REPUBLIC OF MALAWI

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HIGHLIGHTS

- **Most areas received good rains for agriculture production…**
- **Maize crop mainly at vegetative stage in most parts of Malawi…**
- **Widespread rains expected to continue during 1 – 10 January, 2014…**

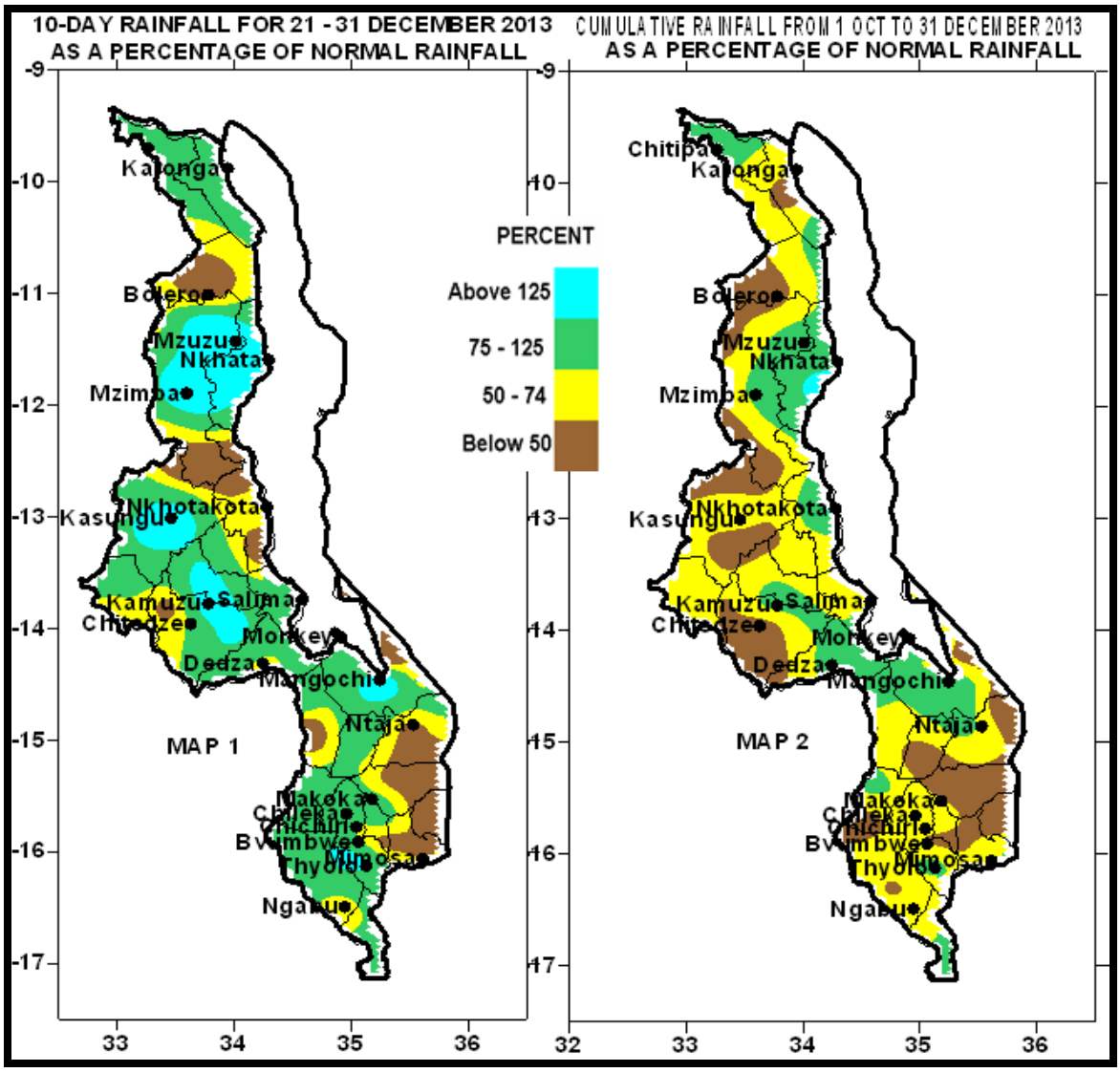

Figure 1: Rainfall Maps for Malawi for 21-31 December 2013

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1.0 WEATHER SUMMARY AND IMPACTS

