Issue: 60
January 2018

Hydrometeorological Service of Guyana

Farmer's Monthly Weather Bulletin

This bulletin is prepared by the Hydrometeorological Service of Guyana. We welcome feedback, suggestions and comments on this bulletin. Correspondences should be directed to: The Chief Hydrometeorological Officer (Ag), and the Agronomist.

HIGHLIGHTS

- Generally wetter than normal conditions predicted for January through March 2018.
- January is expected to be wet with a high probability of frequent showers and downpours over Northern Guyana.
- Near-normal day and nighttime temperatures predicted for January through March 2018.
- The possibility of flooding in low lying agricultural areas in Coastal Regions remains during the month of January 2018.
- Increased surface wetness during the month of January along coastal Guyana will make environmental conditions more conducive to moisture-related pests.
- Dry spells (consecutive days without rain) expected to continue in the Rupununi Region in coming weeks. Generally, dry conditions expected.
- Weak La Niña conditions unfolding, precipitation totals are forecasted to be high enough to prevent drought from being a concern, especially over Northern Guyana.

Rainfall Review for December 2017

For the month of December, the highest monthly rainfall was recorded at Enterprise Region 4 with a total of 804.1mm of rainfall with 24 rain days. The lowest monthly rainfall total was recorded at Lethem, Region 9 with a value of 29.8mm of rainfall with 6 rain days. Most stations analysed recorded rainfall amounts above their long-term averages (Figure 1).

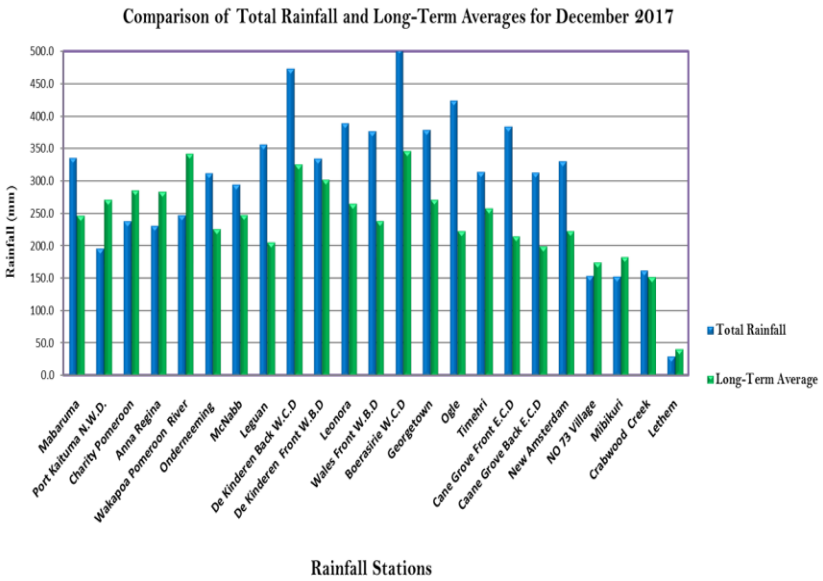

Figure 1: Comparison of the accumulated rainfall and the long-term averages of selected stations for December 2017

