



Republic Of Zambia
 Ministry of Transport and Communications
Zambia Meteorological Department

Period: 11 – 20 December

Issue No. 8. Season: 2017/2018

Crop Weather Bulletin

Highlights

- Moist and unstable winds from the north-west continues to affect most parts of Zambia;
- Heavy falls recorded over Luapula and Northern provinces including areas around Chipata in the Eastern Province;
- Below normal rainfall recorded over Southern province and parts of Lusaka and Western provinces;
- Sufficient soil moisture to support maize crop observed over most parts of the country.

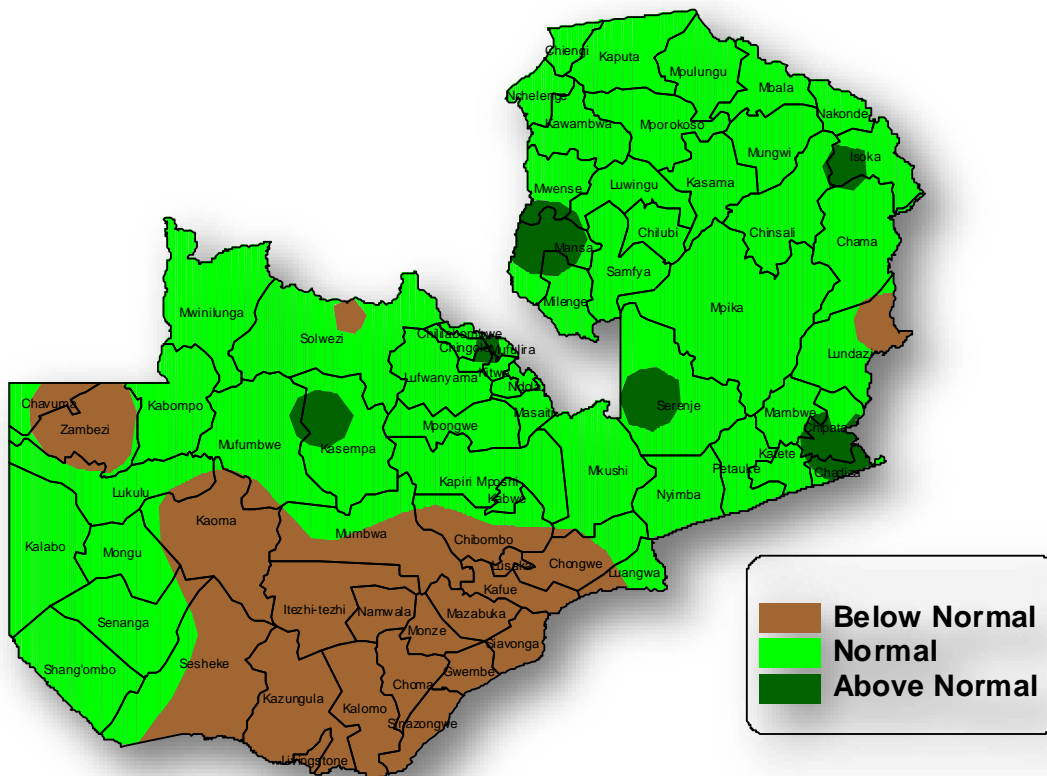


Figure 1: Rainfall Departure Map
 Period: 1st July to 20th December, 2017

RAINFALL PERFORMANCE

Generally, cumulative rainfall performance from 1st July to 20th December, 2017 indicates normal rainfall over most parts of Zambia except Southern province and parts of Lusaka and Western Provinces which recorded below normal rainfall (See Fig.1 & Table1).

Areas that received above normal rainfall include Msekera (112% above normal), Kasempa (81% above normal), Mansa (81% above normal), Serenje (77% above normal), Isoka (64% above normal), Kafironda (62% above normal), Kabwe (60% above normal), Mfuwe (37% above normal), Chipata (32% above normal), Mwinilunga (30% above normal) and Ndola (30% above normal).

Areas that recorded below normal rainfall include Lusaka (48% below normal), Livingstone (40% below normal), Magoye (34% below normal), Kaoma (30% below normal), and Kafue Polder (29% below normal) (See Fig.1 & Table1).

Figure 2 below indicates the cumulative rainfall amounts recorded across the country between 1st July and 20th December 2017.

