

# **Monthly Bulletin**

## **Ministry of Agriculture**

### **Hydrometeorological Service**

**June 2018**



*"To observe, archive and understand Guyana's weather and climate and provide meteorological, hydrological and oceanographic services in support of the Guyana needs and national and international obligations."*

# HYDROMETEOROLOGICAL BULLETIN

Hydrometeorological Service, 18 Brickdam, Stabroek, Georgetown  
[www.http://hydromet.gov.gy](http://hydromet.gov.gy) | Tel #: 592-225-9303 | Fax #: 592-226-1460

## Highlights

- ❖ Guyana classified as *Wet* for May 2018
- ❖ Overall, May 2018 observed rainfall consistent with Historical Average – *The number of stations recording rainfall amounts greater than their historical average almost equal to those recording less than their historical average.*
- ❖ Warmer than average conditions dominated across much of the Earth's surface: Fourth highest May temperature recorded in 139 years.
- ❖ *Wetter to pretty much like usual for the period* June – August Chance for extremely wet condition a bit higher than usual.
- ❖ ENSO-neutral is favored through Northern Hemisphere summer 2018

## INSIDE THIS ISSUE

Review of the Synoptic Systems that influenced the Weather Conditions for May 2018 -----	2
Review of Seasonal Outlook provided by the Hydromet Service in April 2018-----	5
May 2018 Rainfall Analysis -----	6
Climatological Summary for May 2018 -----	8
Global Analysis -----	11
Climatological Outlook for the next few weeks -----	12
IRI/ENSO Forecast -----	13
Annex -----	15

**Below:** Rehabilitation works being executed at Weather monitoring station located in Region 7 at the Mazaruni Prison



## Review of Synoptic Systems that influenced the Weather Conditions for May 2018

Climatologically, Guyana commences its transition into its Primary Wet season during the month of May. Usually during this period of the year the weather condition is influenced by a wide range of meteorological system, including, but not limited to, the Inter-Tropical Convergence Zone (ITCZ),

low and mid-level troughs along with Tropical Waves /Easterly Waves (TW/EW) (Synoptic Systems). Analysis of the observed rainfall for May 2018 indicates varying rainfall amounts throughout different Regions across Guyana.

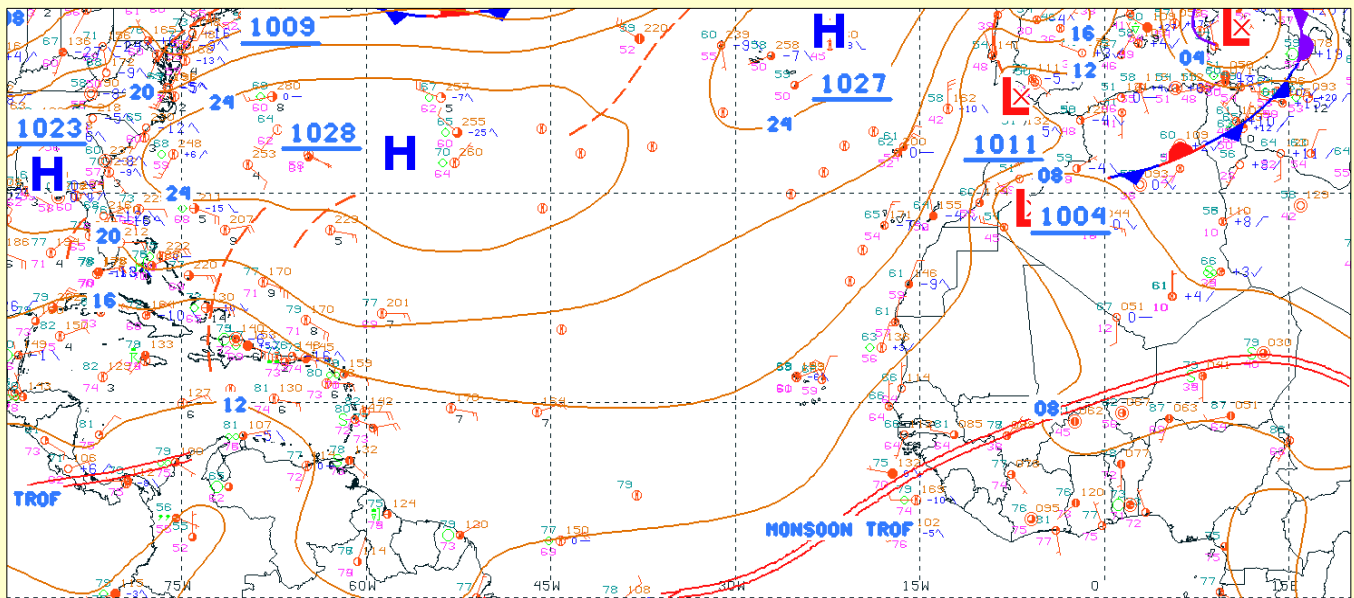


Figure 1 Surface chart (valid 06:00 UTC May 04, 2018) showing Surface Ridges which contributed to the slow movement of the ITCZ.

The continued influence of ENSO Neutral conditions together with confluence in the trade winds, along with mild interaction of the Inter Tropical Convergence Zone (ITCZ) and eventually Tropical waves in the latter part of the month all contributed to the variation of rainfall received during the review period.

A more detailed outline is provided below for the different intervals during the review period along with a brief overview of the dominant synoptic

feature responsible for the prevailing weather condition

### Week 1 (May 01 -07, 2018)

Confluent in the trade winds were the dominant synoptic feature. This generated mild instability in the lower levels of the troposphere. The Inter tropical convergence Zone (ITCZ) was located to the South of Guyana (see Figure 1). The wettest Regions were Regions 6 and 10 and the driest was Region 3.



## Week 2 (May 08 – 14, 2018)

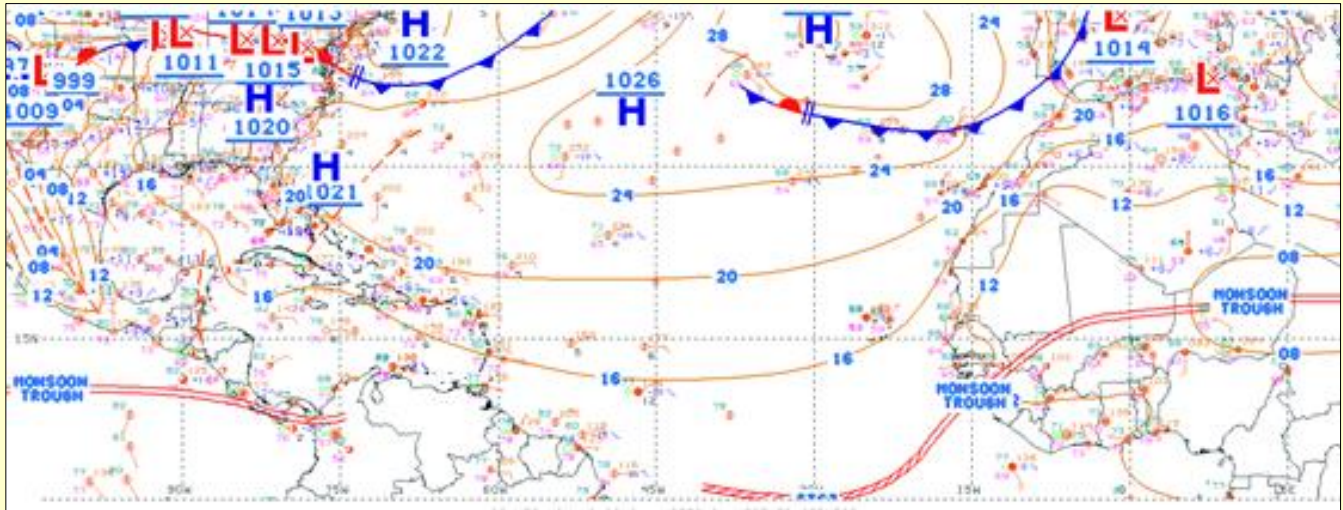


Figure 2 Surface Chart (valid May 12, 2018)

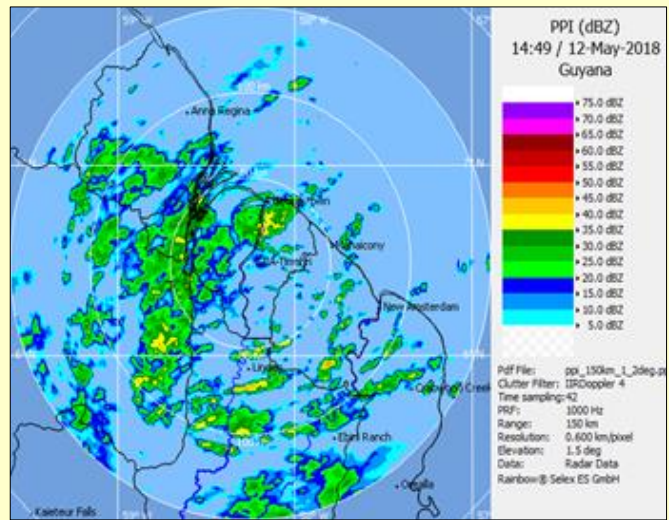
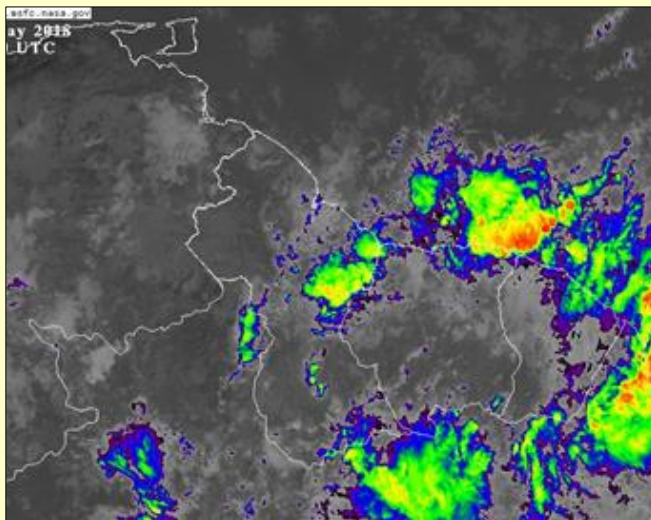


Figure 3 Satellite image (valid March 13, 2018) showing shallow clouds and a very dry atmosphere throughout Guyana.