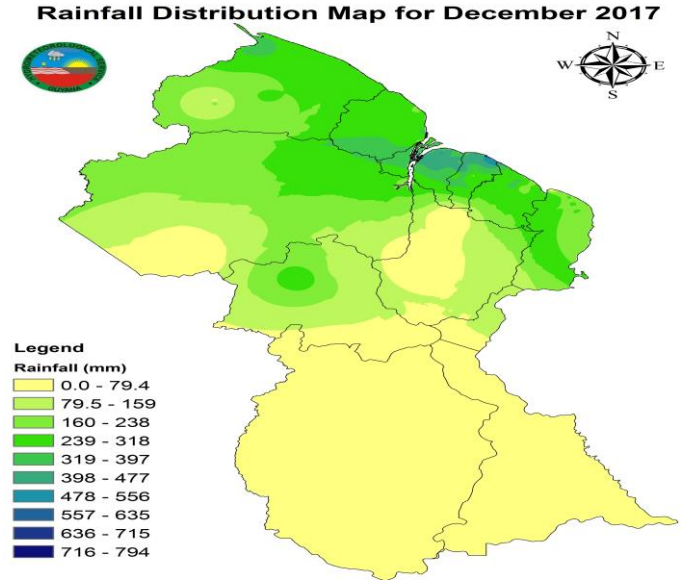

Figure 2: Rainfall Distribution Map for December 2017

Table 1: Regional Rainfall Classification for the Month of December 2017

Regions	Regional Average (mm)	Average Rain days	Classification	Remarks
1	275.3	21 days	Very Wet (VW)	Mabaruma recorded 335.7mm of rainfall with 20 rain days.
2	206.0	20 days	Moderately Wet (MW)	Hibernia recorded 315.3 mm of rainfall with 24 rain days.
3	374.2	22 days	Exceedingly Wet (EeW)	Boerasire recorded 504.0mm of rainfall with 23 rain days.
4	398.5	21 days	Exceedingly Wet (EeW)	Enterprise E.C.D recorded 804.1mm of rainfall with 24 rain days.
5	227.0	18 days	Wet (W)	Burma recorded 359.6mm of rainfall with 20 rain days.
6	221.7	15 days	Wet (W)	New Amsterdam recorded 330.9mm of rainfall with 18 rain days.
7	248.8	20 days	Wet (W)	Dagg Point recorded 300.2mm of rainfall with 27 rain days.
8	215.1	19 days	Wet (W)	Kaieteur recorded 283.0mm of rainfall with 20 rain days.
9	29.8	6 days	Very Dry (VD)	Deer Creek recorded 54.5 mm rainfall with 5 rain days.
10	221.8	16 days	Wet (W)	58 Miles Mabura Road recorded 330.6 of rainfall in 22 rain days.

Sunshine Hours Review for December 2017

Lethem, Region 9 recorded the highest monthly mean sunshine of 7.5 hours, along with the highest one-day sunshine of 10.9 hours on December 4, 2017. Timehri, Region 4 recorded the lowest mean sunshine of 4.8 hours. Georgetown and Timehri recorded mean sunshine hours below their long-term averages, while New Amsterdam and Lethem recorded mean sunshine hours above their long-term averages (Figure 3).

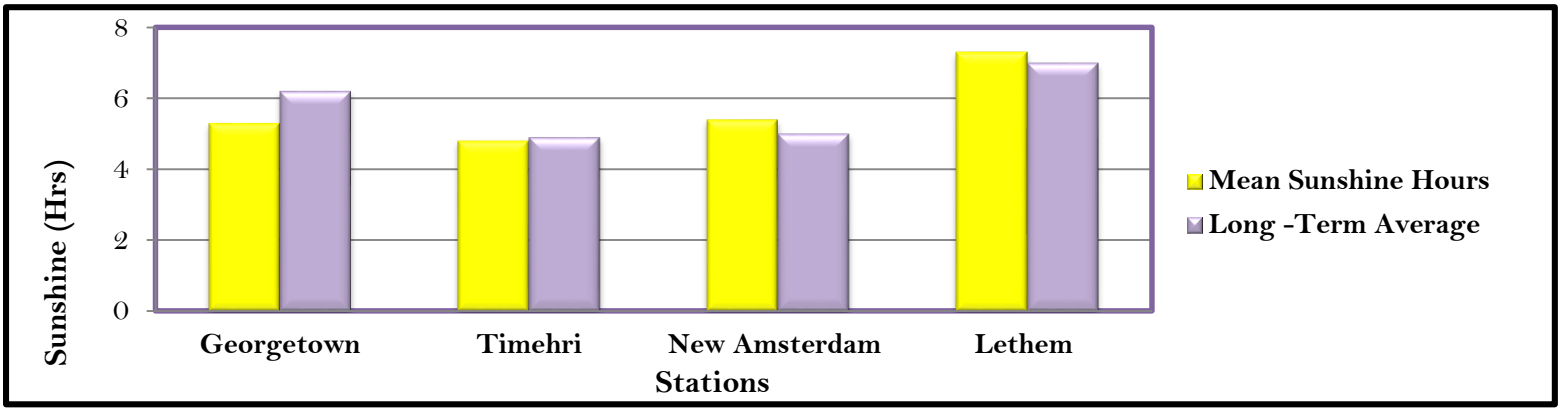

Figure 3: Comparison of the mean sunshine hours and the long-term averages of selected stations for December 2017.