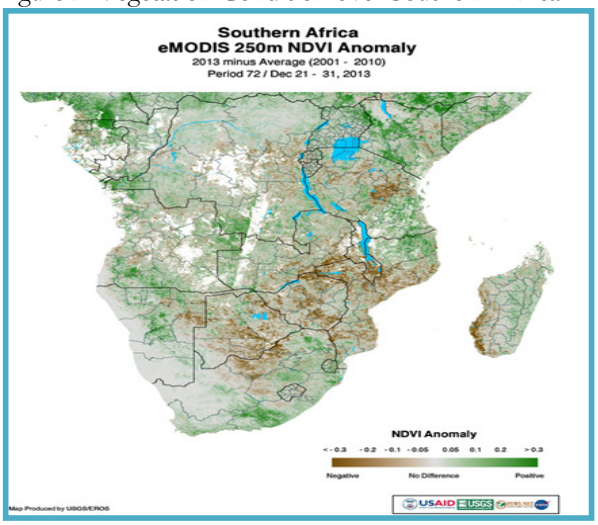
1.1 RAINFALL SITUATION

During the period 21 to 31 December 2013, Congo Air mass had covered most parts of Malawi. As a result scattered to widespread locally heavy rains were registered over the country. Most areas had experienced average to above long term average cumulative rainfall amounts (green and light blue Colours on Map 1). However, a few stations still had recorded light rainfall amounts and this resulted in below average cumulative rainfall conditions (yellow and brown colour on map 1). Stations that recorded significantly high cumulative rainfall amounts of at least 100mm in southern Malawi were confined to highlands including Masambanjati Agric (127mm), Mpemba Agric (106mm), Satemwa Tea Estate (123mm) while in central Malawi high rainfall was reported at Kamuzu International Airport (120mm) and in the north heavy rains were recorded at Chintheche Agric (113mm), Mzimba Met (139mm) and Nkhata Bay Met (105mm). More details are on Table 1 and Map 1.

Map 2 gives an idea of cumulative rainfall performance during the first half of 2013/14 farming season. From the map, it is clear that the rainfall performance has been erratic and poor in most parts of Malawi registering below average rainfall amounts (brown and yellow colours on Map 2). For other details refer to Table 1.

1.2 VEGETATION CONDITION

Figure 2: Vegetation Condition over Southern Africa



Most parts of Southern Africa have by end of December 2013 experienced an onset of seasonal rains. Areas which experienced an effective onset during December 2013 include parts of southern Malawi. Generally low and mostly below average rainfall has been received this season and due to poor rainfall performance in previous seasons, the vegetation condition was below normal in many parts of the region, according to satellite imagery (brown colours, Figure 2). Despite the poor seasonal progress observed in several areas mentioned above, it is worth noting that there is still sufficient time left in the season for good production if the remainder of the season performs well.

1.3 AIR TEMPERATURE

Generally warm temperatures were observed over Malawi during the last days of December 2013. Mean maximum temperatures over Malawi had ranged from 24.4°C at Dedza to 36.0°C at Ngabu in Chikwawa while mean minimum temperatures had ranged from 15.3°C at Bvumbwe in Thyolo to 25.9°C at Monkey Bay (Table 2). The highest (absolute) maximum temperature was still recorded at Ngabu (39.7°C) in Chikwawa while the lowest was 12.1°C recorded at Bvumbwe in Thyolo district. For more details see Table 2.

1.4 WIND SPEEDS

Mean wind speeds at a height of two metres above the ground level had ranged from 0.6 m/s at Nkhata Bay Met to 2.8 m/s at Chileka Met. For more details refer to Table 2. Higher wind speeds coupled with drier conditions lead to increased evaporation rates.

1.5 RELATIVE HUMIDITY

During the last ten days of December 2013, daily average relative humidity values had ranged from 46% at Chichiri to 84% at Chitedze while in the previous ten day period the values had ranged from 58% at Ngabu Met to 73% at Dedza Met. More details are on the Table 2. High relative humidity values are favourable for fungal diseases.

2. AGROMETEOROLOGICAL ASSESSMENT

Good rains for agricultural production fell over most parts of the Malawi during the last ten days of December 2013, thereby allowing growth and development of most crops. The rains have also improved water resources and soil moisture reserves and pasture availability for communal grazing. The major field activities were mainly planting, weeding and basal fertiliser application. This season there has been a delay in the onset of planting rains particularly over southern Malawi. As a result planting of crops was still going on in most parts of the country. Usually planting of crops in the south and some parts of the centre gets finalized by December while for north sometimes continue into January and mid-February.

