

November 2020 Weather Review





SEYCHELLES METEOROLOGICAL AUTHORITY

December 2020 Climate and Weather Bulletin



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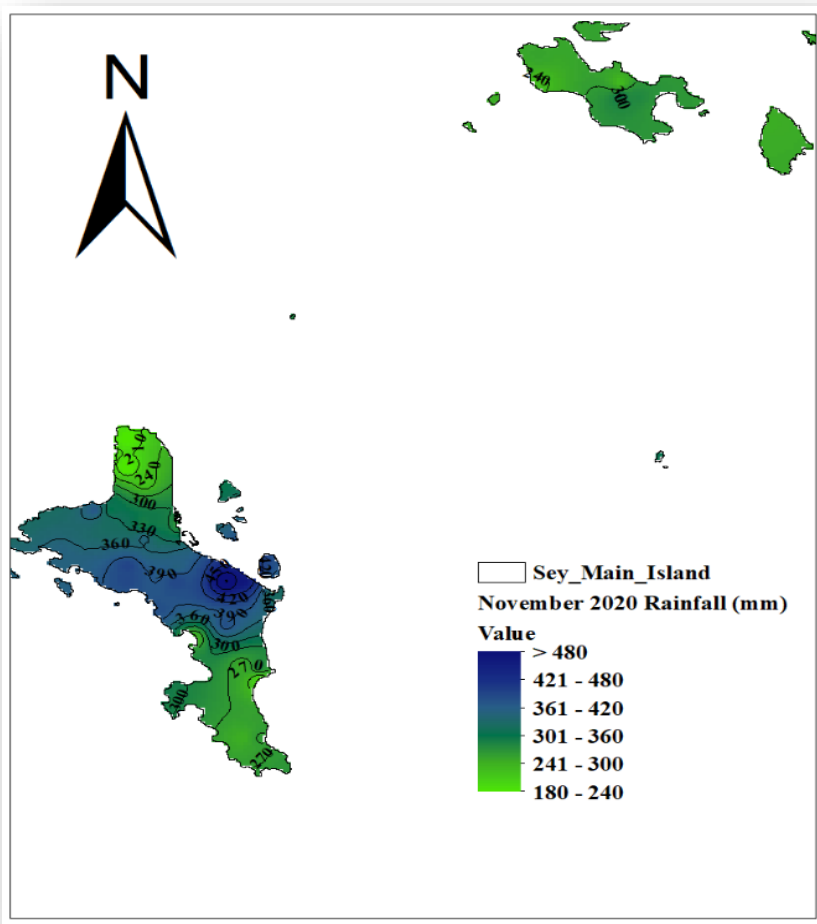
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1 INTRODUCTION

This bulletin gives a review of climate conditions over *Mahe, Praslin and La Digue*. It highlights the status of the climate systems during the month of November 2020, which not only marks the beginning of our rainy season, but also the beginning of tropical cyclone season in the South-west Indian Ocean. The first cyclone named Alicia formed on the 12th of November over the extreme northeast section of the basin. Alicia shifted all active weather around its center to the far east of Mahe, leaving the inner islands in clear weather conditions until its progression further to the south a few days later. However, November 2020 was a fairly wet month with the Intertropical Convergence Zone (ITCZ) setting in within our vicinity.

2 RAINFALL PERFORMANCE IN NOVEMBER 2020

2.1 Spatial Rainfall Distribution



The rainfall map for November 2020 shows that the inner islands received a good amount of rainfall which was concentrated around the Airport and Cascade areas on Mahe. A maximum of 512.1 mm was recorded at Cascade, whereas the minimum was 192.1 mm recorded at Machabee. The northern tip of Mahe received relatively less rainfall when compared to other parts of the country. Most of these rains fell on only 6 days in the month of November (6th, 9th, 18th, 27th, 28th, and 30th), characterized by heavy downpours coming from short-lived convective clouds.

Figure 1: November 2020 Spatial Rainfall Distribution

Comparing the rainfall recorded at our 37 stations to their respective long-term mean, figure 2 shows that all stations except Ma-Constance and La Gogue exceeded their long-term mean rainfall. The increase in rainfall during the month of November is attributed to the Intertropical convergence zone (ITCZ) becoming active east of longitude 60°E, within which low pressure systems formed and moved westward in some cases affecting the inner islands.