Temperature Review for the month of December 2017

For the month of December, the highest one-day maximum temperature was recorded at Lethem, Region 9 with a value of 35.2°C on December 3, 2017. This station also recorded the highest mean maximum temperature of 33.3°C for the month. Georgetown, Region 4 recorded the highest mean minimum temperature of 24.1°C. Timehri, Region 4 and New Amsterdam, Region 6 recorded the lowest daily temperature of 18.9°C on December 23rd and 25th respectively. Apart from Georgetown, all stations recorded mean maximum temperatures above their long-term averages. (Figures 4 & 5).

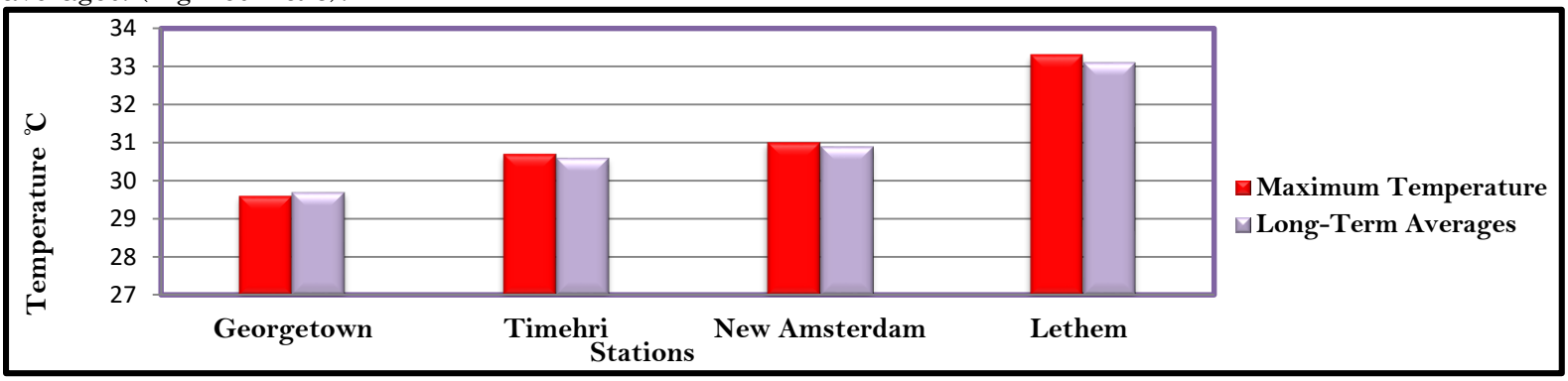

Figure 4: Comparison of the long-term averages and mean maximum temperatures of selected stations for December 2017.

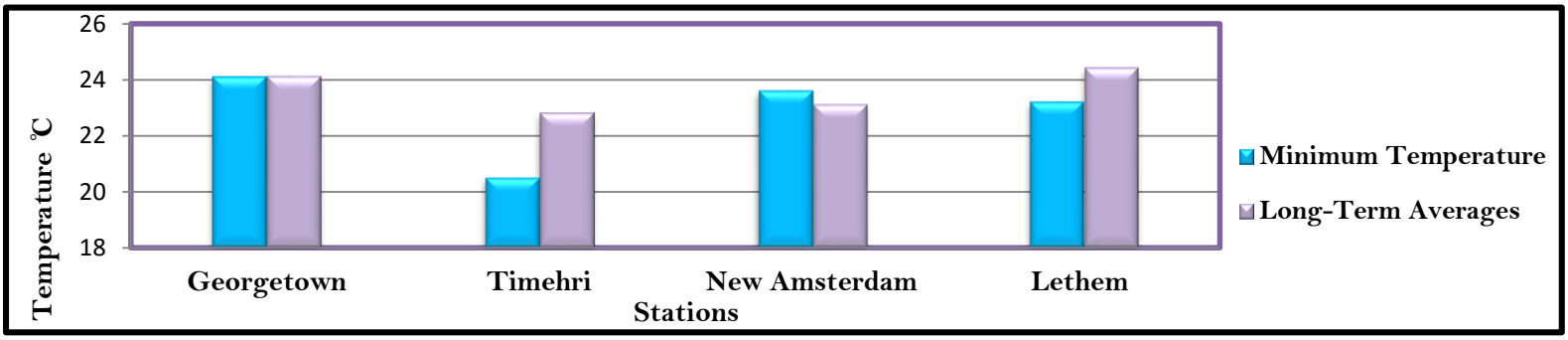

Figure 5: Comparison of the long-term averages and mean minimum temperatures of selected stations for December 2017.