The rainfall amounts experienced during this period was primarily due to confluent at the lower levels along with troughs at the mid-levels. The dominance of low to mid-level troughs was responsible for instabilities in the atmosphere. The

interactions resulted in wet conditions over a few days (May 09 – 12), while other days were moderately dry. These conditions are reflected in the Synoptic charts, Satellite and Doppler Radar imagery shown in Figure 2 and Figure 3 above.

## Week 3 (May 15 – 21, 2018)

Deep low level moisture embedded within the trade winds, coupled with low to mid level trough

and supported by ridging at the top of the troposphere.

## Week 4 (May 22 – 31, 2018)

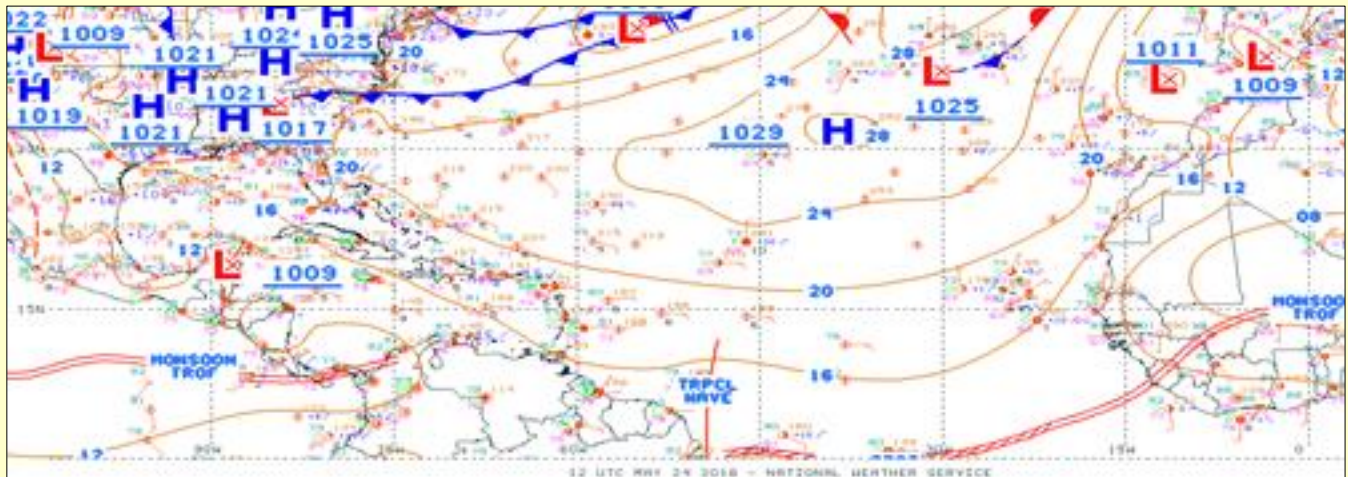


Figure 4 Surface Chart showing position of the ITCZ to the south of Guyana(valid May 24, 2018).

Low to Mid-Level trough was the dominant feature, however the Inter Tropical Convergence Zone migrated closer over Guyana and interacting with the season first two Tropical Waves/ (Easterly

Waves). This interaction was responsible for generating most of the precipitation over Southern Guyana..

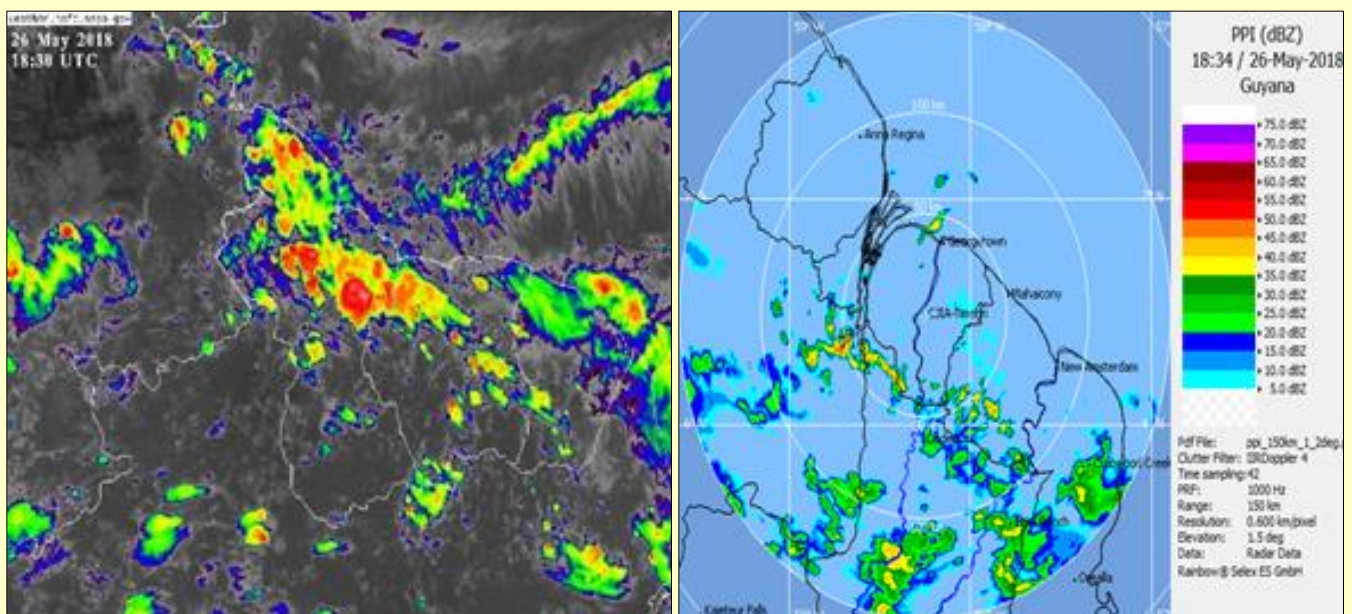


Figure 5 Satellite and Radar Image showing deep convection and strong reflectivity (valid May 26, 2018).



## Review of Seasonal Outlook provided in April 2018.

Below is a brief review of the Seasonal Outlook for Guyana which was provided by the Hydrometeorological Service earlier in April 2018.

**Precipitation:** Model output for April – June had suggested rainfall would be near-normal for most areas across the country as shown in probabilistic rainfall map in Figure 6(b) below. Region 2, the Upper Mazaruni District and the Central Rupununi were likely to see rainfall above-normal, however the confidence in the forecast was low.

Northern Guyana usually experiences 41 to 55 wet days (rainfall  $\geq 1.0\text{mm}$ ) during this period, the

forecast had suggested 49 to 56 wet days, with at least 2 extreme wet spell.

**Temperature:** Across Guyana, slightly higher chances for cooler than usual daytime temperature and higher changes for warmer night time temperatures was expected during this season

**Drought:** Drought Watch was in effect for some areas in Regions 2 and 4, Northern Region 6 and Central Region 10 until June

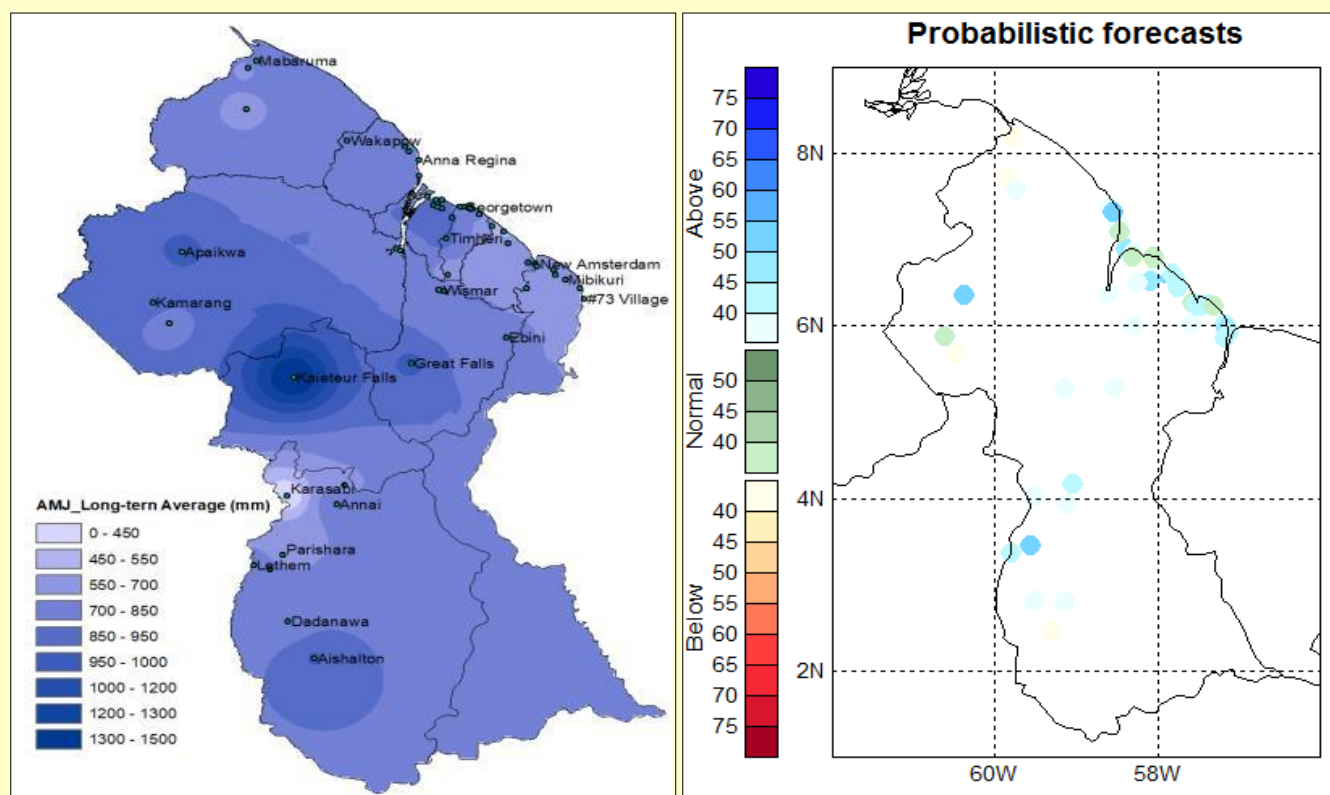


Figure 6 Maps of Guyana showing (a) Climatological Normal and (b) probabilistic seasonal forecast<sup>1</sup> (chances of occurrence) across Guyana for period April – June 2018.