2.2 November rainfall totals compared to long-term mean

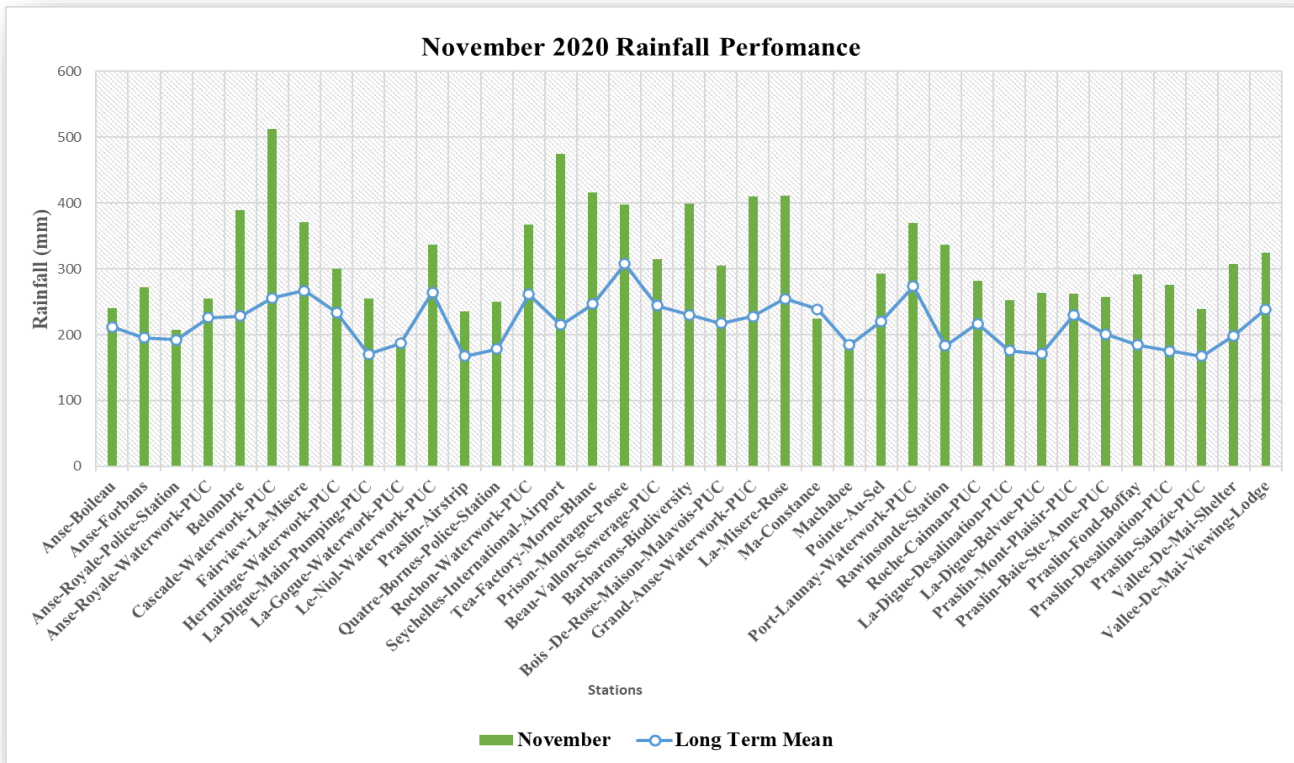


Figure 2: November rainfall totals compared to long-term mean

2.3 Percentage of mean Rainfall for November 2020

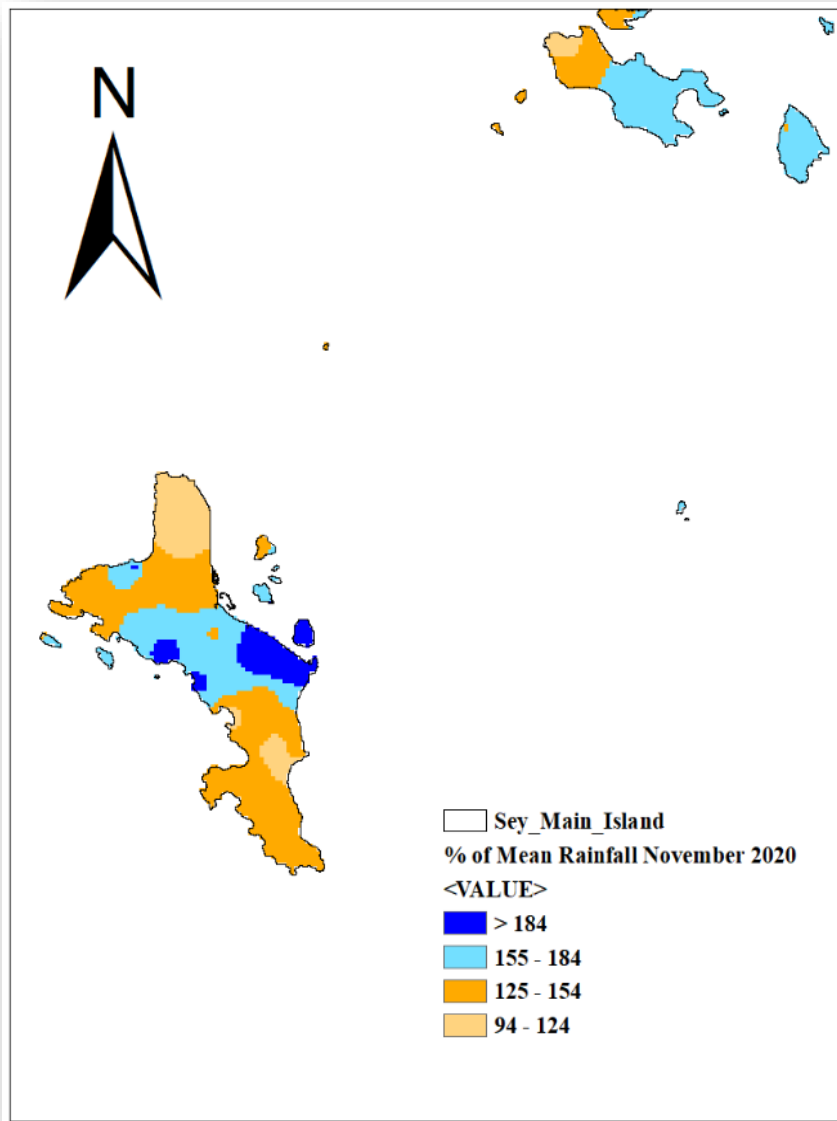


Figure 3 shows the recorded rainfall in terms of the percentage of the long-term mean for each station. Again, the areas of Airport and Cascade performed well, with the Airport station recording 221% of its long-term mean. This translates to a value of 121% excess rainfall for the station. Meanwhile, Ma-Constance got the lowest percentage of its long-term mean with an amount representing 94% of its normal rainfall, a deficit of 6%.

