



Republic Of Zambia
 Ministry of Transport and Communications
Zambia Meteorological Department

Period: 01 – 10 December

Issue No. 7, Season: 2017/2018

Crop Weather Bulletin

Highlights

- Many parts of the country have recorded normal to above normal rainfall;
- Water Requirement observations indicate sufficient soil moisture for maize over much of Zambia;
- Next dekad (11th - 20th December, 2017), Northern half of the country expected to receive above average for the period rainfall amounts.

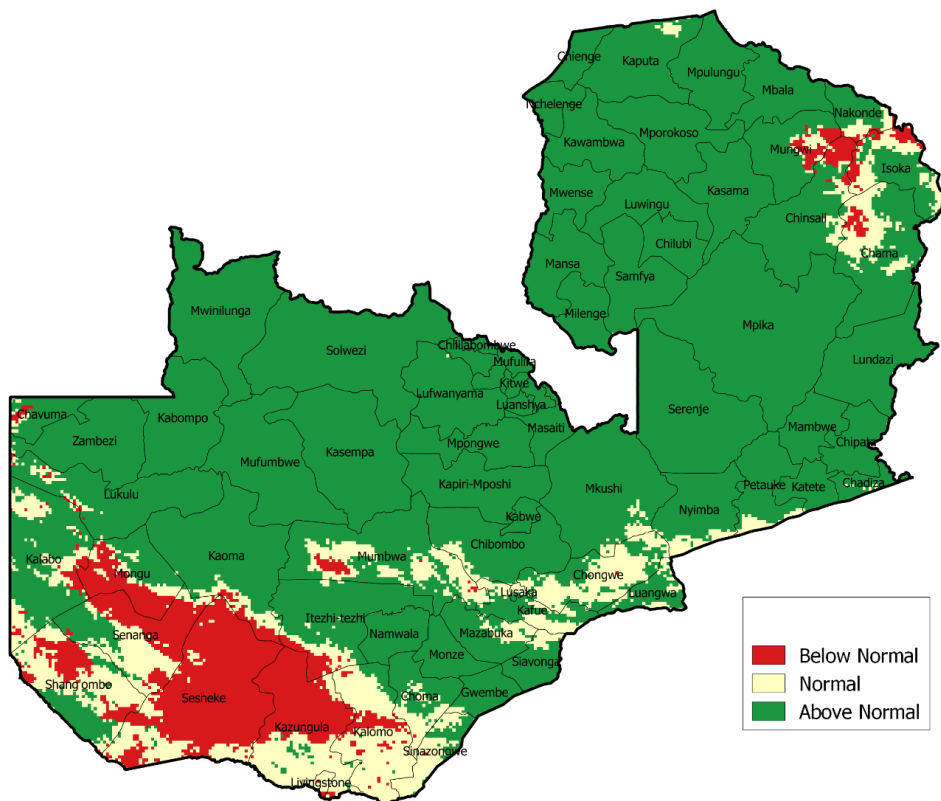


Figure 1: Rainfall Departure Map
 Period: 1st July to 10th December, 2017

RAINFALL PERFORMANCE

Rainfall performance from 1st July to 10th December, 2017 indicates above normal rainfall over most parts of Zambia except areas around Chama, Isoka, Nakonde Mongu, Senanga, Sesheke and Kazungula which recorded normal to below normal rainfall (See Table 1 & Fig. 1).

The cumulative rainfall since the start of the season (1st July, 2017) indicates amounts exceeding 300mm over much of the northern parts of Zambia with Kasempa recording the highest amount of 502mm followed by Kafironda with 491mm. Kawambwa and Ndola recorded 393mm and 346mm respectively, while Msekera and Serenje recorded 337mm each.

On the other hand Kafue Polder and Lusaka city reported the lowest cumulative rainfall amounts of 37mm and 48mm respectively (See Table 1 & Fig. 2).

