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HIGHLIGHTS

- **Generally Malawi had received light and mostly below average rainfall …**
- **Maize crop reported doing well mostly at vegetative stage…**
- **Wet weather to persist during 21 to 31 January 2013…**

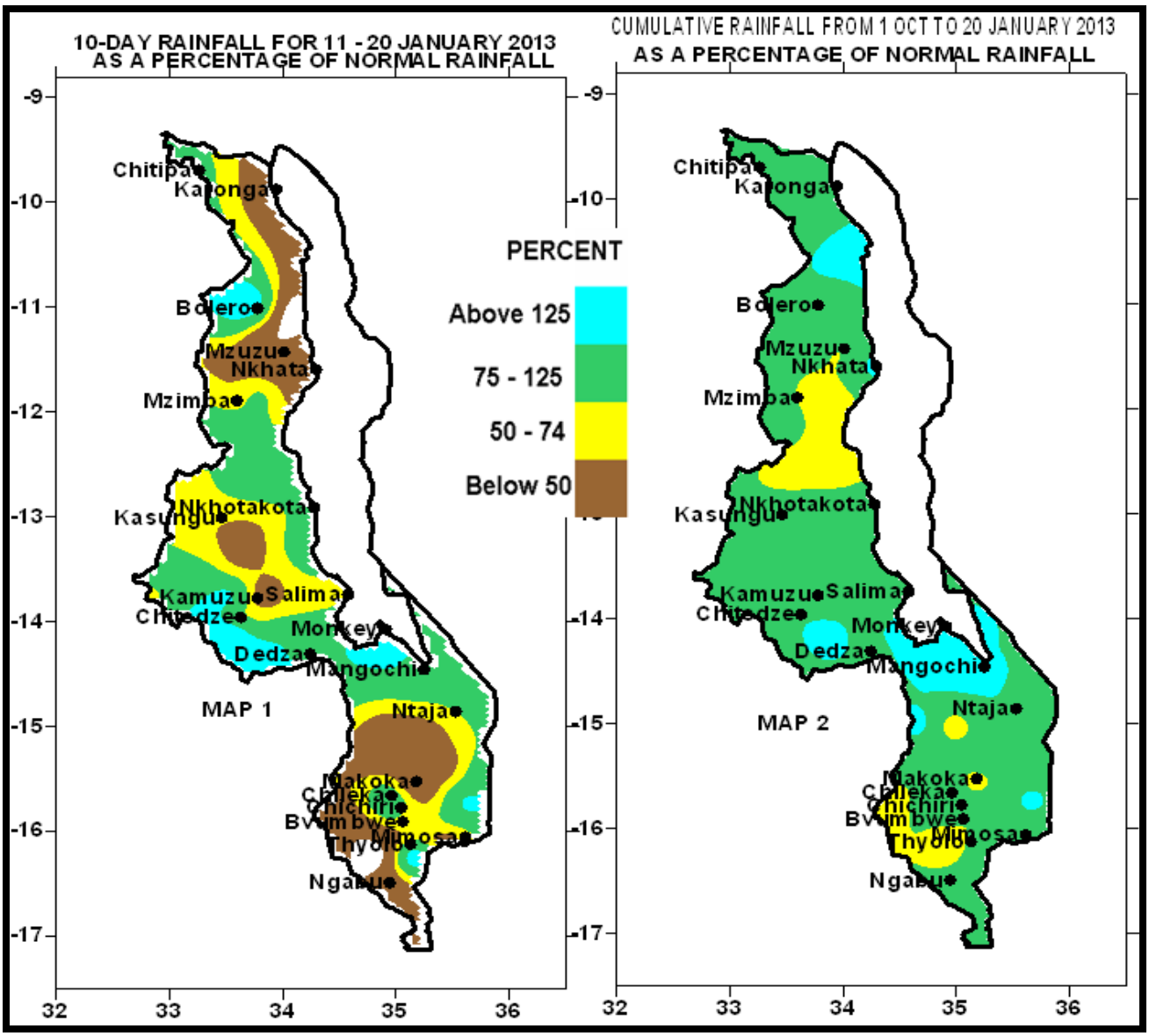

Figure 1: Rainfall Maps for Malawi for 11 – 20 January 2013

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1.0 WEATHER SUMMARY AND IMPACTS