Figure 3: Percentage of mean Rainfall for November 2020



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STATIONS	NOVEMBER	LTM	BN	AN	BN?	AN?	ANOMALIES
Anse-Boileau	240.3	212.1	159.1	265.1	NO	NO	28.2
Anse-Forbans	271.5	195.6	146.7	244.5	NO	YES	75.9
Anse-Royale-Police-Station	207.5	192.4	144.3	240.5	NO	NO	15.1
Anse-Royale-Waterwork-PUC	254.4	225.7	169.3	282.1	NO	NO	28.7
Belombre	389.5	228.5	171.4	285.6	NO	YES	161.0
Cascade-Waterwork-PUC	512.1	255.7	191.8	319.6	NO	YES	256.4
Fairview-La-Misere	370.5	266.6	200.0	333.3	NO	YES	103.9
Hermitage-Waterwork-PUC	300	233.6	175.2	292.0	NO	YES	66.4
La-Digue-Main-Pumping-PUC	254.8	170.6	128.0	213.3	NO	YES	84.2
La-Gogue-Waterwork-PUC	182.5	186.9	140.2	233.6	NO	NO	-4.4
Le-Niol-Waterwork-PUC	336.9	264.3	198.2	330.4	NO	YES	72.6
Praslin-Airstrip	235.6	167.2	125.4	209.0	NO	YES	68.4
Quatre-Bornes-Police-Station	250.2	178.4	133.8	223.0	NO	YES	71.8
Rochon-Waterwork-PUC	367.3	261.2	195.9	326.5	NO	YES	106.1
Seychelles-International-Airport	474.8	214.7	161.0	268.4	NO	YES	260.1
Tea-Factory-Morne-Blanc	415.4	246.6	185.0	308.3	NO	YES	168.8
Prison-Montagne-Posee	397.9	307.7	230.8	384.6	NO	YES	90.2
Beau-Vallon-Sewerage-PUC	314.5	244.1	183.1	305.1	NO	YES	70.4
Barbarons-Biodiversity	398.7	230	172.5	287.5	NO	YES	168.7
Bois -De-Rose-Maison-Malavois-P	305.5	217.2	162.9	271.5	NO	YES	88.3
Grand-Anse-Waterwork-PUC	409.6	227.7	170.8	284.6	NO	YES	181.9
La-Misere-Rose	411.1	254.7	191.0	318.4	NO	YES	156.4
Ma-Constance	224.1	238.6	179.0	298.3	NO	NO	-14.5
Machabee	192.1	184.1	138.1	230.1	NO	NO	8.0
Pointe-Au-Sel	292.7	220.4	165.3	275.5	NO	YES	72.3
Port-Launay-Waterwork-PUC	369.8	273.5	205.1	341.9	NO	YES	96.3
Rawinsonde-Station	336.3	183.4	137.6	229.3	NO	YES	152.9
Roche-Caiman-PUC	281.3	216.5	162.4	270.6	NO	YES	64.8
La-Digue-Desalination-PUC	251.9	175.6	131.7	219.5	NO	YES	76.3
La-Digue-Belvue-PUC	263	170.7	128.0	213.4	NO	YES	92.3
Praslin-Mont-Plaisir-PUC	261.7	229.7	172.3	287.1	NO	NO	32.0
Praslin-Baie-Ste-Anne-PUC	257.7	200.9	150.7	251.1	NO	YES	56.8
Praslin-Fond-Boffay	291.6	184.3	138.2	230.4	NO	YES	107.3
Praslin-Desalination-PUC	275.6	175.1	131.3	218.9	NO	YES	100.5
Praslin-Salazie-PUC	239.6	167	125.3	208.8	NO	YES	72.6
Vallee-De-Mai-Shelter	307.7	198.7	149.0	248.4	NO	YES	109.0
Vallee-De-Mai-Viewing-Lodge	325	238.8	179.1	298.5	NO	YES	86.2

Table 1: Observed rainfall in November

Further analysis in table 1 above, shows that 30 stations recorded Above Normal rainfall, while the remaining 7 stations recorded rainfall amount within the Normal category. Out of the seven, two had a negative anomaly, meaning that they had a rainfall deficiency. La Gogue had a deficiency of 4.4 mm, while Ma-Constance recorded a deficiency of 14.5 mm which was also the largest rainfall deficiency.