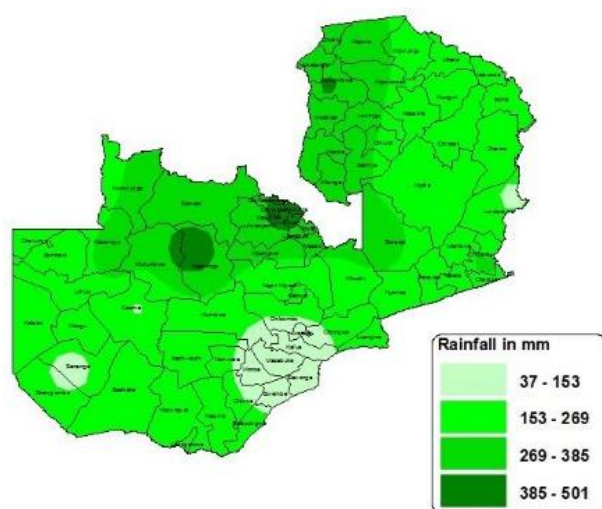


Figure 2: Rainfall Cumulative Map
Period: 1st - 10th December, 2017

RAINFALL DISTRIBUTION

Generally during the first dekad of December, 2017 (1st – 10th), the Northern and Western parts of the country were under the influence of relatively moist and unstable airflow from the Northwest, while the rest of the country was affected by moist but stable winds from the South East. This resulted in most areas over the Northern and Western parts of the country receiving above 5 rain-days with the southern parts receiving less than 4 rain-days. Isoka, Lusaka City, Kabwe, Msekera Mt Makulu and Mpika had 2 rain days while Kafue Polder had recorded 1 rain-day. Although Isoka (38mm) and Mpika (60mm) recorded 2 rain-days, the amount of rainfall received exceeded the average for the areas for the period (See Table 1 & Fig. 3).

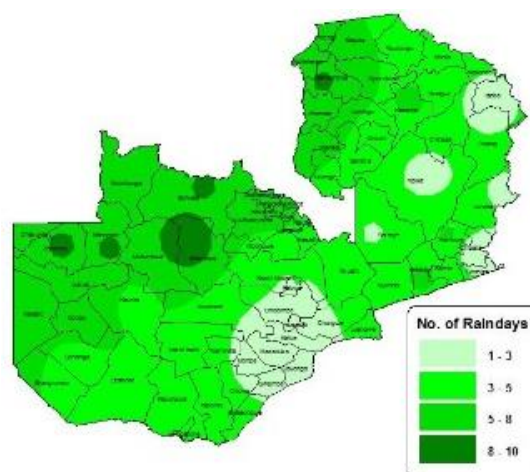


Figure 3: Number of Rain Days
Period: 1st – 10th December, 2017

The rainfall amounts recorded at the meteorological stations during the dekad was 195mm from Kasempa followed by 142mm from Kafironda in the Copperbelt Province. Solwezi, Mongu and Kabompo also recorded rainfall amounts above 100mm. Districts that received low dekad rainfall include Lusaka with 7mm and Kafue Polder with 1mm (See table 1 & Fig. 4).

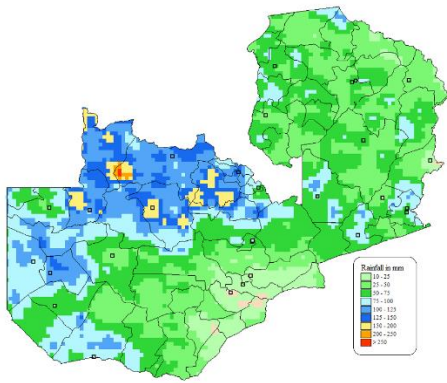


Figure 4: Total Rainfall
 Period: 1st -10th December,2017
 (satellite blended with station observations)

AGROMETEOROLOGICAL CONDITIONS

The Water Requirement Satisfaction Index (WRSI) indicates that there is adequate soil moisture to support the germination and growth of Maize across the country. 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).

10 DAY WEATHER FORECAST

11th – 20th December, 2017

General situation:

From 10th - 15th December, 2017, Moist and unstable airflow from the northwest affecting most parts of Zambia resulting in rainfall activities across the country. From 16th - 17th Moist and stable airflow from the Southeast is expected to affect the southern parts of Zambia thereby reducing rainfall activities over Eastern, Lusaka, Southern and Western Provinces.

From 18th to the end of the forecast period, Moist and unstable airflow from the northwest is projected to progress southwards thereby increasing rainfall activities over much of Zambia.

In view of the general situation; Forecast for the period 10th – 15th December, 2017, much of the Country is expected to be cloudy and mild with morning rain, becoming warm with afternoon rain and thunder. Forecast for the period 16th -17th December Eastern, Lusaka, Southern and Western Provinces will be partly cloudy and warm becoming hot with a chance of afternoon showers and thunderstorm in few places. As for the rest of Zambia, Partly cloudy to cloudy with morning rain in just places, afternoon showers and thunderstorm in places.

From 18th -20th the whole country is expected to have rainfall activities and it will be mild to warm. Night rain and thunder in places.

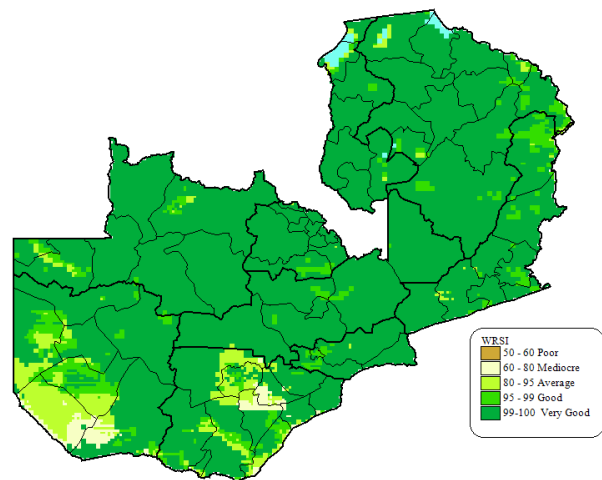


Figure 5: Water Requirements Satisfaction Index for Maize
 Period: 1st – 10th December, 2017

The rainfall received in most parts of the country during this dekad resulted into sufficient soil moisture and this should be a good benefit to most crops. However some parts in Lusaka, Western and Southern provinces indicate poor soil moisture to support growth of Maize which can result in crop stress (See fig 6).