Seasonal Rainfall and Temperature Outlook for Guyana (January-March 2018)

Climatologically Northern Guyana is continuing in its secondary wet season of 2017/18.Based on historical records, this season is expected to conclude by mid-February, 2018; while Southern Guyana's dry season is expected to continue until mid-April 2018.The latest forecast indicates that Guyana is likely to experience above-normal rainfall and near normal day and nighttime temperatures during this period. Chances of frequent downpours are likely in the month of January which may lead to flooding in some areas. Dry spells are expected to continue in the Rupununi Region.

Table 2: Historical average rainfall(mm) of selected rainfall stations for the January – March Season

Region	Station	Jan	Feb	Mar	Region	Station	Jan	Feb	Mar
1	MABARUMA *	183.0	101.6	94.1	5	BLAIRMONT	184.8	94.6	95
	WAUNA	177.8	98.9	76.5					
	PORT KAITUMA	162.8	110.9	82.8	6	ALBION	167.8	85.7	93.5
2	ANNA REGINA*	286.0	133.6	75.3		SKELDON	147.9	97	105.5
	CHARITY	265.6	110.4	122.5		CRABWOOD CREEK*	111.5	70.4	50.5
	Mc NABB	219.5	102.4	109.3		ROSE HALL	203.4	101.4	102.5
	WAKAPOW	266.6	140.7	99.3		NIGG 58	163.7	77.3	91.2
	ONDERNEEMING	197.0	88.4	58.1		ALBION 33	166.8	78.2	77.4
3	BOERSARIE	301.8	140.2	114		#73 VILLAGE	165.4	110.7	97.5
	DeKENDEREN BACK	270.6	118.7	103.1		# 54 VILLAGE*	125.9	74.4	81.5
	DeKENDEREN FRONT	262.0	104.9	107.5		MIBIKURI	166.9	89	82.3
	LEONORA FRONT	238.2	103	95.6		MARA LAND DEV. SCHEME*	128.5	60.5	91.4
	LEONORA BACK	282.6	124.7	137.1		NEW AMSTERDAM	180.6	97	90.1
	WALES	231.4	130.7	117.6		APAIKWA	299.6	220.5	96.1
	UITVLUGT BACK	253.8	112.3	119.4	7	MAZARUNI	183.6	105.2	208.6
	La BAGATELLE LEGUAN*	199.3	67.3	71.8		BARTICA DEM. STATION*	172.4	98.5	112.7
4	GEORGETOWN	239.7	104.1	111.64		JAWALLA	167.4	107.4	127.7
	TIMEHRI	239.9	118.1	119.8		KAIETEUR FALLS *	414.1	218.1	113.9
	CANE GROVE BACK	168.0	87.8	73.6	8	LETHEM	17.2	18.8	162.4
	CANE GROVE FRONT	189.5	110.9	110.2	9	KARASABAI	6.7	8	18.9
	L.B.I FRONT	189.2	88.1	86		DADANAWA	34.9	26.1	5.5
	OGLE FRONT	194.6	73.9	93.9		GREAT FALLS	199.1	125.6	42.2
	ENMORE FRONT	204.3	95.4	106.6	10	WISMAR*	139.4	92.2	154.6
	KAIRUNI*	****	70.8	72.1		-	-	-	-

The historical averages for various stations were calculated by the use of rainfall data from the year 1981- 2010 (climatological normal). Stations, where less than 30 years of observations were used, are denoted with *

Table 3: Average rain days for the months January-March of selected stations

Station Name	January	February	March
Mabaruma	16 days	11 days	10 days
Anna Regina	3 days	8 days	7 days
Leonora	16 days	11 days	9 days
Georgetown Botanical Gardens	15 days	11 days	10 days
Timehri Meteorological Station	17 days	12 days	11 days
Blairmont	15 days	11 days	10 days
New Amsterdam	14 days	10 days	10 days
Kamarang	19 days	15 days	13 days
Lethem	12 days	3 days	3 days
McKenzie	16 days	11 days	11 days
Ebini	15 days	12 days	12 days

Note: A rain day is considered as a day with rainfall >= 1mm.

Table 4: Average wet days for the months January-March of selected stations

Station Name	January	February	March
Mabaruma	9 days	6 days	1 day
Anna Regina	8 days	5 days	4 days
Leonora	9 days	5 days	4 days
Georgetown Botanical Gardens	9 days	5 days	5 days
Timehri Meteorological Station	11 days	6 days	6 days
Blairmont	8 days	5 days	5 days
New Amsterdam	8 days	5 days	4 days
Kamarang	10 days	7 days	6 days
Lethem	1 day	1 day	1 day
McKenzie	10 days	6 days	6 days
Ebini	8 days	6 days	6 days

Note: A wet day is considered as a day with rainfall >= 5mm.