<sup>1</sup>The forecast and projection above was prepared taking into account the usual Climatological trends along with current dynamical models and Climate Prediction Tools (CPT)

# May 2018 Rainfall Analysis

Guyana was classified as *Wet (W)* for the month of May 2018, with a nationwide average rainfall of 247.3 mm distributed over 19 rain days A detailed

comparison of the May 2018 rainfall with the historical average for selected stations can be seen in Figure 7 below.

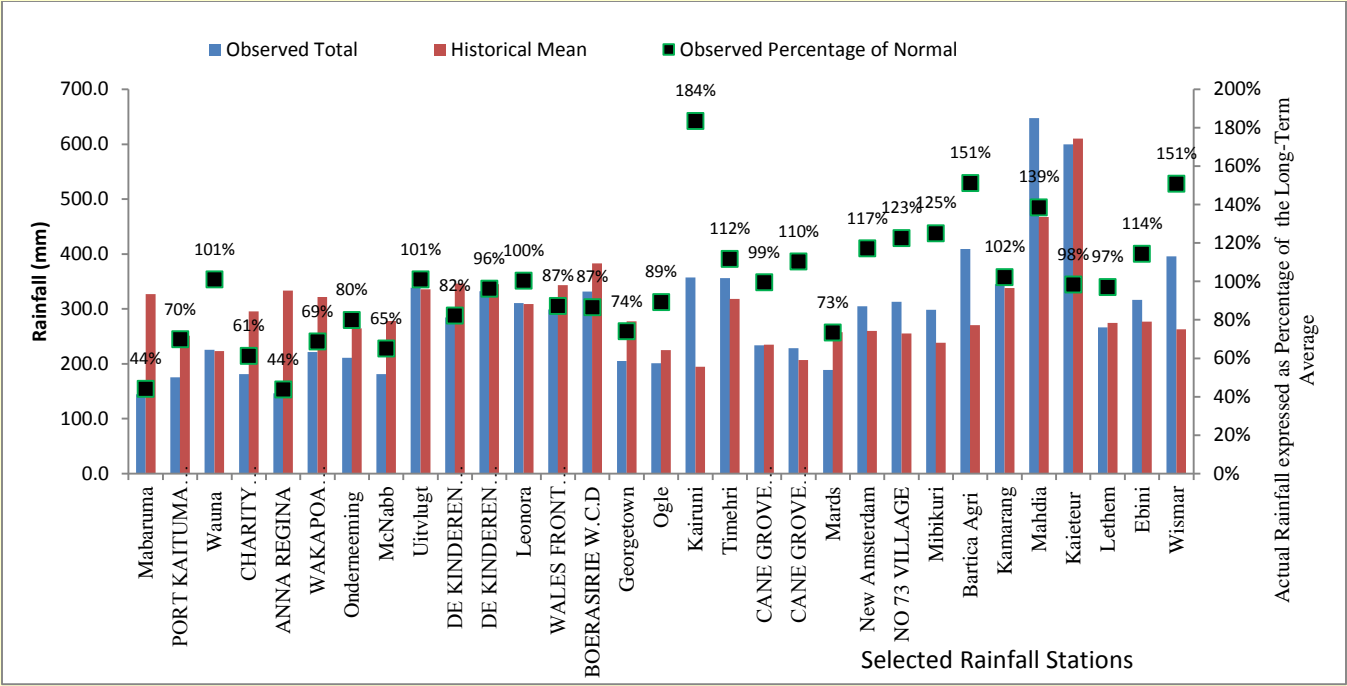


Figure 7 Comparison of the accumulated observed Rainfall for May 2018 expressed as a percentage of the Historical mean

According to the records collected and processed by the Hydromet Service, the number of rainfall stations recording above normal rainfall was almost equal to those recording below normal rainfall For stations with long term data available, Region 4 at Kairuni recorded the largest deviation from its historical average – with rainfall amounts exceeding the historical average by more than 75%, that is, an observed accumulated rainfall total of 357.3 mm for the month, notwithstanding, this location did not record the maximum rainfall countrywide. In addition, Regions 7 and 8 at Bartica and Mahadia also recorded rainfall amounts significantly greater than their long – term averages (see Figure 7 above). One the other hand, Regions 1 and 2 at Mabaruma and Anna Regina also recorded significant deviation, however, these locations experienced a deficit of 56% in the rainfall amounts at an accumulated total of 144.4 mm and 145.9 mm respectively.

Details of the temporal distribution of daily rainfall for several locations are shown in Figure 8 to the left.

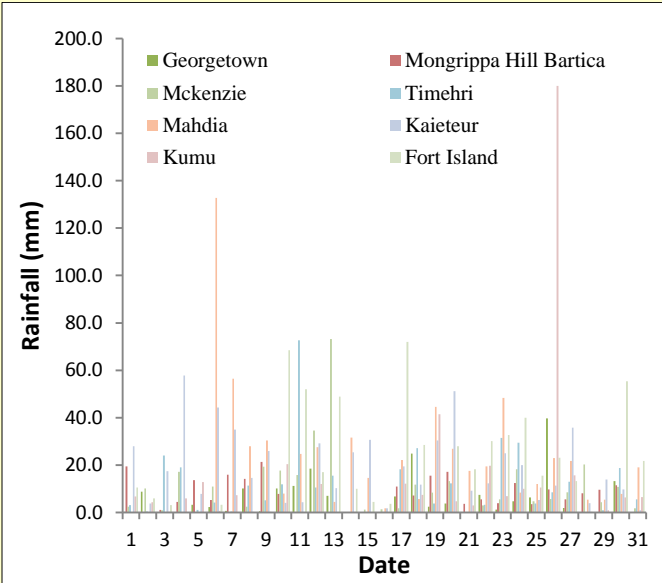


Figure 8 Temporal distribution of daily rainfall for May 2018 for selected stations throughout Guyana

Further analysis of the rainfall amount in Figure 7 above was done and the results presented in Figure 9 below as a histogram. The horizontal axis shows January 2018 accumulated rainfall expressed as a Percentage difference of the long-term average, with -ve values indicating rainfall amounts below the historical averages, while +ve values represent rainfall amounts greater than the historical average. Most notable observation made is that almost all

equal amounts of station recorded above and below normal rainfall amounts. The histogram shows that nearly *a third* of the stations experienced a deficit in the May 2018 rainfall of more than 15%, while only about *a fifth* of the location exceeded their long term averages by 15% or more. Needless to say, the remaining 45% of the location falls within a 15 % deficit and a 15 % excess in the rainfall amounts as compared to the *Normal* rainfall

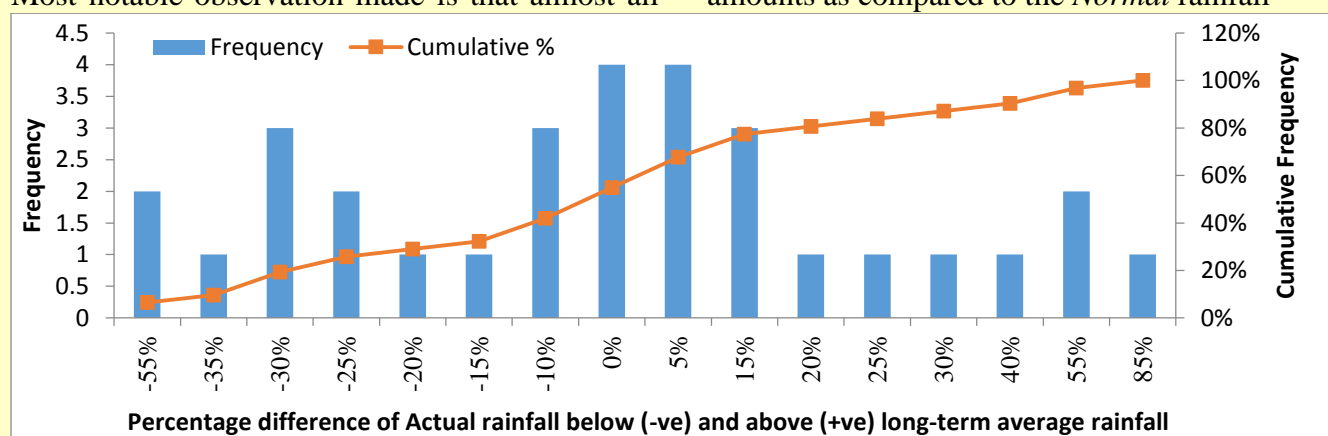


Figure 9 Histogram of May 2018 rainfall as percentage difference of Long term average rainfall