3 DAILY WEATHER FOR NOVEMBER 2020 AT THE SEYCHELLES INTERNATIONAL AIRPORT

3.1 Daily rainfall, relative humidity, maximum and minimum temperatures in November 2020

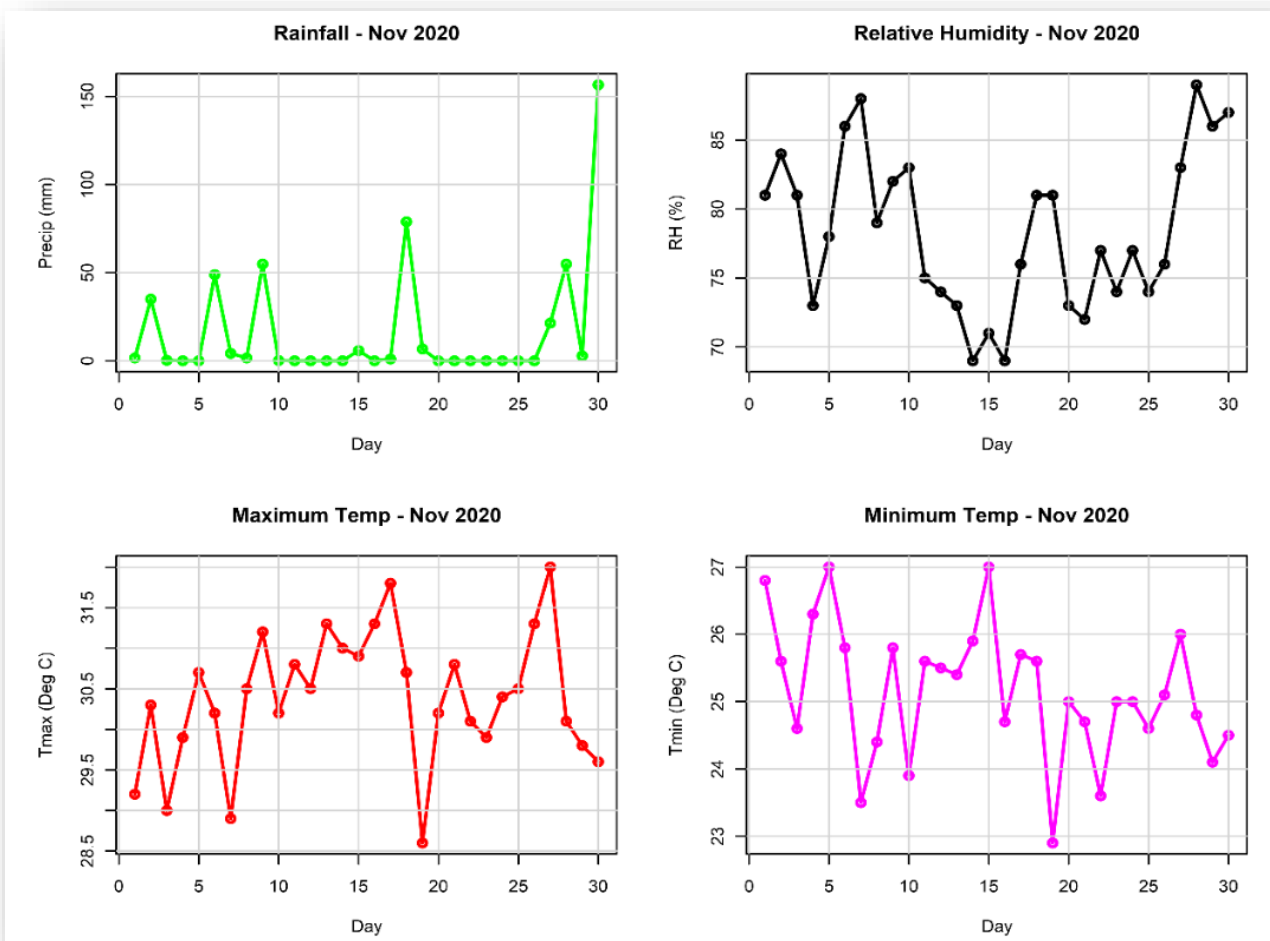


Figure 4: Daily rainfall, relative humidity, maximum and minimum temperatures in November 2020

A maximum of 156.6 mm of rainfall was recorded at the Airport Station on the 30th of November. The Monthly mean relative humidity for the month was 78.4%, a slight increase from the October value (77.5%) as the rainy season began. The highest maximum daily temperature was 32 °C recorded on the 27th, while the lowest minimum temperature was recorded on the 19th with a value of 22.9 °C.