1.1 RAINFALL SITUATION

Scattered to widespread rains persisted over Malawi during the period 11-20 January 2013. These rains were due to the combined effect of the two main rain-bearing systems namely Congo Air mass and Inter Tropical Convergence Zone. However, the rainfall intensity and amounts were lower than those experienced during the first ten days of January 2013. Very few areas had reported rainfall amounts of over 100mm and such areas included Chikweo Agric, Masambanjati, Monkey Bay and Naminjiwa Agric in the south, Mtakataka and Ntchisi Agric in the centre and Bolero Met in the north (see Table 1) and this represented above normal rainfall situation (represented by light blue colours on Map 1). Average number of rainy days was four compared to seven in the previous dekad. These lower rainfall amounts allowed flood waters in the affected districts such as Salima, Mangochi, Nsanje and Phalombe to recede.

Map 2 depicts the situation of cumulative rainfall performance for the country since 1 October 2012. From the map, most areas have achieved normal to above normal cumulative rainfall by 20 January 2013 (green and light blue colours on Map 2). A few pockets still had registered less than 75% of the expected cumulative rainfall amounts. For more details also refer to Table 1.

1.2 VEGETATION CONDITION

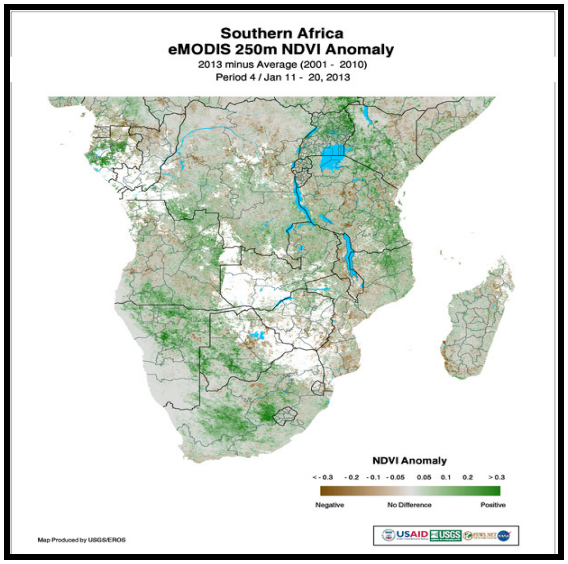

Figure 2: Vegetation Condition over Southern Africa

The vegetation diference from long term average map for Southern Africa for the period 11 to 20 January 2013 showed further improvement in most areas. (Figure2). Negative anomalies still exist in some parts of the region. This has been attributed to low rainfall received as a result of slow and delayed onset of the rainy season. Vegetation condition anomaly over Malawi showed no major differences over most areas. Even areas that showed negative deviations during the previous dekad showed improvement in the vegetation condition as a result of the gradual improvement in rainfall performance.

1.3 AIR TEMPERATURE

Generally warm to hot tempratures were experienced over the country during the second ten days of January 2013. Mean maximum temperatures ranged from around 23.4°C at Dedza to around 33.8°C at Ngabu. Compared to the previous dekad, maximum temperatures this time were still lower due to increased cloud cover and the rainfall that was being received. Mean minimum temperatures ranged from around 16.5°C at Dedza to 23.5°C at Mangochi Met (Table 2). These were slightly higher compared to the previous dekad. The highest absolute maximum temperature for the period was about 372°C, observed at Ngabu in Shire Valley on 20 January 2013.

1.4 WIND SPEEDS

Mean wind speeds at a height of two metres above the ground level ranged from 0.5 to 3.0 metres per second. The lowest mean wind speed was reported at Nkhata Bay while the highest mean wind speed was recorded at Chitipa. Refer to Table 2.