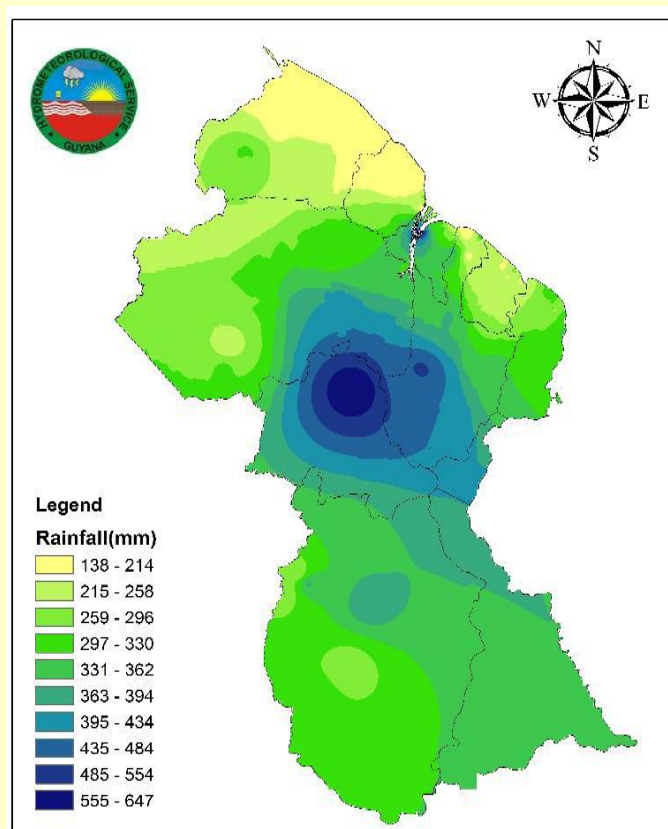


Figure 10 shows a spatial and graphical representation of the rainfall distribution across Guyana. Region 8 at Mahadia and Kaieteur recorded the highest accumulated rainfall for May 2018 at 647.8 mm and 610.1 mm over 26 and 30 rain days. The highest one – day rainfall amount for the month of 180.0 mm was recorded on May 26, 2018 at Kumu in Region 9 (see Figure 8 above). Table 1 below shows classification of rainfall by administrative regions across Guyana.

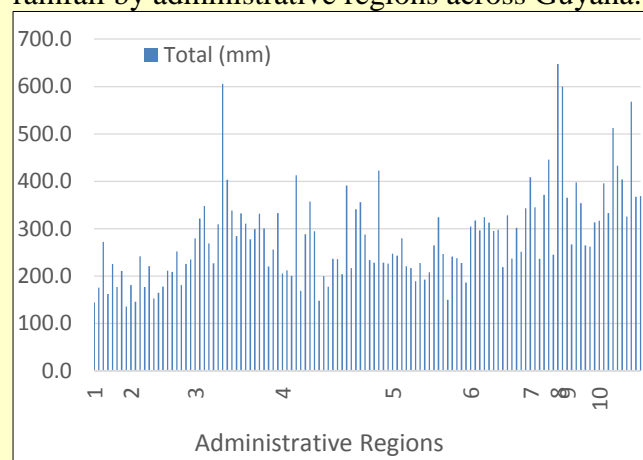


Figure 10 (a)Map and (b) Graph showing Spatial Interpolation (IDW) and distribution of rainfall amounts acrosss Guyana.



Table 1 Classification of Regional rainfall throughout Guyana for May 2018.

<i>Region</i>	<b>Average Rainfall (mm)</b>	<b>Average Rain days</b>	<b>Classification</b>	<b>Station with the highest total</b>
1	184.5	18 days	Moderately Wet (MW)	Port Kaituma recorded 175.3 mm of rainfall with 17 rain days.
2	195.4	20 days	Moderately Wet (MW)	Supenaam Forestry recorded 252.2 mm of rainfall with 18 rain days.
3	318.2	22 days	Very Wet (VW)	Fort Island Essequibo River recorded 605.8 mm of rainfall with 23 rain days.
4	264.5	21 days	Wet (W)	Land of Canaan recorded 412.6 mm of rainfall with 27 rain days.
5	227.7	22 days	Wet (W)	Abary MMA recorded 324.4 mm of rainfall with 26 rain days.
6	294.6	21 days	Very Wet (VW)	Crabwood Creek recorded 343.4 mm of rainfall with 25 rain days.
7	331.2	24 days	Very Wet (VW)	Dagg Point recorded 445.4 mm of rainfall with 27 rain days.
8	Mahdia recorded 647.8 mm of rainfall with 26 rain days.			
9	316.4	20 days	Very Wet (VW)	Parishara recorded 365.6 mm rainfall with 23 rain days.
10	408.0	26 days	Exceedingly Wet (EeW)	Amelia's Ward recorded 568.2 mm rainfalls with 15rain days.

## Climatological Summary for May 2018

Table 2 Summary of Observed data and Historical averages for Synoptic stations across Guyan during May 2018

<b>STATION</b>	<b>RAINFALL (mm)</b>		<b>MAX. TEMP (°C)</b>		<b>MIN. TEMP (°C)</b>		<b>SUNSHINE HOURS</b>	
	<b>TOTAL</b>	<b>LONG TERM AVERAGE</b>	<b>MEAN</b>	<b>LONG TERM AVERAGE</b>	<b>MEAN</b>	<b>LONG TERM AVERAGE</b>	<b>MEAN</b>	<b>LONG TERM AVERAGE</b>
<i>MABARUMA</i>	144.7	327.0	29.9	*	23.0	*	*	*
<i>GEORGETOWN</i>	205.3	277.4	29.2	30.0	24.6	24.4	5.1	5.7
<i>TIMEHRI</i>	360.9	318.4	30.0	30.7	22.7	22.8	4.5	4.9
<i>OGLE</i>	197.4	224.9	29.4	*	24.3	*	4.8	*
<i>N/AMSTERDAM</i>	297.2	259.8	29.8	30.7	24.1	23.6	3.5	5.4
<i>KAIETEUR</i>	600.0	610.1	27.5	*	21.4	*	3.4	*
<i>LETHEM</i>	260.2	274.5	30.6	31.7	22.1	23.9	4.9	5.5
<i>KAMARANG</i>	342.9	337.8	28.4	29.4	20.5	20.4	3.6	*
<i>EBINI</i>	316.7	277.0	30.0	31.9	23.3	23.0	2.9	5.4

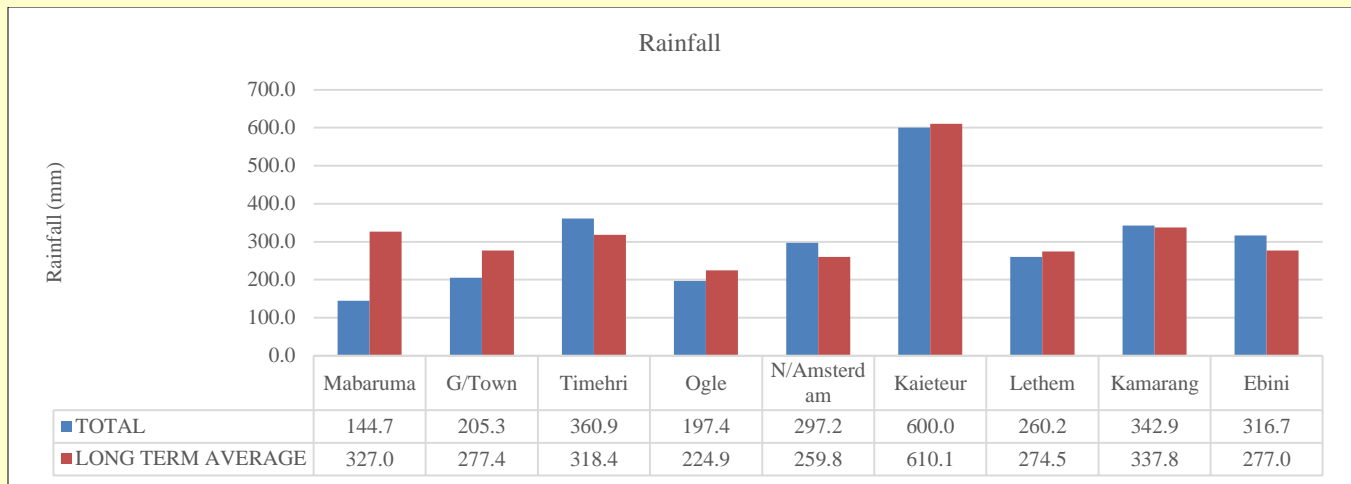


Figure 11 Comparison of May observed rainfall with its historical average for Synoptic Weather Stations across Guyana.

Figure 11 shows a comparison of May 2018 actual accumulated rainfall with the historical average for the Synoptic weather stations across Guyana. With the exception of Region 1 at Mabaruma, all synoptic stations across Guyana recorded rainfall amounts consistent with their long-term averages. Mabaruma experienced the largest deviation from

its historical average, with a substantial deficit in the May 2018 rainfall – falling short of the usual amount by more than 50. Also worthwhile to mention, Region 8 at Kaieteur recorded the highest rainfall amounts, nearly doubling all other synoptic stations, however this is not surprising according to the trends shown in the historical averages above.