The general crop stand in the fields particularly for maize was reported in good condition at various stages of development. Maize crop had ranged from planting and germination to vegetative stage. Due to erratic and poor rainfall performance during the first half of the season, there have been reports of incidences of army worms in some districts in the country while red locusts have been reported threatening crops around Lake Chilwa basin in Machinga ADD.

3. PROSPECTS FOR 2013/14 RAINFALL SEASON

The rainfall outlook for December 2013 to February 2014 suggests that ***Malawi is likely to experience normal to above normal total rainfall amounts. However, it should be noted that the forecast does not address the timing of the rains, but only rainfall totals, summed over the three-month period from December to February 2014.***

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4. OUTLOOK FOR 01 – 10 JANUARY 2014

Models for short and medium range rainfall forecasts indicate that moist and unstable Congo Air mass will continue to influence rainfall over Malawi. Hence widespread locally heavy rainfall is expected to be maintained over Malawi during the first ten days of January 2014

TABLE 1: DEKADAL RAINFALL FOR SELECTED STATIONS FOR 21 to 31 DECEMBER 2013

STATION NAME	ACTUAL DEKADAL TOTAL RAINFALL mm	DEKADAL NORMAL (EXPECTED) RAINFALL mm	ACTUAL TOTAL AS PERCENTAGE OF NORMAL (EXPECTED) RAINFALL	TOTAL ACTUAL RAINFALL TO DATE mm	NORMAL (EXPECTED) RAINFALL TO DATE mm	ACTUAL TODATE AS PERCENTAGE OF NORMAL	RAINY DAYS ≥ 0.3 mm
SOUTHERN REGION							
Balaka Township	51.0	52.4	97	109.9	249.4	44	2
Bvumbwe Met.	25.8	61.9	42	175.6	336.3	52	5
Chichiri Met.	50.6	104.4	48	304.8	578.0	53	5
Chikwawa Boma	63.8	54.7	117	179.4	259.9	69	4
Chikweo Agric.	67.8	74.6	91	87.6	303.2	29	5
Chileka Airport	47.2	57.7	82	165.8	284.7	58	3
Chingale Agric	36.0	68.6	52	127.7	292.2	44	2
Chiradzulu Agric	78.9	72.7	109	234.7	319.1	74	4
Mpilipili (Makanjila)	18.7	72.4	26	119.9	254.8	47	2
Makoka Met	81.2	77.9	104	171.7	303.0	57	3
Mangochi Met.	64.8	39.2	165	205.4	156.5	131	4
Masambanjati Agric	127.1	100.8	126	299.7	417.0	72	5
Mimosa Met.	40.2	76.5	53	293.2	464.0	63	8
Monkey Bay Met.	57.5	53.4	108	154.2	150.3	103	5
Mpemba Vet	106.8	77.0	139	152.6	369.0	41	6
Mulanje Boma	49.0	98.4	50	521.8	595.3	88	4
Namiasi Agric	24.7	69.5	36	92.4	210.6	44	3
Namwera Agric	42.4	72.7	58	137.4	295.6	46	5
Nchalo Sucoma	37.5	43.0	87	86.5	202.8	43	2
Neno Agric	71.7	71.9	100	348.6	319.2	109	3
Ngabu Met.	38.6	61.0	63	140.4	251.0	56	3
Nsanje Boma	61.5	65.0	95	308.6	355.2	87	3
Ntaja Met.	23.6	69.4	34	226.2	259.3	87	6
Satemwa Tea Est	122.6	68.0	180	286.3	341.8	84	3
Thuchila Agric	27.0	64.2	42	59.5	263.8	23	2
Thyolo Met	92.7	71.4	130	302.7	353.5	86	6
Zomba RTC	27.3	83.4	33	126.5	387.3	33	5
CENTRAL REGION							
Chitedze Met.	51.4	70.5	73	141.7	252.1	56	5
Dedza Met	45.5	68.6	66	218.0	253.7	86	6
Dowa Agric	81.9	71.2	115	184.3	241.4	76	6
Dwangwa	9.6	85.6	11	221.2	333.1	66	4
Dzonzi Forest	18.3	77.8	24	194.9	318.5	61	2
K.I.A Met	119.9	72.1	166	223.2	222.7	100	5
Kasiya Agric	38.2	73.5	52	169.3	332.2	51	1
Kasungu Met	97.4	54.0	180	152.1	211.8	72	5
Malomo Agric	46.4	53.2	87	97.1	188.0	52	5
Madisi Agric	66.0	61.2	108	133.7	221.3	60	5
Mlangeni Njolomole	77.7	64.3	121	241.4	285.3	85	4
Mponela Agric	84.8	53.0	160	165.8	214.1	77	4
Nathenje Agric	90.7	63.6	143	144.3	239.1	60	4
Nkhotakota Met	70.9	94.1	75	451.7	314.2	144	4
Ntcheu - Nkhande	21.2	87.6	24	127.9	319.2	40	3
Ntchisi Boma	20.4	109.8	19	138.3	341.2	41	4
Salima Met	92.1	84.0	110	187.1	269.5	69	4
Dedza RTC	39.5	72.5	54	197.6	271.5	73	5
NORTHERN REGION							
Bolero Met	14.5	58.4	25	65.7	175.6	37	5
Bwengu Agric.	34.6	62.9	55	112.1	209.9	53	4
Chikangawa forest	133.6	77.2	173	288.7	286.4	101	10
Chitipa Met	88.9	80.4	111	243.9	261.1	93	5
Chintheche Agric	113.3	86.8	131	573.5	373.3	154	4
Emfeni Agric	7.5	66.2	11	67.6	236.2	29	1
Euthini Agric.	53.7	68.1	79	105.0	223.7	47	4
Karonga Met.	71.1	63.0	113	122.8	213.4	58	6
Mbawa Res. Stn	46.2	71.0	65	102.8	241.9	42	6
Mzimba Met	139.0	69.6	200	224.4	243.9	92	4
Mzuzu Met.	93.0	63.1	147	261.3	271.2	96	6
NkhataBay Met.	105.2	76.0	138	355.5	319.3	111	6
Vinthukutu Agric	57.0	62.5	91	261.0	240.9	108	4
Zombwe Agric	135.0	56.8	238	165.8	196.6	84	3