1.5 RELATIVE HUMIDITY

During the period under review, air over Malawi was generally moist. Mean daily relative humidity values ranged from 62% at Karonga to 87% at Makoka. See more details in Table 2.

2.0 AGROMETEOROLOGICAL ASSESSMENT

During the second ten days of January 2013, there was a significant reduction in rainfall intensity and amounts across the country. These rains were generally favourable for crop and pasture development, as well as regeneration of the natural vegetation. The rains were also good for replenishing ground water levels and allowed flood waters in the affected districts to recede. Crops were at varying stages of development ranging from early vegetative stage to tasseling and cob formation stages for the early planted crops. On farm activities ranged from weeding to applying basal and top dressing fertilizers. In most parts of the country, the

maize crop was reported to be doing well and if good rainfall performance continues up to February and March then good harvests are inevitable in most parts of Malawi. For Agriculture Development Division (ADD) agrometeorological assessment refer to the following paragraphs:

2.1 SHIRE VALLEY ADD

Generally light and below average rains were experienced in the ADD. These rains were favourable for crop and pasture development as well as regeneration of the natural vegetation. The main agricultural activities in the ADD included application of basal and top dressing fertilizer application and weeding.

2.2 BLANTYRE ADD

Good rains for agricultural production were experienced in the entire ADD. Most areas had registered light rains enough to sustain soil moisture. These rains continued to satisfy crop water requirements and supported crop growth and development. The Maize crop was reported doing well particularly where fertilizer has been applied. Reports from the districts indicated that the major agricultural activities during the period under review included weeding and top dressing fertilizer application. Maize crop was reported ranging from advanced vegetative stages to early reproductive stages such as arrowing, tasseling and cob formation stages.

2.3 MACHINGA ADD

Generally light rainfall was received in most parts of Machinga ADD during the period under review.. Farmers in most EPAs were reported applying top dressing fertilizer to their crops. The major agricultural activities in the ADD included weeding and application of basal and top dressing fertilizer. Maize crop was reported in good condition and ranging from advanced vegetative to tasselling and flowering stages.

2.4 LILONGWE ADD

Most parts of the ADD had recorded light to moderate rainfall during the period 11 to 20 January 2013. These rains had supported crop growth and development as well as basal and top dressing fertilizer application. The major agricultural activities in the ADD included weeding, banking, basal and top fertilizer dressing. Maize crop was reported between vegetative and tasselling and flowering stages.

2.5 SALIMA ADD

During the period under review light rains had covered most parts of Salima ADD. Reports indicated that planting of various crops and basal dressing of fertilizers was in progress in most areas of the ADD. The major agricultural activities included planting of crops and weeding as well as fertilizer application. Maize crop was reported to be mostly at vegetative stage.

2.6 KASUNGU ADD

Generally light rainfall was recorded in most parts of Kasungu ADD. These rains supported germination and establishment and development of crops. Maize crop ranged from vegetative to tasseling stages. Agricultural activities in the ADD included weeding, basal and top dressing.

2.7 MZUZU ADD

Most areas in Mzuzu ADD had received light rains, favourable for agricultural production during the second ten days of January 2013. Maize crop in the ADD ranged from vegetative to tasseling and flowering stages. Agricultural activities in Mzuzu ADD included weeding and fertilizer application.

2.8 KARONGA ADD

Light rainfall was received in most parts of Karonga ADD during the period under review. Weeding and basal fertilizer dressing were in progress in most EPAs in the ADD. The maize crop in Karonga ADD ranged from germination, establishment to vegetative stages.

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 updated rainfall outlook indicates that despite the poor start of 2012/2013 rainfall season the greater part of the country will still experience normal to above normal total rainfall amounts by end of 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 21 – 31 JANUARY 2013

During the last ten days of January 2013 models for short and medium term weather forecasts suggest that both main rain-bearing systems namely Congo Air mass and Inter Tropical Convergence Zone will be active over Malawi.. Therefore, widespread rains and locally heavy thunderstorms are expected to persist over Malawi. These rains will continue supporting on-farm agricultural activities and growth and development of crops in most parts of Malawi.

