



Hydrometeorological Service

Seasonal Outlook/El Niño Advisory # 4

During the month of December 2015 very strong El Niño Southern Oscillation (ENSO) conditions continued to impact the Northern Hemisphere as well above-average (+3.0 °C) sea-surface temperatures (SSTs) continued to be experienced across the central and eastern Pacific Ocean. While the SSTs remained above average, weakened SSTs were observed. Most models indicate that the ongoing strong El Niño will weaken with a transition to normal conditions favoured over the period of May-June-July, 2016 (Figure 1). Forecasters are in agreement with the model forecasts; however, the exact time of the transition is still difficult to predict (Climate Prediction Centre/NCEP/NWS, 2016).

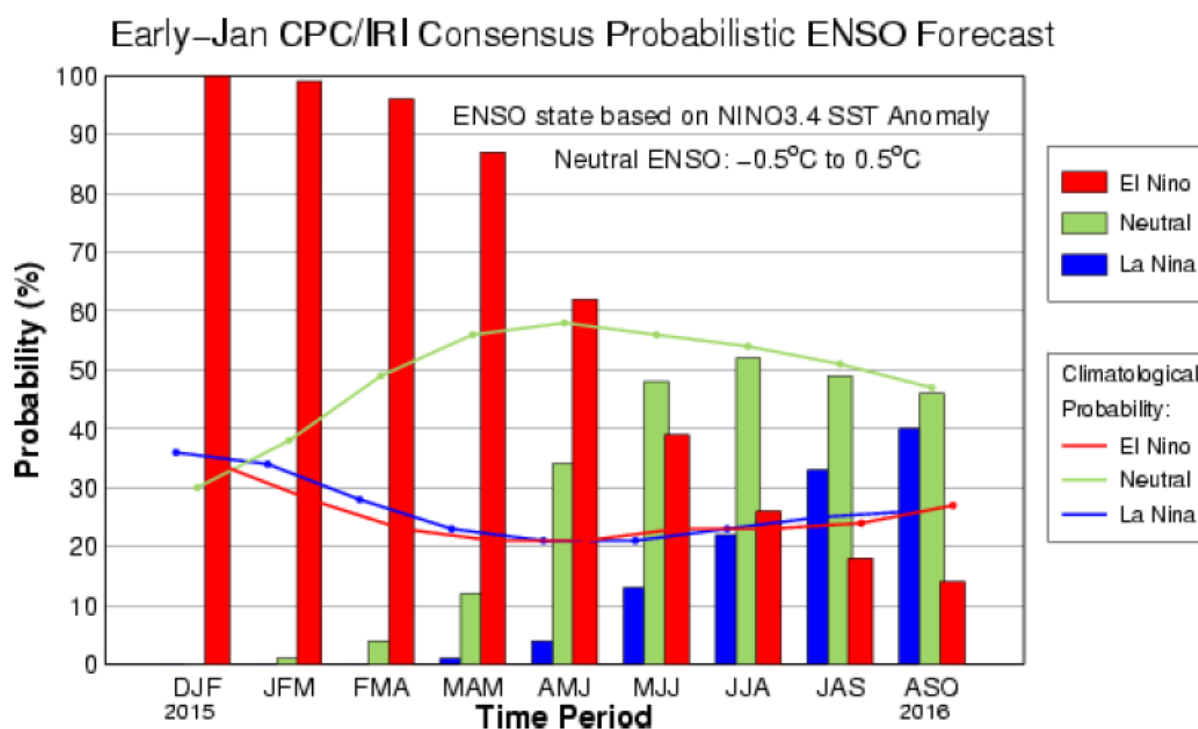


Figure 1 Current ENSO outlook based on SST Anomalies for the period January – October, 2016.

All models surveyed indicated that the current El Niño peaked at the end of 2015. Figure 2 shows an ensemble forecast of multiple models for the SST anomaly from September, 2015 to October, 2016. The plume indicates that all models are suggesting a reduction of SST anomalies in the first half of 2016 with transition into La Niña conditions in the second half of 2016 having a 40 % chance.

Guyana’s Review and Outlook

A review of rainfall for the month of December, 2015 for selected locations across Guyana shows that all locations in Regions 1 – 6, and 8 recorded rainfall quantities less than their long term averages (greater

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than 10 years). Only stations at Bartica, Karasabai, Parishara, and Wismar recorded rainfall quantities above their long-term averages (Annex I).

The latest climate forecast indicates that Guyana is likely to experience below normal to normal (90 % confidence) rainfall for the period January to March, 2016 with an equal confidence of above normal to normal temperatures. While for the period April to June, 2016 there is an 80% confidence of above normal to normal rainfall quantities and temperatures is forecasted.

