0**	18.1	97.7	**19**	0
Chileka Airport	5.4	43.9	**12**	52.6	123.0	**43**	1
Chingale Agric	11.0	36.2	**30**	43.9	88.7	**49**	3
Chiradzulu Agric	0.0	42.1	**0**	29.7	122.9	**24**	0
Chizunga Factory	3.0	42.0	**7**	9.0	157.6	**6**	1
Kasinthula Res. Stn.	0.0	20.4	**0**	6.0	80.4	**7**	0
Lujeri Tea Estate	69.2	67.8	**102**	187.8	316.2	**59**	2
Luchenza Agric	0.0	39.3	**0**	0.0	124.8	**0**	0
Mpilipili (Makanjila)	25.1	20.6	**122**	42.4	64.1	**66**	2
Makhanga Met	9.5	28.5	**33**	39.4	92.7	**43**	2
Makoka Met	24.5	35.0	**70**	39.0	92.9	**42**	1
Mangochi Met.	18.5	16.9	**109**	49.6	45.4	**109**	2
Masambanjati Agric	17.1	45.4	**38**	116.2	150.4	**77**	1
Mimosa Met.	27.5	58.6	**47**	122.3	203.7	**60**	2
Monkey Bay Met.	1.1	8.1	**14**	13.3	22.0	**60**	2
Mpemba Vet	0.0	49.3	**0**	39.7	145.9	**27**	0
Mulanje Boma	135.4	81.8	**166**	183.2	293.9	**62**	2
Mwanza Boma	0.0	52.5	**0**	17.2	143.7	**12**	0
Namiasi Agric	33.6	16.7	**201**	37.6	39.6	**95**	2
Naminjiwa Agric	0.0	34.6	**0**	10.7	95.5	**11**	0
Namwera Agric	33.9	32.8	**103**	83.8	94.2	**89**	3
Nchalo Sucoma	2.2	28.0	**8**	7.3	78.1	**9**	1
Neno Agric	40.4	40.7	**99**	45.6	117.5	**39**	1
Ngabu Met.	0.2	32.8	**1**	0.4	88.3	**0**	0
Nsanje Boma	27.8	35.1	**79**	38.2	154.3	**25**	1
Ntaja Met.	20.2	29.6	**68**	83.4	73.8	**113**	1
Phalula Agric	6.5	40.7	**16**	33.1	114.1	**29**	1
Satemwa	9.8	43.5	**23**	54.0	134.4	**40**	2
Thuchila Agric	0.0	28.4	**0**	22.0	95.1	**23**	0
Thyolo Boma	9.7	30.2	**32**	37.8	122.3	**31**	2
Zomba RTC	28.3	46.5	**61**	57.3	110.5	**52**	0
CENTRAL REGION							
Bunda College	0.0	28.0	**0**	44.0	91.7	**48**	0
Chileka Namitete	27.2	39.6	**69**	42.7	99.9	**43**	1
Chitedze Met.	12.2	32.5	**38**	33.8	86.0	**39**	2
Dowa Agric	0.0	24.0	**0**	5.2	57.8	**9**	0
Dwangwa Sugar Corp.	0.5	39.8	**1**	57.1	92.2	**62**	1
Dzonzi Forest	7.3	34.3	**21**	46.8	93.9	**50**	2
Kalululuma DTC	0.0	12.3	**0**	0.0	40.3	**0**	0
K.I.A Met	61.3	19.1	**321**	85.6	65.7	**130**	3
Kasiya Agric	0.0	31.8	**0**	32.1	109.7	**29**	0
Kasungu Met	0.0	25.3	**0**	3.8	52.9	**7**	0
Lisasadzi	0.0	22.6	**0**	28.3	45.4	**62**	0
Malomo Agric	0.0	21.2	**0**	56.5	43.7	**129**	0
Madisi Agric	26.5	19.3	**137**	54.5	49.3	**111**	2
Mchinji Boma	2.9	40.0	**7**	35.4	113.4	**31**	1
Mkanda Met	1.7	30.0	**6**	12.3	85.9	**14**	1
Mlangeni Njolomole	4.9	29.9	**16**	10.0	89.8	**11**	2
Mponela Agric	4.0	28.9	**14**	28.7	63.4	**45**	1
Mtakataka Airwing	6.8	22.4	**30**	34.9	52.4	**67**	1
Nathenje Agric	14.5	29.0	**50**	68.0	73.6	**92**	1
Natural Res. College	12.5	28.1	**44**	13.7	84.5	**16**	2
Nkhotakota Met	10.6	25.5	**42**	95.7	55.9	**171**	3
Ntcheu - Nkhande	8.6	34.1	**25**	69.1	92.0	**75**	2
Ntchisi Boma	0.0	33.0	**0**	61.5	62.2	**99**	0
Salima Met	4.4	16.8	**26**	34.4	42.7	**81**	1
Dedza RTC	17.3	22.1	**78**	44.1	82.7	**53**	2
NORTHERN REGION							
Baka Res. Stn.	0.0	31.7	**0**	8.0	42.9	**19**	0
Bolero Met	0.0	20.6	**0**	22.6	44.0	**51**	0
Chikangawa forest	26.4	32.2	**82**	82.9	87.9	**94**	2
Chitipa Met	14.8	44.8	**33**	78.6	75.9	**104**	3
Chintheche Agric	6.6	40.0	**17**	112.2	131.7	**85**	1
Ekwendeni Agric.	6.0	12.1	**50**	6.0	102.9	**6**	1
Euthini Agric.	0.0	26.4	**0**	110.8	60.2	**184**	0
Karonga Met.	0.0	28.7	**0**	12.7	49.5	**26**	0
Kavuzi Rosefalls	0.0	47.3	**0**	0.0	227.4	**0**	0
Lupembe	0.0	22.2	**0**	5.7	39.4	**14**	0
Mbawa Res. Stn	20.7	25.4	**81**	51.9	70.2	**74**	2
Mzimba Met	15.0	24.2	**62**	69.6	63.3	**110**	2
Mzuzu Met.	14.8	30.5	**49**	87.9	107.4	**82**	2
NkhataBay Met.	247.1	31.7	**779**	269.3	95.6	**282**	3
Rumphi Boma	2.8	20.0	**14**	2.8	43.4	**6**	1
Vinthukutu Agric	169.5	25.8	**657**	196.4	65.7	**299**	2
Zombwe Agric	0.0	19.5	**0**	39.0	60.2	**65**	0