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR DEKAD 2 OF JANUARY 2013: PERIOD 11 – 20TH

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	20.0	70.2	28	215.5	403.7	53	3
Bvumbwe Met.	19.5	84.0	23	437.1	500.5	87	6
Chancellor College	9.3	89.4	10	581.7	601.5	97	3
Chichiri Met.	85.2	74.8	114	636.3	741.0	86	6
Chikweo Agric.	122.6	107.3	114	373.2	496.6	75	6
Chileka Airport	74.2	63.9	116	485.1	416.7	116	6
Chingale Agric	28.0	64.4	43	475.6	427.0	111	5
Chiradzulu Agric	21.9	60.3	36	397.3	445.8	89	2
Chizunga Factory	15.1	70.9	21	309.8	644.7	48	1
Kasinthula Res. Stn.	15.8	33.3	47	356.6	324.8	110	2
Mpilipili	50.0	65.9	76	373.6	412.6	91	4
Makhanga Met	24.6	47.7	52	435.9	368.3	118	3
Makoka Met	6.8	79.4	9	263.4	458.8	57	4
Mangochi Met.	83.4	64.6	129	490.4	275.3	178	6
Masambanjati Agric	145.6	82.2	177	537.8	596.1	90	3
Mimosa Met.	64.0	93.8	68	672.3	655.5	103	6
Monkey Bay Met.	111.3	54.0	206	578.5	253.4	228	6
Mpemba Vet	72.2	88.8	81	507.4	545.3	93	4
Mulanje Boma	17.4	109.7	16	342.8	812.1	42	3
Namiasi Agric	73.9	78.3	94	476.3	347.9	137	5
Naminjiwa Agric	120.2	84.8	142	610.9	458.1	133	5
Namwera Agric	82.2	86.6	95	502.5	471.8	107	5
Nchalo Sucoma	7.0	58.1	12	165.8	314.0	53	2
Neno Agric	38.6	95.7	40	530.2	510.9	104	4
Ngabu Met.	10.8	55.8	19	371.0	368.1	101	3
Ntaja Met.	48.8	75.2	65	476.8	404.6	118	4
Phalula Agric	5.8	61.9	9	336.1	407.0	83	2
Thuchila Agric	61.0	67.6	90	303.4	399.1	76	2
Thyolo Boma	36.9	56.6	65	411.9	515.1	80	4
Zomba RTC	24.2	90.7	27	537.6	559.7	96	7
CENTRAL REGION							
Bunda College	71.6	66.2	108	648.2	420.0	154	4
Chileka Namitete	94.1	61.3	154	443.9	445.9	100	6
Chitedze Met.	49.6	79.5	62	476.9	400.5	119	6
Dedza Met	64.3	69.3	93	470.6	405.5	116	8
Dowa Agric	35.6	82.0	43	361.6	394.0	92	4
Dwangwa	62.4	81.6	76	273.6	500.5	55	5
Dzonzi Forest	41.3	81.9	50	656.5	471.3	139	5
Kaluluma DTC	57.3	76.9	75	200.7	384.0	52	5
K.I.A Met	28.1	87.2	32	474.8	382.6	124	3
Kasiya Agric	78.6	53.9	146	417.0	473.4	88	5
Kasungu Met	32.4	62.3	52	337.8	344.2	98	4
Lisasadzi	28.5	67.7	42	302.0	388.8	78	3
Malomo Agric	57.2	125.7	46	353.0	379.7	93	4
Madisi Agric	29.9	81.5	37	325.1	371.8	87	6
Mchinji Boma	53.5	79.7	67	378.5	507.5	75	5
Mkanda Met	74.5	83.3	89	339.6	432.5	79	5
Mlangeni Njolomole	77.8	82.4	94	509.0	438.5	116	6
Mponela Agric	35.6	68.1	52	352.5	350.2	101	4
Mtakataka Airwing	160.4	59.2	271	425.5	343.6	124	6
Nathenje Agric	63.7	57.7	110	471.2	368.9	128	4
Natural Res. College	59.1	71.7	82	403.5	415.3	97	4
Nkhotakota Met	85.3	105.9	81	508.9	528.9	96	6
Ntcheu - Nkhande	80.6	97.6	83	607.8	503.1	121	8
Ntchisi Boma	111.3	98.2	113	395.0	532.7	74	5
Salima Met	70.7	117.2	60	463.8	481.5	96	5
Dedza RTC	98.4	87.2	113	473.1	434.1	109	6
NORTHERN REGION							
Baka Res. Stn.	3.2	60.6	5	126.0	382.9	33	1
Bolero Met	103.1	52.0	198	364.7	290.2	126	4
Chikangawa forest	69.8	83.5	84	285.5	452.3	63	7
Chitipa Met	59.4	65.9	90	466.7	398.2	117	3
Chintheche Agric	19.1	83.1	23	460.1	564.1	82	2
Emfeni Agric	74.0	61.1	121	250.1	374.3	67	3
Euthini Agric.	19.0	52.6	36	343.2	349.2	98	3
Karonga Met.	3.9	55.3	7	240.3	331.7	72	2
Mbawa Res. Stn	56.6	59.4	95	422.8	377.6	112	8
Mzimba Met	45.1	71.1	63	287.7	407.7	71	5
Mzuzu Met.	7.6	69.3	11	303.5	407.1	75	2
NkhataBay Met.	37.5	65.6	57	718.8	474.8	151	6
Rumphi Boma	0.0	57.9	0	240.7	303.5	79	0
Vinthukutu Agric	0.0	69.0	0	645.2	382.4	169	0
Zombwe Agric	0.0	54.0	0	289.6	319.2	91	0