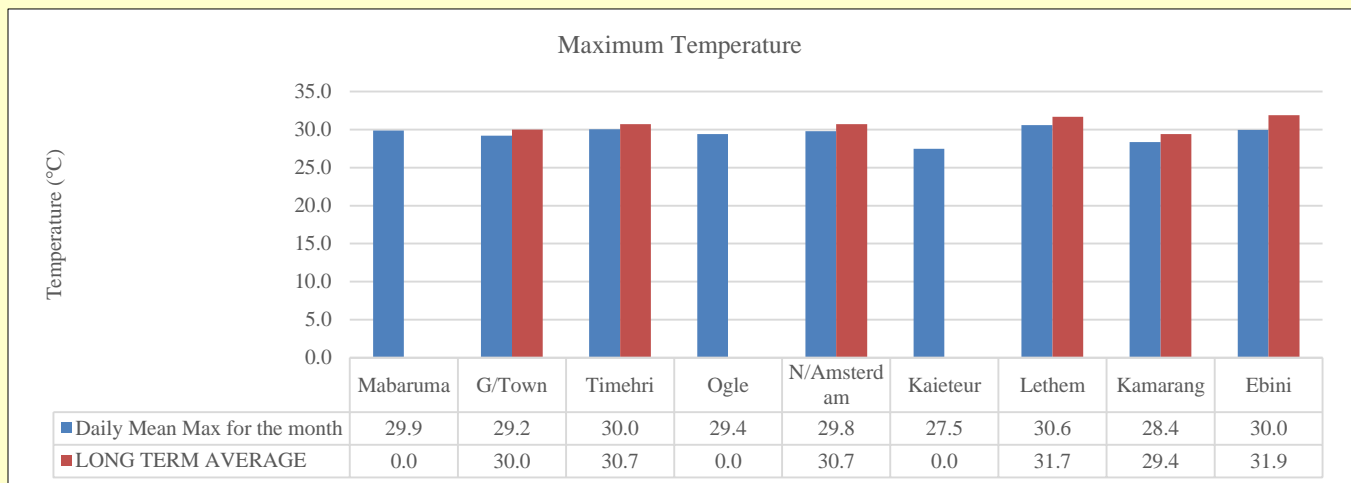


Figure 12 Comparison of May 2018 actual mean monthly Maximum Temperature with mean monthly historical average for May for Synoptic Weather Stations across Guyana

As with the previous few months, during May 2018 all Synoptic stations recorded maximum and minimum temperatures consistent with their long-term averages (correlation factor of more than 0.9) – with only minor variation. Similarly, again as with previous months, according to the data available, all station with available historical

averages recorded mean maximum temperatures slightly above their long term averages. The highest mean maximum temperature of 30.6 °C was recorded in Region 9 at Lethem, as is usually the case (reflected in the historical average). In addition, this station also recorded the highest one-day Max Temperature of 33.0 °C on May 05, 2018.

On the other hand, in keeping with the usual trend across Guyana (long term averages shown in Figure 13), Region 7 at Kamarang recorded the lowest minimum temperature of 20.5°C. It is not

surprising that this location also recorded the lowest one – day minimum temperature of 19.0°C on March 15, 2018.

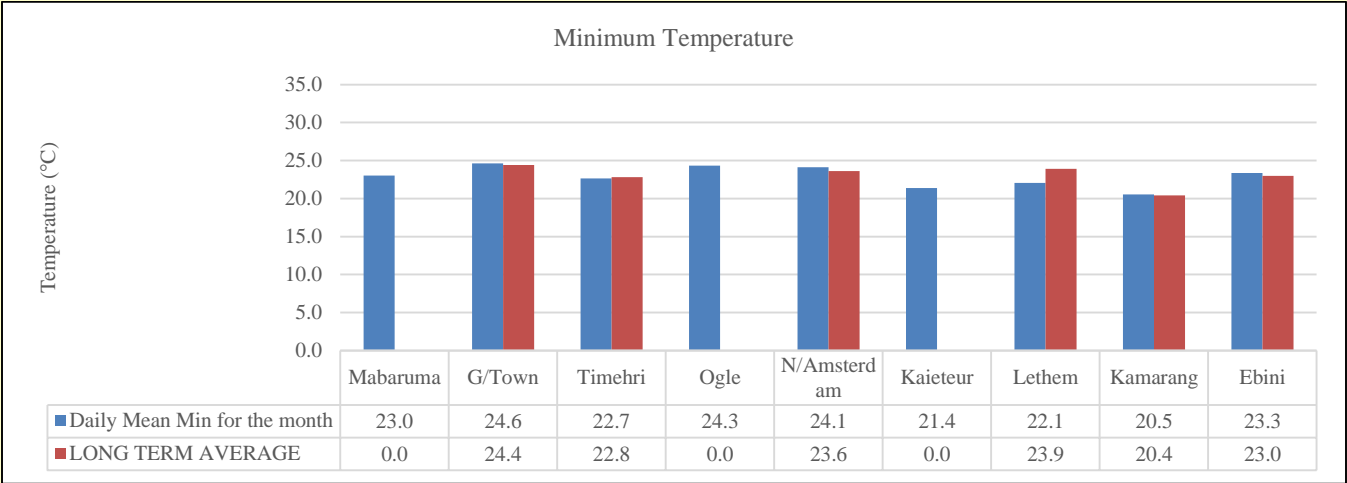


Figure 13 Comparison of May 2018 actual mean monthly Minimum Temperature with mean monthly historical average for May for Synoptic Weather Stations across Guyana

According to the available data, all station (with available historical records) recorded mean daily bright sunshine hours below their long term averages. As is usually the case according to the historical record, Region 4 at Georgetown recorded the highest mean daily Bright Sunshine Hours of 5.1 hours/day for May 2018 with Ogle,

trailing by only 0.3 hours/day as the second highest. Ogle also recorded the maximum one – day Bright Sunshine hour of 11.3 hours on May 16, 2018. On the other hand, Regions 6, 8 and 10 at New Amsterdam, Kaieteur and Ebini recorded values significantly lower than their historical averages.

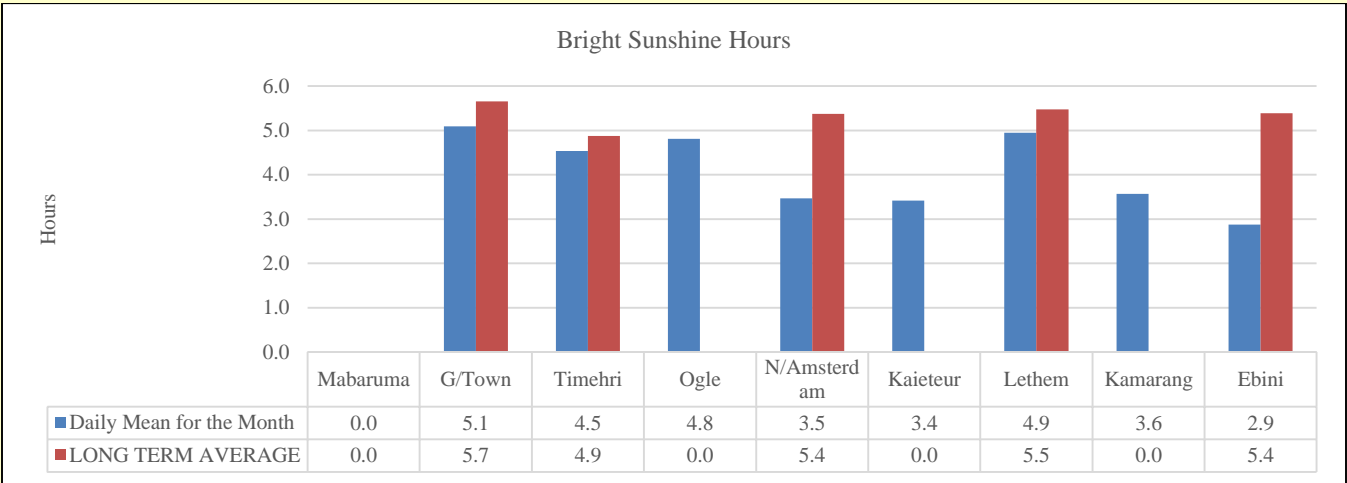


Figure 14 Comparison of May 2018 actual daily mean Bright Sunshine Hours with historical average for May for Synoptic Weather Stations across Guyana



## Global Analysis

Warmer-than-average conditions engulfed much of the world's land and ocean surfaces, giving way to the fourth highest May temperature since global records began in 1880. The May 2018 combined average temperature over the global land and ocean surfaces was 0.80°C (1.44°F) above the 20th century average of 14.8°C (58.6°F). The years 2014–2018 rank among the five warmest Mays on

record, with 2016 the warmest May at +0.88°C (+1.58°F). May 2018 also marks the 42nd consecutive May and the 401th consecutive month with temperatures, at least nominally, above the 20th century average. According to NCEI's Regional Analysis, four of six continents had a May temperature that ranked among the nine warmest Mays on record.