TABLE 2: AGROMETEOROLOGICAL PARAMETERS FOR 21 TO 31 DECEMBER 2013

STATION	MAX TEMP (°C)	MIN TEMP (°C)	ABS MAX (°C)	ABS MIN (°C)	WIND SPEED (m/s)	RH (%)	EVAP (mm)
KARONGA ADD							
Chitipa	27.4	18.9	28.9	17.9	2.1	79	N/A
Karonga	30.4	21.2	32.4	20.1	1.4	74	N/A
MZUZU ADD							
Bolero	30.8	19.6	32.8	18.3	N/A	63	N/A
Mzuzu	26.0	17.3	28.2	16.6	1.3	82	N/A
Mzimba	28.4	18.3	30.1	17.0	0.9	67	N/A
Nkhata Bay	30.5	21.6	32.3	20.7	0.6	83	N/A
KASUNGU ADD							
Kasungu	29.5	N/A	32.3	N/A	0.8	69	N/A
LILONGWE ADD							
KIA	25.3	18.5	29.5	15.9	1.5	72	5.0
Chitedze	31.4	21.1	30.1	17.2	1.0	84	N/A
Dedza	24.4	16.5	26.2	14.8	1.8	77	N/A
SALIMA ADD							
Salima	30.6	23.3	33.5	21.0	1.9	73	N/A
Nkhotakota	29.1	22.4	30.6	20.5	1.8	79	N/A
MACHINGA ADD							
Makoka	28.4	19.3	31.6	17.5	1.7	78	N/A
Ntaja	30.0	21.8	33.6	20.4	2.0	67	N/A
Mangochi	31.8	23.2	34.0	22.0	1.7	67	N/A
Monkey Bay	33.1	25.9	32.3	22.1	2.3	79	N/A
BLANTYRE ADD							
Chileka	30.2	21.2	33.3	19.5	2.8	0.8	N/A
Chichiri	30.0	20.7	30.0	15.0	1.3	46	N/A
Bvumbwe	26.4	15.3	29.1	12.1	1.8	25.7	N/A
Mimosa	31.4	20.1	34.2	16.9	1.0	N/A	5.0
SHIRE VALLEY ADD							
Ngabu	36.0	24.9	39.7	22.3	2.5	60	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 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