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR THE PERIOD 11 TO 20 JANUARY 2013

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (ºC)	ABS MIN (°C)	WIND SPEED (m/s)	RH (%)	EVAP (mm)
KARONGA ADD							
Chitipa	28.2	19.0	29.5	17.9	3.0	75	N/A
Karonga	31.7	22.8	33.5	21.6	1.3	62	N/A
MZUZU ADD							
Bolero	29.7	19.2	32.0	17.8	N/A	75	N/A
Mzuzu	27.3	18.0	31.5	17.0	2.5	76	N/A
Mzimba	27.8	18.3	29.5	17.5	1.1	73	N/A
Nkhata Bay	31.8	21.7	34.7	20.9	0.5	81	N/A
Kasungu	28.9	18.5	32.4	14.1	2.0	73	N/A
LILONGWE ADD							
KIA	27.3	18.4	29.1	17.2	1.6	74	6.2
Chitedze	28.0	19.0	31.6	19.9	1.2	63	N/A
Dedza	23.4	16.5	25.3	16.5	2.4	83	N/A
SALIMA ADD							
Salima	30.2	22.6	32.5	20.0	1.3	82	N/A
Nkhotakota	29.6	22.2	31.7	19.9	1.7	76	N/A
MACHINGA ADD							
Makoka	27.7	19.1	30.3	15.5	2.1	87	N/A
Ntaja	29.3	22.0	31.6	19.9	1.2	63	N/A
Mangochi	30.9	23.5	33.5	22.0	0.7	76	N/A
Monkey Bay	29.9	23.0	32.0	20.6	1.3	78	N/A
BLANTYRE ADD							
Chileka	28.5	21.1	29.8	19.2	2.8	81	N/A
Chichiri	27.3	19.8	28.5	17.5	0.9	80	N/A
Bvumbwe	26.3	17.5	27.9	16.4	1.7	77	N/A
Mimosa	31.1	21.0	34.2	20.1	1.1	77	4.6
SHIRE VALLEY ADD							
Ngabu	33.8	N/A	37.2	N/A	0.7	70	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