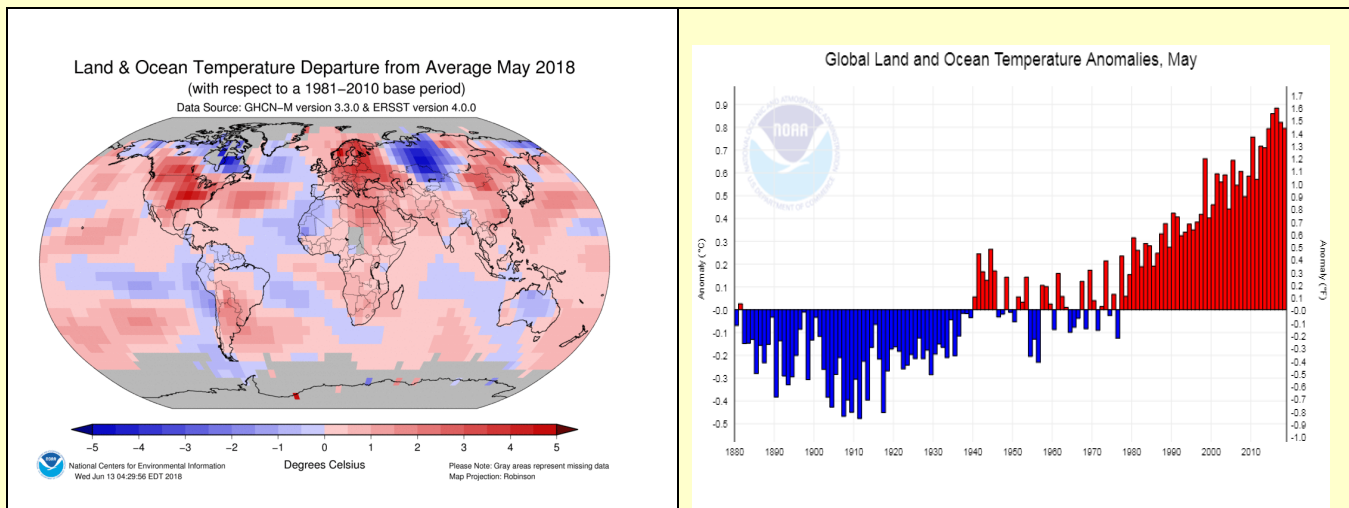


Figure 15(a) Global departure of May 2018 Land and Ocean Temperatures from the Historical averages taken for period 1981 - 2010. Compliments of NOAA<sup>2</sup>. (b) Global Land and Ocean Temperature Anomalies for the month of May from 1880 to 2018<sup>3</sup>

The global land surface temperature for May 2018 was the coolest May since 2011 and tied with 2013 as the seventh highest in the 139-year record at 1.14°C (2.05°F) above the 20th century average of 11.1°C (52.0°F)

The global oceans had their smallest temperature departure for May since 2014 and was also the fourth highest May temperature on record at 0.66°C (1.19°F) above the 20th century average of 16.3°C (61.3°F).

<sup>2</sup> <http://www.ncdc.noaa.gov/sotc/service/global/map-blended-mntp/201805.gif>

<sup>3</sup> [http://www.ncdc.noaa.gov/cag/time-series/global/globe/land\\_ocean/1/5/1880-2018](http://www.ncdc.noaa.gov/cag/time-series/global/globe/land_ocean/1/5/1880-2018)

## Climatological Outlook for the next few Weeks

### CariCOF Precipitation and Temperature Outlook for June to August 2018

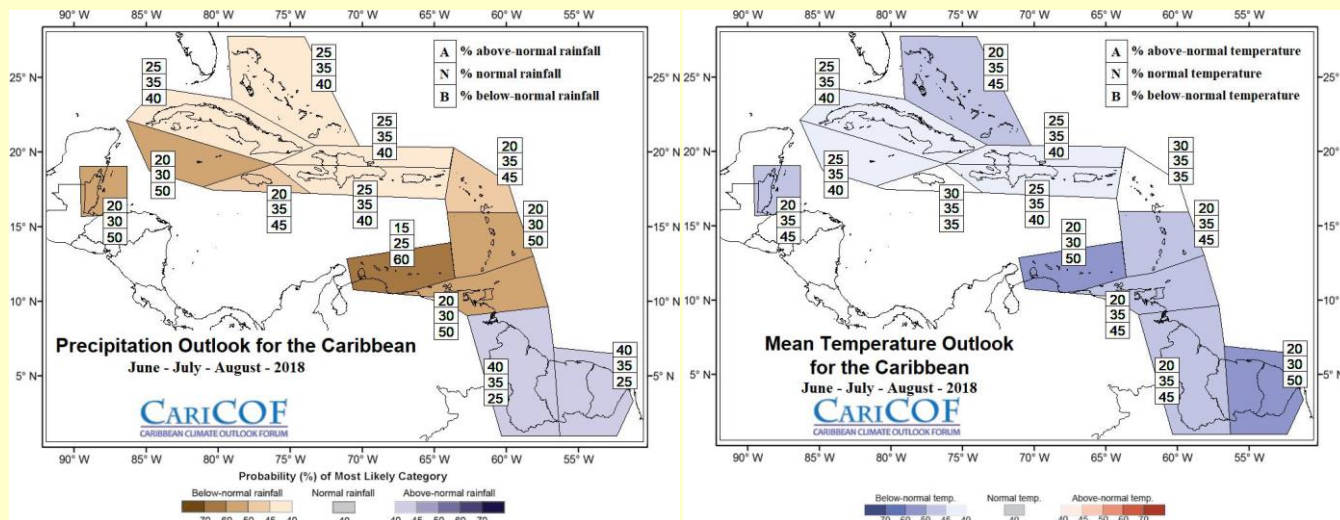


Figure 16 CariCOF (a) Precipitation and (b) Temperature outlook for the Caribbean for the period valid June – August, 2018 showing 75% confidence for *Above Normal to Normal* rainfall and 80% *Below Normal to Normal* Temperature for Guyana

According to the Outlook provided by CariCOF for the period June – August 2018 in Figure 16 (a) above, Expect wetter to pretty much like usual for this period with a confidence of 75%. The chance for extremely wet weather conditions are low, notwithstanding this is the Primary wet season, as a result, chances of extreme wet are still a bit higher than usual

Additionally, according to the Temperature Outlook in

Figure 16(b) above, cooler than to pretty much like usual can be expected for this period with a confidence level of 80%. Since this is the period within the wet season, extreme heat is not a concern.

### CariCOF Wet Days and Wet Spells Outlook for June – August 2018

Table 3 Climatological Normals and Forecasted Number of *Wet Days* and various categories of *Wet Spells* for selected locations across Guyana for the period June – August, 2018

June to August 2018	No. of wet days		No. of 7-day wet spells (20% wettest)		No. of 7-day very wet spells (10% wettest)		No. of 3-day extremely wet spells (1% wettest)	
	Climatology	Forecast	Climatology	Forecast	Climatology	Forecast	Climatology	Forecast
Guyana_73	25-35	26-39	3.3-5.6	3.2-6.4	1.3-3.3	1.2-4.3	0-1	0-1.2
Guyana (Albion)	37-52	38-55	3.4-6.6	3.3-6.4	1.7-3.7	1.5-3.8	0-1	0-1.4
Guyana (Blairmont)	44-60	47-64	3.4-6.9	3.7-8.3	1.3-3.9	1.7-4.5	0-1	0-1.7
Guyana (Charity)	40-56	35-67	2.3-5.1	1.9-7.4	0.9-3.1	0.5-3.2	0-0.6	0-0.3
Guyana (Enmore)	41-57	41-60	3-6	2.8-6.4	0.9-3.4	0.8-3.6	0-1.1	0-1.2
Guyana (Georgetown)	51-63	50-66	3.1-5.6	3-6.7	1.3-3	1.3-3.7	0-1	0-1.1
Guyana (New Amsterdam)	46-60	45-60	3.8-6.1	3.5-7.4	1.3-3.2	1.5-3.7	0-1	0-1.1
Guyana (Skeldon)	45-52	44-54	3.1-5.9	2.7-6.6	1.2-3.9	1-4.2	0-1.9	0-1.5
Guyana (Timehri)	55-68	56-71	3.4-5.8	3.1-6.3	1.3-3.5	1-3.7	0-1	0-1.4
Guyana_Wales	50-64	52-67	3.4-6	3.6-7.2	0.9-3.3	1-4.6	0-1.9	0-1.7

brown is a decrease in frequency, dark blue an increase, grey none are expected

**Wet Days:** Usually, during June – July – August, 43 to 57 of the 92 days are Wet Days along Coastal Guyana – shown in Table 3 above. For June – August 2018, the forecast suggest wetter to pretty much like usual, as a result, there is a resonable chance for a slight increase in the amount of Wet Days (medium confidence of occurence) across coastal Guyana for the period.

**7 – Days Wet Spells:** Usually, Coastal Guyana experiences up to 6 ‘Seven – Days’ Wet Spell, with up to 3 of them being Very Wet for the period June – August. For June – August 2018, the forecast indicates a slight shift in the usual number of *Wet* and *Very Wet* spells, with a forecast of upto 7 ‘Seven – days’ wet spells with the possibility of 4 of them being *Very Wet* – mid confidence (see Table 3 for usual and forecast occurrences).

## IRI-ENSO Forecast

**Synopsis:** ENSO-neutral is favored through Northern Hemisphere summer 2018, with the chance for El Niño increasing to 50% during fall, and ~65% during winter 2018-19.

ENSO-neutral continued during May, as indicated by mostly average sea surface temperatures (SSTs) across the central and eastern equatorial Pacific. The latest weekly Niño indices were between +0.2°C and 0.0°C, except for the Niño-1+2 index, which remained negative (-0.5°C). Positive subsurface temperature anomalies (averaged across 180°-100°W) increased over the past month,

as another downwelling equatorial oceanic Kelvin wave reinforced the already above-average subsurface temperatures. Convection remained suppressed near the Date Line and was slightly enhanced over Indonesia. Low-level and upper-level winds were near average across the equatorial Pacific Ocean. Overall, oceanic and atmospheric conditions reflected ENSO-neutral..