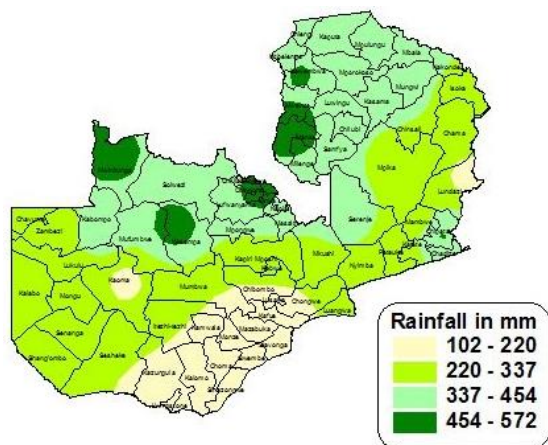


Figure 2: Rainfall Cumulative Map
Period: 1st July to 20th December, 2017

RAINFALL DISTRIBUTION

11th to 20th December 2017:

Largely, during the second dekad of December, 2017 (11th – 20th), most parts of the country, especially the northern half, were under the influence of moist and unstable airflow from the Northwest. This resulted in these areas recording

more than 5 rain-days. However, areas over Southern Province and parts of Lundazi recorded less-than 4 rain-days due to localized high pressure systems. Livingstone had 1 rain-day, Choma, Chipepo and Lundazi had 2 rain-days (See Fig.3 & Table1).

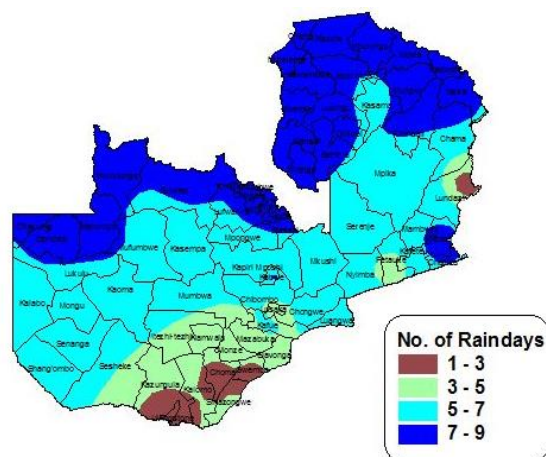


Figure 3: Number of Rain Days
Period 11th – 20th December, 2017

High rainfall amounts recorded from the meteorological stations during the dekad (11th to 20th December 2017) include; Mansa (235mm), Isoka (170mm), Chipata and Msekera (155mm). The least amounts recorded were; Ludanzi (7mm), Chipepo (9mm), Livingstone (14mm) and Lusaka international Airport (27mm) (See Fig.4 & Table1).

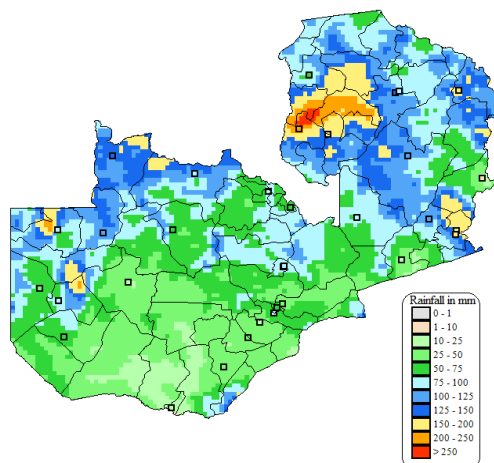


Figure 4: Total Rainfall
Period: 11th -20th December,2017
(satellite blended with station observations)

10 DAY WEATHER FORECAST

General situation: 21st – 31st December, 2017

From 21st - 28th December, 2017, Moist and unstable airflow from the northwest will affect most parts of Zambia resulting into increased rainfall activities across the country. From 29th December, 2017, moist but stable airflow from the Southeast is expected to affect the southern parts of Zambia thereby reducing rainfall activities over Eastern, Lusaka and Southern Provinces.

In view of the general situation; Forecast for the period 21st – 28th December, 2017, much of the Country is expected to be cloudy and mild with morning rains, becoming warm with afternoon showers and thunderstorms. Forecast from the 29th December, 2017; Lusaka, Southern including parts of Central and Eastern Provinces will be partly cloudy and warm becoming hot with a chance of afternoon showers and thunderstorms. The rest of Zambia will be cloudy with morning rains, afternoon showers and thunderstorms.

AGROMETEOROLOGICAL CONDITIONS

The Water Requirement Satisfaction Index (WRSI) shows that there is sufficient water to support the growth of Maize across the country except for areas around Monze, Choma and Sesheke where there is some indication of mediocre performance. The WRSI is an indicator which shows the crop water requirements in percentage at a given stage of growth. The WRSI for maize shows very good indications over most parts of Zambia. (See fig 5 & 6).