3.2 Daily solar Radiation, Sunshine hours, Mean Sea Level Pressure and Surface wind speeds in November 2020

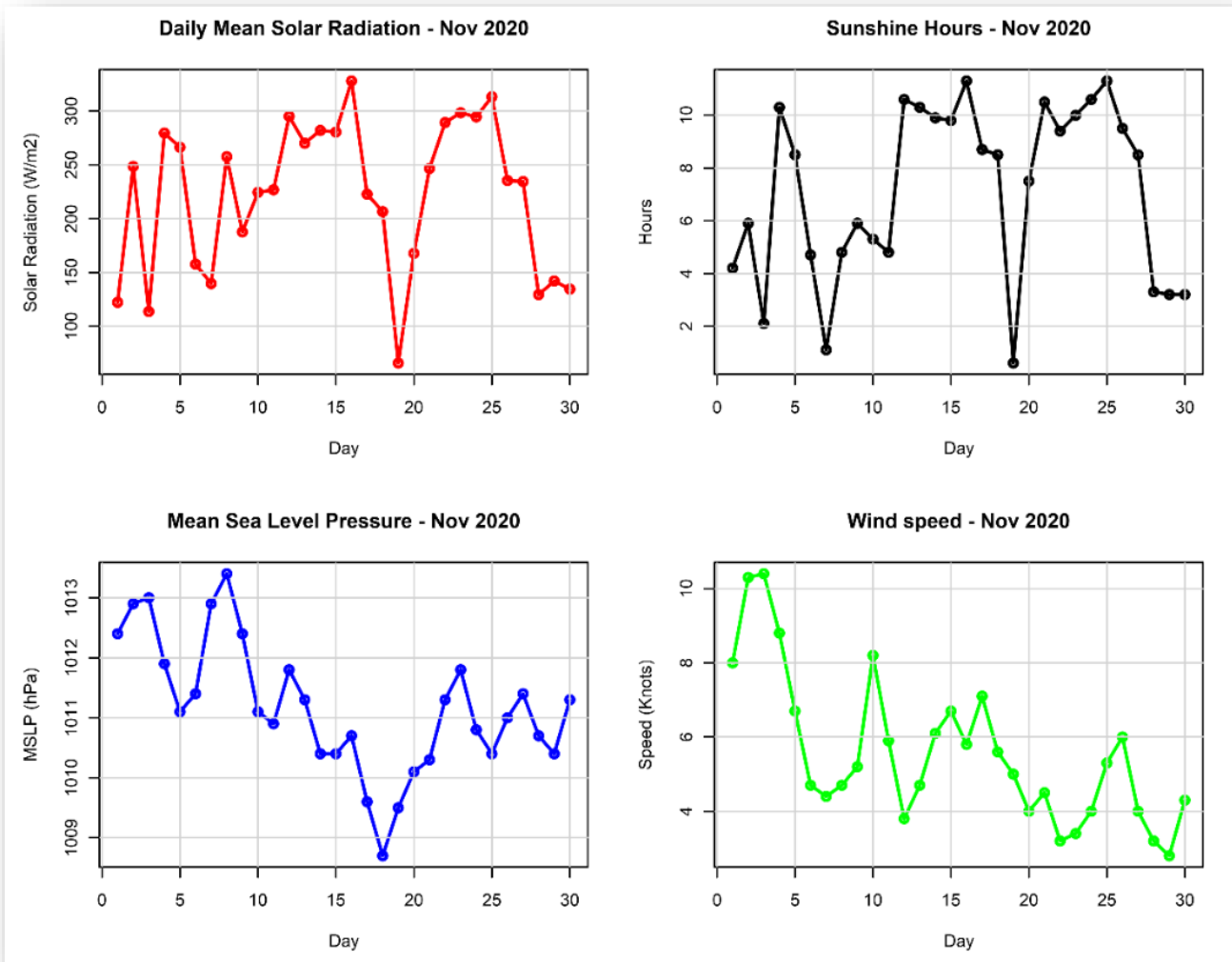


Figure 5: Daily solar Radiation, Sunshine hours, Mean Sea Level Pressure and Surface wind speeds in November 2020

The average solar radiation during the month of November was 222.1 W/m², a decrease of 27.4 W/m², while the average sunshine hours stood at 7.1 hrs (Figure 5), a decrease of 1.2 hrs. The average monthly wind speed was 5.6 Knots (~10.4 km/hr) a decrease of 1.2 Knots (~2.2 km/hr). And the average mean sea level pressure was 1011.2Hpa with the lowest being 1008.7Hpa recorded on the 18th.