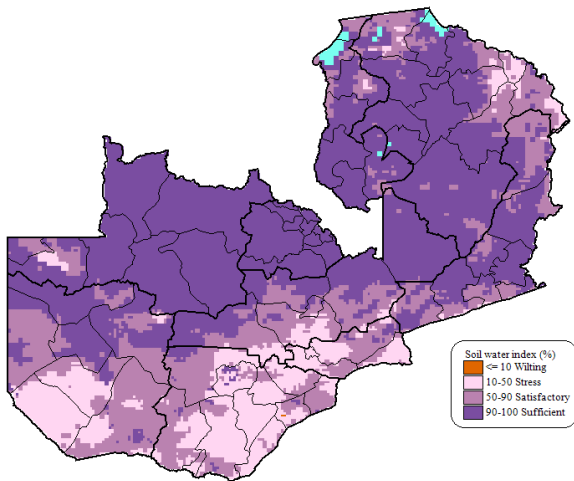


Figure 6: Soil Water Index Maize
 Period: 1st – 10th December, 2017.

Much of Northwestern and Copperbelt provinces including Serenje, parts of Mambwe and Mpika, Mansa and Luwingu districts may experience leaching and flooding due to the surplus rainfall (See fig 7).

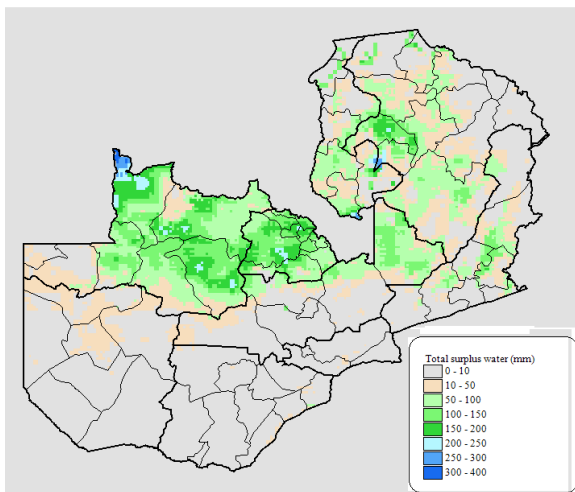


Figure 7: Total Surplus Water
 Period: 1st – 10th December, 2017.

Table 1								
Dekad rainfall and Rain days Summary								
Period:	01 - 10 December, 2017			Issue No:	02	Season	2017/18	
Station	Observed		Normal	Total Since 1 July 2017				
	Rainfall	Raindays	Rainfall	Cummulative	Cumm	Normal	Rainfall	Percentage
	mm	(>=1mm)	mm	Rainfall	Raindays	mm	Departure	Departure
				mm			mm	%
Chipata	65	3	69	204	16	166	38	23
Isoka	38	2	54	164	14	141	23	16
Kabwe Agro	48	4	62	178	13	176	2	1
Kaoma	27	5	55	150	18	197	-47	-24
Kasama	64	6	72	259	28	228	31	14
Kawambwa	59	8	61	393	40	313	80	26
Lundazi	13	3	42	135	11	117	18	16
Lusaka City	7	2	62	48	13	148	-100	-68
Mansa Met	31	6	54	317	22	207	110	53
Msekera	70	2	62	337	15	154	183	119
Misamfu	70	5	73	243	22	227	16	7
Ndola	72	5	82	346	27	220	126	57
Kafironda	142	7	78	491	26	241	250	104
Serenje	75	3	62	337	24	161	176	109
Kasempa	195	10	60	502	30	245	257	105
Kabompo	109	8	50	334	35	210	14	13
Zambezi	49	8	54	158	23	236	-78	-33
Kabwe	78	2	62	244	16	176	68	39
Solwezi	123	8	84	275	28	287	-12	-4
Mfuwe	25	6	44	158	19	140	18	13
Kalabo	96	7	46	177	20	141	36	25
Mt Makulu	15	2	51	123	16	170	-47	-27
Petauke	95	6	54	229	16	156	73	47
Senanga	46	5	47	134	18	163	-29	-18
Sesheke	92	5	37	170	14	143	27	19
Mongu	122	6	69	161	11	189	-28	-15
Kafue Polder	1	1	43	37	8	138	-101	-73
Mpika	60	2	56	160	11	167	-7	-4