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR THE PERIOD 21 TO 30 NOVEMBER 2012

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (ºC)	ABS MIN (°C)	WIND SPEED (m/s)	RH (%)	EVAP (mm)
KARONGA ADD							
Chitipa	30.0	19.0	31.3	18.0	3.9	60	N/A
Karonga	33.1	20.7	34.6	24.3	2.2	57	N/A
MZUZU ADD							
Bolero	32.5	19.7	34.2	18.2	N/A	54	N/A
Mzuzu	27.7	16.5	31.4	13.9	1.8	66	N/A
Mzimba	30.1	18.6	32.6	16.9	1.4	57	N/A
Nkhata Bay	33.6	20.4	37.3	17.7	1.0	63	N/A
KASUNGU ADD							
Kasungu	32.7	18.9	35.1	15.7	2.8	49	N/A
LILONGWE ADD							
KIA	28.8	17.8	32.3	13.2	1.9	60	7.8
Chitedze	30.7	18.2	33.7	15.2	1.2	60	N/A
DEDZA	24.2	16.9	28.0	15.7	2.4	N/A	N/A
SALIMA ADD							
Salima	32.9	23.8	34.8	22.1	3.2	61	N/A
Nkhotakota	31.1	22.4	33.4	21.0	2.3	54	N/A
MACHINGA ADD							
Makoka	30.0	18.5	33.1	15.0	1.2	76	N/A
Ntaja	32.2	21.4	35.6	11.0	2.6	54	N/A
Mangochi	34.4	22.2	37.5	19.6	2.0	53	N/A
Monkey Bay	33.5	24.1	35.9	21.4	2.8	51	N/A
BLANTYRE ADD							
Chileka	32.5	21.2	35.9	18.3	3.6	54	N/A
Chichiri	28.7	18.2	33.4	14.0	2.1	54	N/A
Bvumbwe	28.1	16.0	33.6	12.4	2.9	61	N/A
Mimosa	32.3	18.6	37.4	14.3	1.4	62	6.6
SHIRE VALLEY ADD							
Ngabu	36.7	23.3	42.3	20.8	2.2	47	N/A

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 bserved for a given number of days (calendar month) of a specified period of months (years).
- convert Meters Per Second (mps) to Kilometers per hour (Km/hr) = mpsx3.6