Table 5: Average maximum temperatures for the months January-March of selected stations

Station Name	January	February	March
Georgetown Botanical Gardens	29.2 °C	29.4 °C	29.8 °C
Timehri Meteorological Station	21.0 °C	21.0 °C	21.0 °C
New Amsterdam	30.1 °C	30.4 °C	30.8 °C
Kamarang	28.8 °C	29.0 °C	29.5 °C
Lethem	32.6 °C	33.0 °C	33.6 °C

Table 6: Average minimum temperatures for the months January-March of selected stations

Station Name	January	February	March
Georgetown Botanical Gardens	20 °C	25 °C	24 °C
Timehri Meteorological Station	21 °C	22 °C	22 °C
New Amsterdam	16 °C	19 °C	20 °C
Kamarang	14 °C	15 °C	16 °C
Lethem	13 °C	17 °C	15 °C

Lunar calendar for January 2018

Agricultural Review for December 2017

The month of December saw generally wet conditions over northern Guyana. Periods of downpours were recorded in several areas. Flooding was reported in the farming community of Canal Number One Polder, West Bank Demerara in the latter part of the month. Several farms were under water which saw the livelihood of farmers being threatened.

Weather Outlook and Advice for January 2018

For the month of January, farmers are encouraged to take heed of the advisories from their regional agriculturists or extension officers and to be vigilant and follow the Hydrometeorological Service's daily and three-day forecasts via the radio on 56.0 AM and on our website at www.hydromet.gov.gy.

Northern Guyana is still in its secondary rainfall season of 2017/18.Therefore;

- **January is expected to be generally wet over northern Guyana.**
- **There is the likelihood of downpours which may lead to flooding in flood-prone areas.**
- **Increased surface wetness during the month of January along coastal Guyana will make environmental conditions more conducive to moisture related pests.**

Farmers in the Rupununi Region should note that they are still in their secondary dry season thus, water conservation exercises such as mulching, watering the early mornings or evening is recommended. Generally, dry conditions are expected along with periods of consecutive days without rainfall (dry spells).

Advice for Crop Farmers

Southern Guyana (Rupununi Region)

- Plant crop varieties that can be grown in dry conditions and that are not easily affected by pests and diseases.

- Change the timing of farm operations- adjust sowing and harvesting period to avoid negative effects of dry spells.
- Cultivate shrubs and trees around the fields as part of a crop farming system- this practice assists with the restoration of soil fertility, and at the same time creates a micro-climate to reduce high temperatures in dry periods.

Northern Guyana

- Maintain clean drains around crop beds. This helps water to drain off the land easily thereby reducing the effects of floods.
- Cultivate seedlings under a shaded area.
- Change the timing of farm operation. Adjust sowing and harvesting periods to avoid the negative effects of very wet periods.
- Maintain embankments around fields to protect crops against flooding. Empolder low lying areas and creeks. Plant grass/crops on damns to reduce soil loss.
- Cultivate crop varieties that can be grown well in wet conditions.
- Plant crops on raised beds. This helps to reduce the effects of flooding on plants.
- Store fertilizers on shelves, in an enclosed, dry area away from moisture and water sources.

Advice for Livestock Farmers

- Monitor livestock for pests and diseases- this is an early intervention practice since climate change can increase the incidence of uncertain types of pest and diseases that affect livestock.
- Construct mounts where possible to provide higher grounds for livestock during extremely wet periods.
- Where water is stagnant, create diversion ditches to drain it away from livestock facilities or sheds.
- Always keep cows clean and dry; Cleanliness can be an issue this period but you have no excuse. Coats with dirt and moisture have lower insulation value, making animals more susceptible to cold stress.
- Store animal feeds in a dry place. In particular, hay is likely to get mouldy if wet.