4 WIND PATTERNS IN NOVEMBER 2020

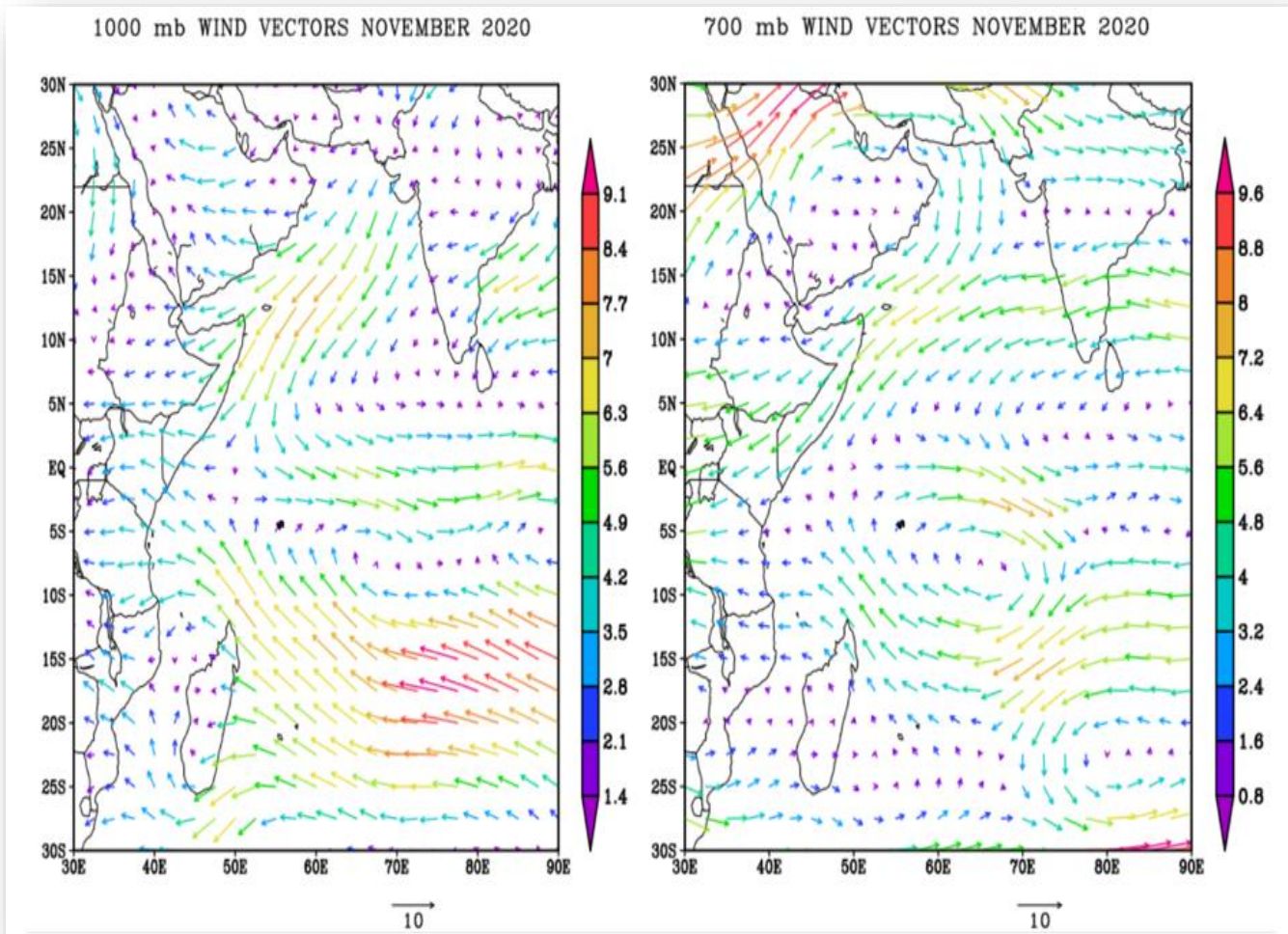


Figure 6: Surface wind flow (left) and wind flow at 700mb (right)

The surface (1000mb) wind analysis in figure 6 above shows the ITCZ located just north of Mahe, with the wind turning to a southwesterly direction as it feeds into the ITCZ. However, southeasterly wind still prevailed to the south of the inner islands. The wind has also reduced in speed, which is expected for this time of the year as our rainy season begins. At 700 mb, a low-pressure circulation is quite visible to the southeast, extending its trough northward over our area.