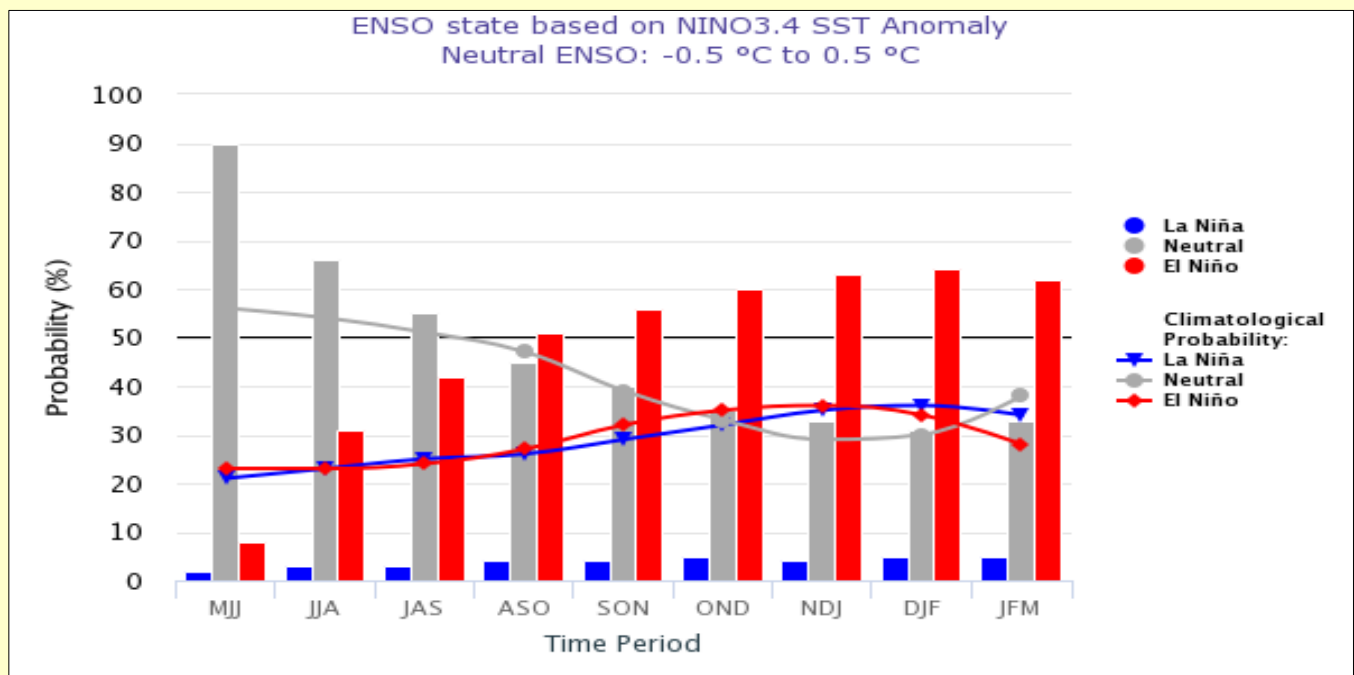


Figure 17 June 2018 CPC/IRI Official Probabilistic ENSO Forecast



### Recent and Current Conditions

In mid-June 2018, the NINO3.4 SST anomaly showed neutral ENSO conditions. For May the SST anomaly was -0.13 C, indicating neutral conditions, and for February-April it was -0.41 C, indicating cool-neutral ENSO. According to the IRI and NOAA/Climate Prediction Center, the condition for El Niño requires that the SST anomaly in the Nino3.4 region (5S-5N; 170W-120W) exceed 0.5 C. Similarly, for La Niña, the anomaly must be -0.5 C or less. The climatological probabilities for La Niña, neutral, and El Niño conditions vary seasonally, and are shown in a table in Annex IV for each 3-month season. The most recent weekly anomaly in the Nino3.4 region was 0.2, showing neutral conditions. Additionally, most of the key atmospheric variables, including

the lower level zonal wind anomalies and the Southern Oscillation suggest neutral condition. The only exception is the anomalies of outgoing longwave radiation (convection), which show weak remnants of the La Niña episode that ended two months ago. The subsurface temperature anomalies across the eastern equatorial Pacific have warmed to moderately above-average, suggesting the possibility of a warming of the SST in the coming months. Given the current and recent SST anomalies, the subsurface profile and the conditions of most key atmospheric variables, we will likely remain in ENSO-neutral conditions at least through Northern Hemisphere summer, with a chance for a warming leading to El Niño development after about August.

### Expected Conditions

The official diagnosis and outlook produced jointly by CPC and IRI issued by the NOAA/Climate Prediction Center ENSO Diagnostic Discussion stated that ENSO-neutral is expected during summer, with about an even chance for El Niño during autumn, rising to about 65% for winter. As of mid-June, about 75-80% of the dynamical or statistical models predict neutral conditions for the initial Jun-Aug 2018 season, with about 20-25%

showing El Niño conditions. Over the course of the rest of 2018, probabilities for neutral drop below 50% by Aug-Oct and to near 20% from Oct-Dec through Feb-Apr 2019, as the probability for El Niño hovers near 80% during those same seasons. La Niña probabilities are near zero throughout the forecast period. – see Table 4 below for probability of occurrence.

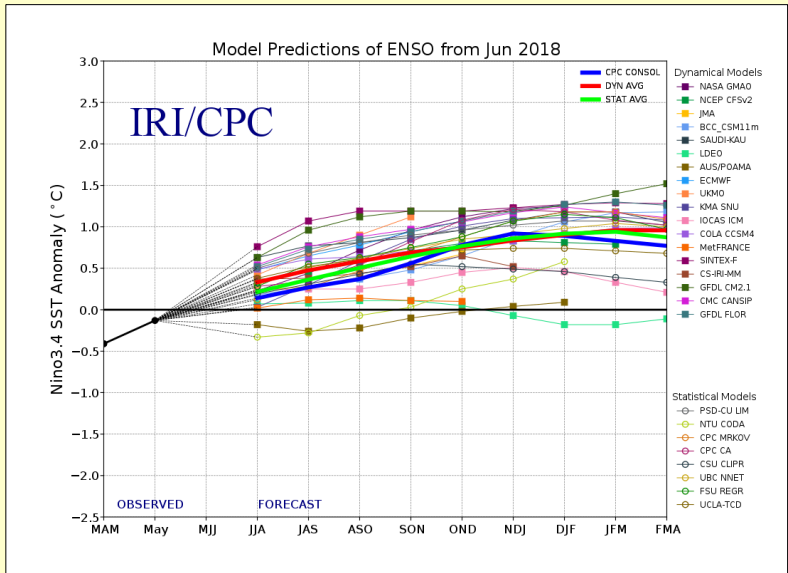


Figure 18 June 2018 Plume of Model ENSO Predictions

Table 4 Showing IRI/CPC Mid – June model Based Forecast probabilities for La Niña, neutral, and El Niño conditions for each 3-month season.

Season	La Niña	Neutral	El Niño
MJJ 2018	2%	90%	8%
JJA 2018	3%	66%	31%
JAS 2018	3%	55%	42%
ASO 2018	4%	45%	51%
SON 2018	4%	40%	56%
OND 2018	5%	35%	60%
NDJ 2018	4%	33%	63%
DJF 2019	5%	31%	64%
JFM 2019	5%	33%	62%

In summary, the probabilities derived from the models on the IRI/CPC plume describe, on average, a preference for ENSO-neutral for Jun-Aug and Jul-Sep 2018, followed by a tilt of the odds toward El Niño conditions starting in Aug-

Oct and increasing to 70% or higher by the end of 2018 and in early 2019. Probabilities for La Niña are about 5% or less throughout the entire forecast period.