Advice for Fish Farmers

During the rainy season, floods often occur creating unfavorable weather conditions for fish farming: temperature changes during the day and widespread thunderstorms making abrupt changes in the water environment. Conditions that may occur during the wet season are as follows:

- Abrupt changes in environmental factors and aquaculture pollution causing shocks in farming species and leading them to stop eating, or even death due to infectious diseases.
- Water temperature drops suddenly.
- If the rainwater is acidic or leaches out alum from embankments into ponds, which makes pH in pond drops suddenly.
- Sudden drop in salinity (in brackish water farming).
- Reduction of dissolved oxygen in the water.
- Reduction of alkalinity of water.
- Rainwater and flood water can leach out alum, fertilizers, plant protection chemicals and toxic waste from fields, orchards or residential areas into rivers, canals and farming ponds.

- Rising water level can overflow and destroy embankments.

Fish farmers are advised to work closely with Fisheries Officers and report any issues that they may have.

A few recommended crops that can be planted during the month of January are as follows:

- Corilla
- Cucumber
- Sorrel
- Ginger
- Corn
- Turmeric
- Pumpkin
- Squash
- Muskmelon
- Eggplant(Boulanger)

Table 7: SPRINGTIDE TABLE FOR JANUARY 2018

SPRINGTIDE ≥ 2.74(m)		
DATE	TIME	HEIGHT (m)
1/1/2018	3:30	2.93
	15:15	3.21
1/2/2018	4:20	3.03
	16:04	3.27
1/3/2018	5:07	3.07
	16:53	3.27
1/4/2018	5:54	3.06
	17:41	3.2
1/5/2018	6:42	2.99
	18:30	3.08
1/6/2018	7:30	2.87
	19:19	2.9
1/14/2018	14:48	2.76
1/15/2018	3:14	2.56
	15:23	2.81
1/16/2018	15:57	2.86
1/17/2018	16:31	2.89
1/18/2018	4:52	2.74
	17:05	2.9
1/19/2018	5:23	2.76
	17:40	2.88
1/20/2018	5:54	2.77
	18:16	2.84
1/21/2018	6:26	2.75
	18:55	2.76
1/28/2018	13:13	2.87
1/29/2018	2:27	2.76
	14:09	3.03
1/30/2018	3:18	2.93
	15:02	3.17
1/31/2018	4:05	3.07
	15:52	3.26

Tide Tables are provided by the Maritime Administration Department

THE
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SERVICE OF GUYANA

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Telephone#: 592-261-2284
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(24 hours National Weather Watch Centre numbers)
Or
Visit our Website:
www.hydromet.gov.gy

El Niño and La Niña Update

ENSO Alert System Status: La Niña Advisory

- La Niña conditions are present.
- Equatorial sea surface temperatures (SSTs) are below average across the central and eastern Pacific Ocean.
- La Niña is likely (exceeding ~80%) through the Northern Hemisphere winter 2017-18, with a transition to ENSO-neutral most likely during the mid-to-late spring.

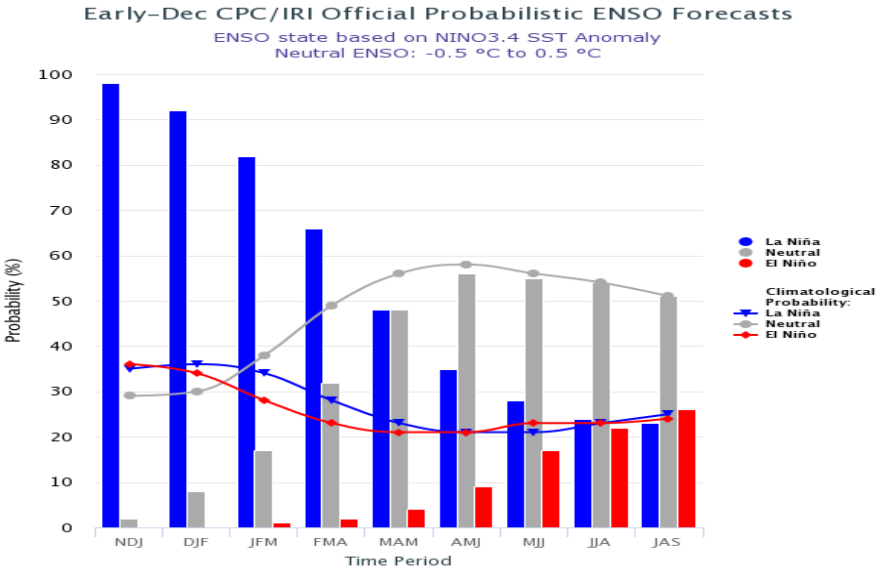

Figure 6: CPC/IRI Early-Month Consensus ENSO Forecast Probabilities