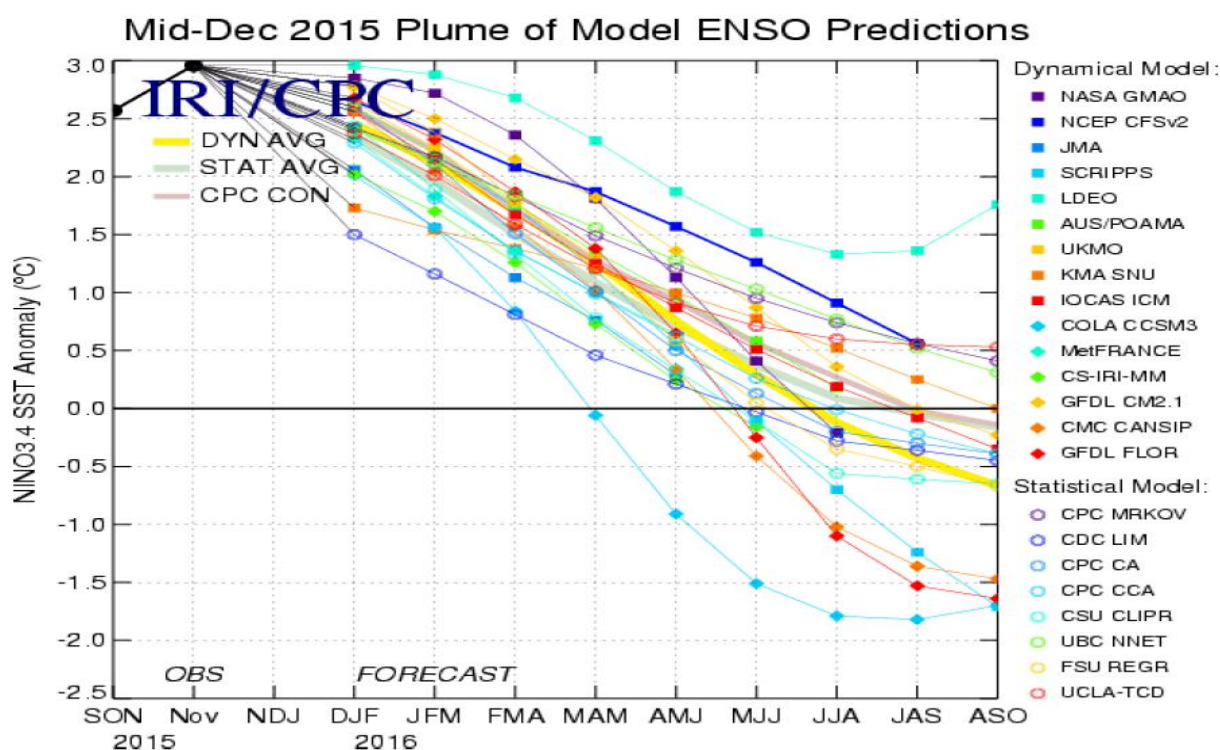


Figure 2 An Ensemble Prediction for ENSO until October, 2016. The spread of the ensemble is a reasonable indicator of the uncertainty associated with the forecast. (Source: Climate Prediction Centre/NCEP/NWS, 2016)

Conclusion

As a result of the expected conditions the Hydrometeorological Service is advising that the appropriate water management practices be employed in the various sectors and households to mitigate against the forecasted deficit in rainfall quantities and increase in atmospheric temperatures in the coming months. These conditions place Guyana under a drought warning at least to May, 2016. For as long as these conditions persist, the quantity of water available for the various uses across sectors is like to be reduced. While the Service issues this advisory, readers are also advised that the forecasted conditions do not equate to a complete absence of rainfall over the period, but rather a significant reduction in the average quantities of rainfall that is expected to be observed at the various recording stations across the country. Further, under these conditions, it is also still possible to experience periods of high intensity short duration rainfall. However, the chance of flash flooding is significantly reduced. Concerned parties should also note that with the forecasted reduction in rainfall quantities and the increase in ambient temperature the chances of forest related fires are also increased.

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Annex I

<i>Region</i>	<i>Station</i>	<i>Long term Average(LTE)</i>	<i>Numbers of years used to calculate LTE</i>	<i>December, 2015 Rainfall (mm)</i>	<i>% Above/Below LTE</i>
1	<i>Port Kaituma</i>	270.8	25	194	-28.3
	<i>Mabaruma</i>	246.9	14	107.6	-56.4
2	<i>Anna Regina</i>	283.4	19	41.7	-85.3
	<i>Charity</i>	285.5	22	85.0	-70.2
	<i>Onderneeming</i>	225.9	28	161.9	-28.3
	<i>Wakapoa</i>	342.5	30	82.8	-75.8
3	<i>Boerasirie</i>	345.8	29	114.9	-66.8
	<i>De Kinderen Back</i>	325.2	29	128.2	-60.6
	<i>De Kinderen Front</i>	302.2	29	140.0	-53.7
	<i>Leonora</i>	265.5	28	153.6	-42.1
	<i>Uitvlugt</i>	257.7	30	148.7	-42.3
	<i>Wales Front</i>	238.5	30	133.6	-44.0
4	<i>Georgetown</i>	270.9	30	151.0	-44.3
	<i>Cane Grove Back</i>	199.1	28	151.7	-23.8
	<i>Ogle</i>	222.6	30	130.0	-41.6
	<i>Timheri</i>	258.3	30	152.3	-41.0
	<i>Mon Repos</i>	261.3	22	121.5	-53.5
5	<i>Blairmont</i>	228.8	28	146.0	-36.2
	<i>Mards</i>	203.8	20	82.8	-59.4
6	<i>Albion</i>	197	27	116.8	-40.7
	<i>New Amsterdam</i>	223	27	126.0	-43.5
	<i>Mara</i>	165.9	15	74.4	-55.2
	<i>Rosehall</i>	266.6	22	125.6	-52.9
7	<i>Kamarang</i>	195.4	19	141.4	-27.6
	<i>Bartica</i>	151.7	15	160.3	5.7
8	<i>Kaieteur</i>	452.3	12	253.9	-43.9
9	<i>Karasabai</i>	5.1	25	12.4	177.8
	<i>Parishara</i>	59	18	62.9	6.6
	<i>Lethem</i>	40.8	18	34.3	-15.9
	<i>Annai</i>	76.7	12	36.8	-52.0
10	<i>Wismar</i>	124.4	14	169.6	36.4

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