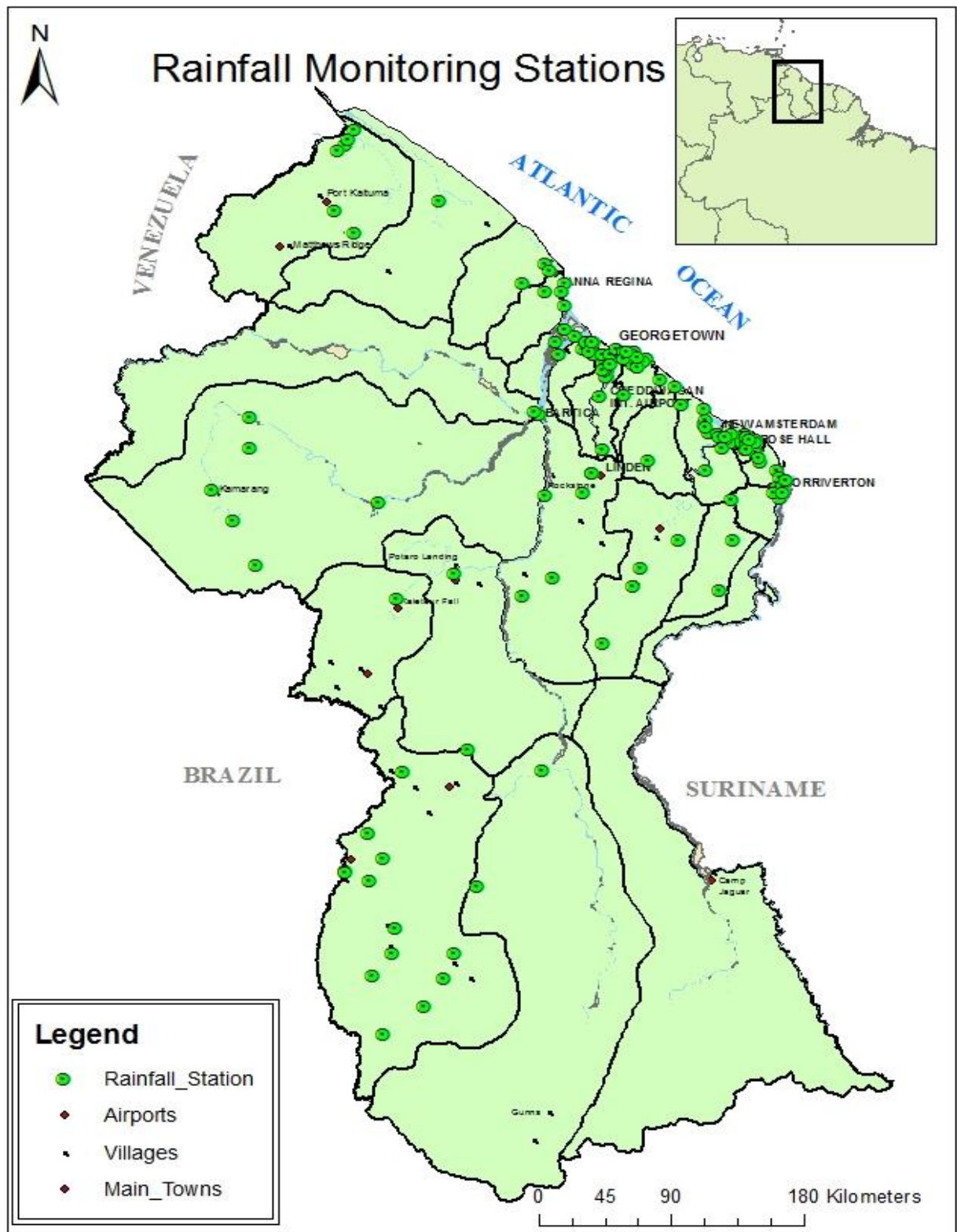
## Annex I

### Glossary of Terms

- **CariCOF** - Caribbean Climate Outlook Forum
- **CPC** – Climate Prediction Center
- **ENSO** - *El Niño–Southern Oscillation* is an irregularly periodical variation in winds and sea surface temperatures over the tropical eastern Pacific Ocean, affecting much of the tropics and subtropics.
- **Historical Mean** - Arithmetical mean computed using all the available Historical data from time of commencement of data collection.
- **IRI** – International Research Institute
- **ITCZ** - *The Inter Tropical Convergence Zone* is a belt of low pressure which circles the Earth generally near the equator where the trade winds of the Northern and Southern Hemispheres come together.
- **Long Term Average** - Same as Historical Mean
- **NOAA** - National Oceanic and Atmospheric Administration
- **Normal** - An Arithmetical mean taken over a Thirty (30) years period defined by WMO - currently 1981-2010.
- **OLR** – Outgoing Longwave Radiation.
- **Primary Dry Season** - The Major Dry Season in Guyana Occurring during the period August to mid-November
- **Primary Wet Season** - A period of heavy rainfall in Guyana occurring during the period Mid-April to Mid-July as a result of the northward movement of the ITCZ
- **Secondary Dry Season**
- **Secondary Wet Season** - A rainfall season in Guyana occurring during the period mid-November to January as a result of the Southward movement of the ITCZ
- **SST** - Sea Surface Temperature
- **WMO** - World Meteorological Organization

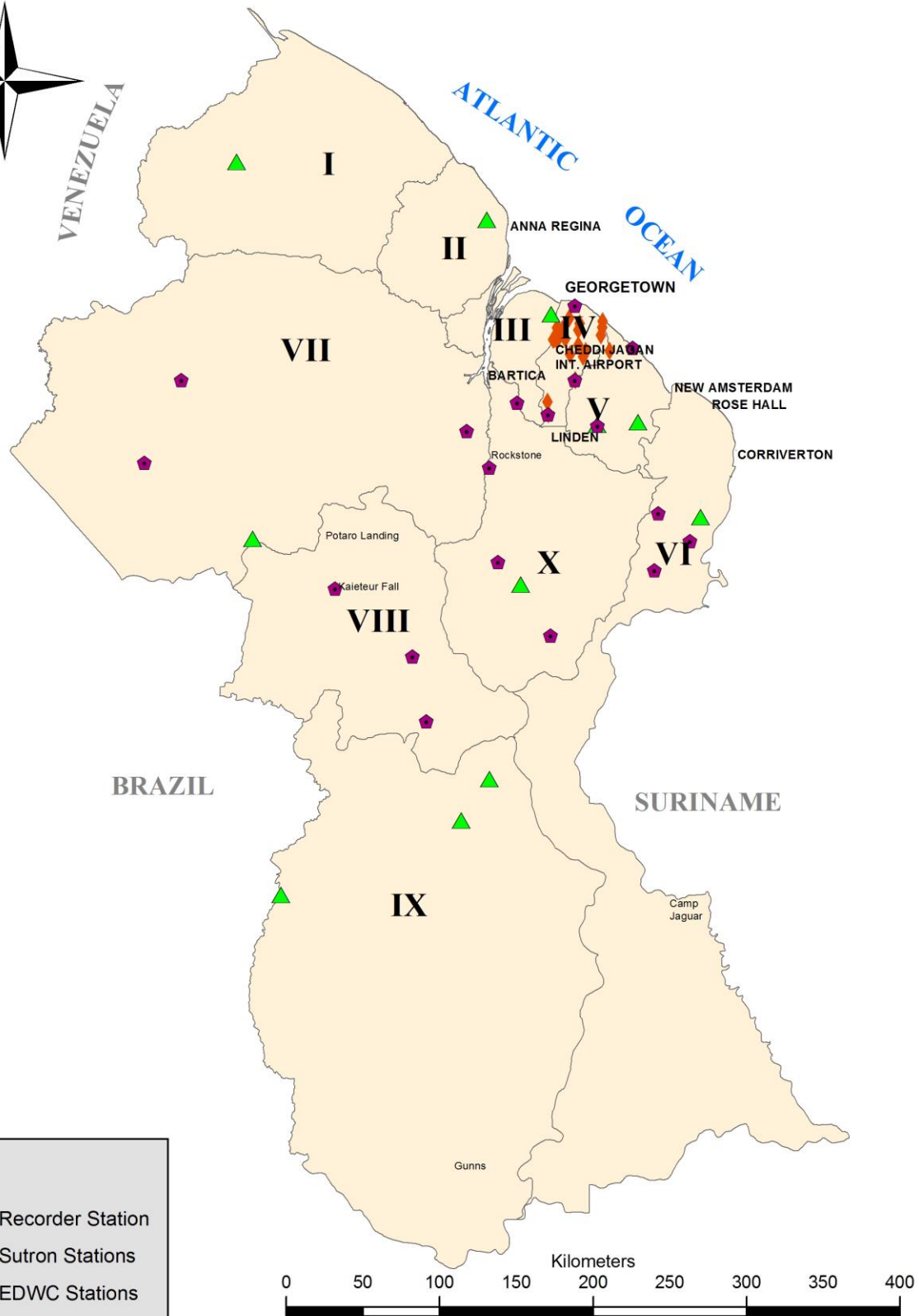


## Annex II





## *Administrative Distribution of Hydrological Stations*



**Annex III****Classification of Precipitation Values**

DESCRIPTION	ABBREVIATION	RAINDAYS	RAINFALL (mm)
Very Dry	VD	0-10 11-20	0-59.9 11-29.9
Dry	D	1-10 11-20 21-31	60-119.9 30-89.9 21-59.9
Moderately Dry	MD	1-10 11-20 21-31	120-179.9 90-149.9 60-119.9
Moderately Wet	MW	1-10 11-20 21-31	180-239.9 150-209.9 120-179.9
Wet	W	1-10 11-20 21-31	240-329.9 210-269.9 180-239.9
Very Wet	VW	1-10 11-20 21-31	330-449.9 270-389.9 240-329.9
Exceedingly Wet	EeW	1-10 11-20 21-31	450-569.9 390-509.9 330-449.9
Excessively Wet	EsW	1-10 11-20 21-31	>570 510-629.9 450-569.9
Extremely Wet	EtW	11-20 21-31	>630 >570

Table Showing variation in seasonal climatological probabilities for La Niña, neutral, and El Niño conditions for each 3-month season

SEASON	LA NIÑA	NEUTRAL	EL NIÑO
<b>DJF</b>	36%	30%	34%
<b>JFM</b>	34%	38%	28%
<b>FMA</b>	28%	49%	23%
<b>MAM</b>	23%	56%	21%
<b>AMJ</b>	21%	58%	21%
<b>MJJ</b>	21%	56%	23%
<b>JJA</b>	23%	54%	23%
<b>JAS</b>	25%	51%	24%
<b>ASO</b>	26%	47%	27%
<b>SON</b>	29%	39%	32%
<b>OND</b>	32%	33%	35%
<b>NDJ</b>	35%	29%	36%

## Sources

- <http://carogen.cimh.edu.bb/index.php/component/countrydata/countrydata?dataset=rainfall>
- [http://iri.columbia.edu/our-expertise/climate/forecasts/enso/current/?enso\\_tab=enso-cpc\\_update](http://iri.columbia.edu/our-expertise/climate/forecasts/enso/current/?enso_tab=enso-cpc_update)
- NOAA National Centers for Environmental information, Climate at a Glance: Global Time Series. <http://www.ncdc.noaa.gov/cag/>
- NOAA National Centers for Environmental Information, State of the Climate: Global Climate Report for May 2018, retrieved from: <https://www.ncdc.noaa.gov/sotc/global/201805>.
- [http://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/enso\\_advisory/ensodisc.html](http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.html)
- <http://www.ncdc.noaa.gov/sotc/global/201805>
- <http://iri.columbia.edu/wp-content/uploads/2018/05/figure1.gif>



**For the latest Weather Forecast, Advisories & Updates,  
Archived data or further information,  
Contact our Offices**

**Hydrometeorological Service  
Ministry of Agriculture  
18 Brickdam, Stabroek  
Georgetown, Guyana.**

or

**National Weather Watch Center,  
Hyde Park Timehri**

**Phone:**

592-225-9303 | 592-261-4489 | 592-225-4247

**Fax:**

592-225-1460

**E-Mail:**

hydromet.nwwc@gmail.com

---

*We're on the Web!*

*Visit us at:*

[www.http://hydromet.gov.gy](http://hydromet.gov.gy)

---