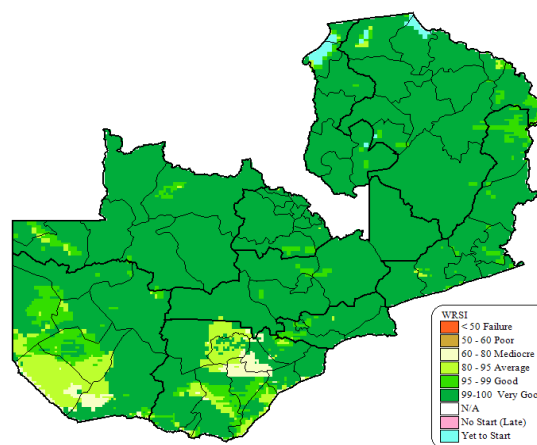


Figure 5: Water Requirements Satisfaction Index for Maize

Period: 11th – 20th December, 2017

The rainfall received in most parts of the country during this dekad resulted into sufficient soil moisture to support agriculture activities especially maize crop. However areas around Lusaka, Shangombo, Nalolo, parts of Sesheke, Kazungula, Southern province poor soil moisture that could result into stress for the maize crop (See fig 6).

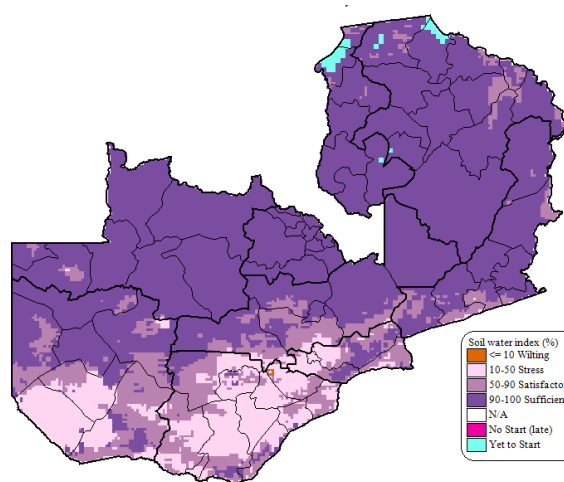


Figure 6: Soil Water Index Maize

Period: 11th – 20th December, 2017.

Table 1								
Dekad rainfall and Rain days Summary								
Period:	11-20 December, 2017			Issue No: 08		Season 2017/18		
Station	Observed		Normal	Total Since 1 July 2017				
	Rainfall	Raindays	Rainfall	Cummulative	Cumm	Normal	Rainfall	Percentage
				Rainfall	Raindays		Departure	Departure
	mm	(>=1mm)	mm	mm		mm	mm	%
Chipata	155	7	105	359	23	271	88	32
Isoka	170	8	62	334	22	203	131	64
Kabwe Agro	83	5	67	261	18	243	18	8
Kaoma	23	5	49	173	23	246	-74	-30
Kasama	128	6	95	387	34	323	64	20
Kawambwa	69	8	81	462	48	394	68	17
Lundazi	7	2	52	142	13	168	-27	-16
Lusaka City	57	5	55	105	18	203	-98	-48
Mansa Met	235	9	98	552	31	305	247	81
Msekera	155	8	78	492	23	232	260	112
Misamfu	99	9	82	342	31	309	33	11
Ndola	68	8	99	414	35	319	95	30
Kafironda	78	8	109	569	34	350	219	62
Serenje	77	7	73	414	31	234	180	77
Kasempa	70	6	71	572	36	316	256	81
Kabompo	114	8	63	448	43	272	14	13
Zambezi	94	9	56	252	32	293	-40	-14
Kabwe	144	8	67	388	24	243	145	60
Solwezi	100	8	96	375	36	382	-7	-2
Mfuwe	118	7	62	276	26	202	74	37
Kalabo	48	6	43	225	26	184	41	22
Mt Makulu	79	6	62	202	22	232	-30	-13
Petauke	18	4	66	247	20	222	25	11
Mongu	96	5	52	257	16	241	16	7
Kafue Polder	17	4	37	124	12	175	-51	-29
Mpika	119	7	86	279	18	253	26	10
Lusaka Intl	27	4	58	101	15	214	-113	-53
Livingstone	14	1	34	106	11	176	-70	-40
Choma	37	2	48	169	17	217	-48	-22
Magoye	38	4	47	132	17	198	-67	-34
Mwinilunga	139	8	89	562	47	433	129	30
Senanga	52	6	39	235	24	202	33	16
Chipepo	9	2	62	145	21	166	-21	-13