

## **December 2021 Weather Review**





# SEYCHELLES METEOROLOGICAL AUTHORITY

## January 2022 Climate and Weather Bulletin



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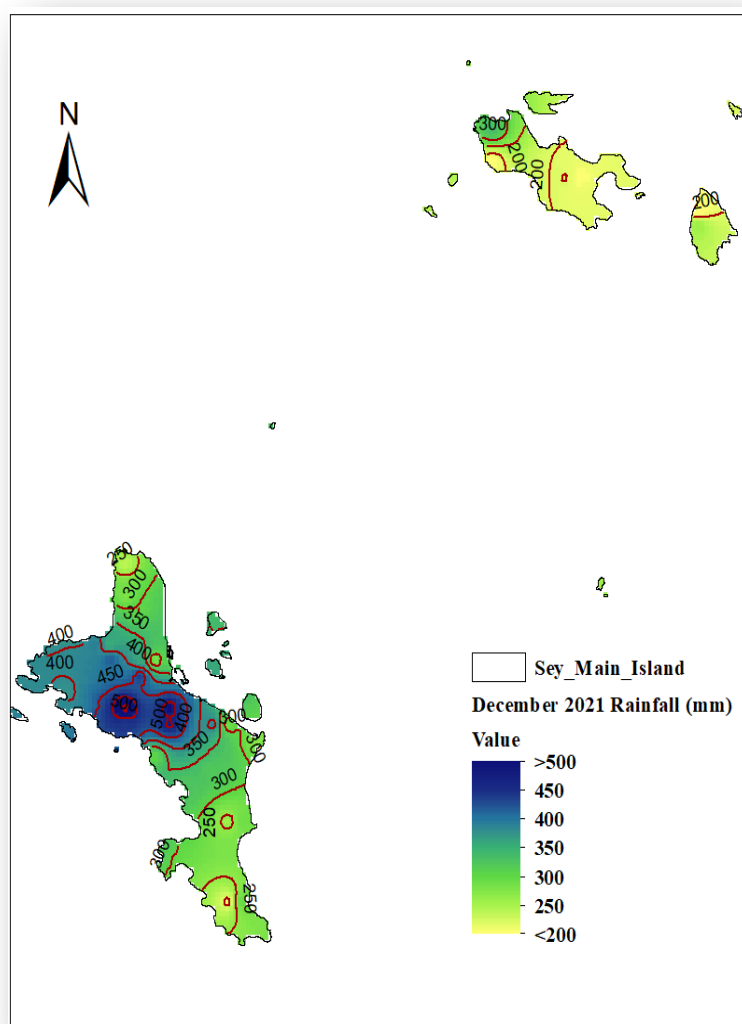
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## 1. Introduction

This bulletin reviews climate conditions over Mahe, Praslin, and La Digue and highlights the status of the climate systems during the month of December 2021. The emergence of the Intertropical Convergence Zone within the South-West Indian Ocean Basin translated to an improvement in rainfall performance during December compared to previous months.

## 2. Rainfall Performance in December 2021

### 2.1 Spatial Rainfall Distribution for December 2021



The spatial rainfall distribution for December (Figure 1) indicates that more rainfall exceeding 350mm was recorded around the central part and extending to the North-west of the main island Mahe. La Digue and Praslin recorded less than 350mm of rainfall. Tea Factory Morne Blanc was the station that recorded the highest rainfall amounting to 560.3 mm. On Praslin Island, the maximum was 340.2mm recorded at the Praslin Mont Plaisir PUC station and, on La Digue, La Gogue Waterwork PUC recorded a maximum of 260.0mm. A minimum of 166.0mm was reported at La Digue Desalination PUC Station.

*Figure 1: December 2021 Spatial Rainfall Distribution*

Comparing the rainfall recorded at the 37 stations to their respective long-term mean (Figure 2) shows that 16 out of the 37 stations recorded rainfall amounts exceeding the long-term-mean for the month of December. The central to northwestern parts of Mahe as well as the western Praslin out-performed the rest of the country by recording the highest departures from the average rainfall. Rainfall over this region ranged between 113 – 163% of the long-term-mean (Figure 3). However, the extreme Northern Mahe, eastern Praslin and La Digue, the rainfall was much less compared to the December long-term-mean, with rainfall ranging between 69 – 89%.

Table 1 summarizes December's rainfall performance. Out of the 37 stations, 5 recorded Above Normal, 27 recorded Near Normal and 5 station recorded below Normal Rainfall. Generally, the monthly rainfall performance was Near-Normal.

### 2.2 December Rainfall Totals Compared to Long-Term Mean

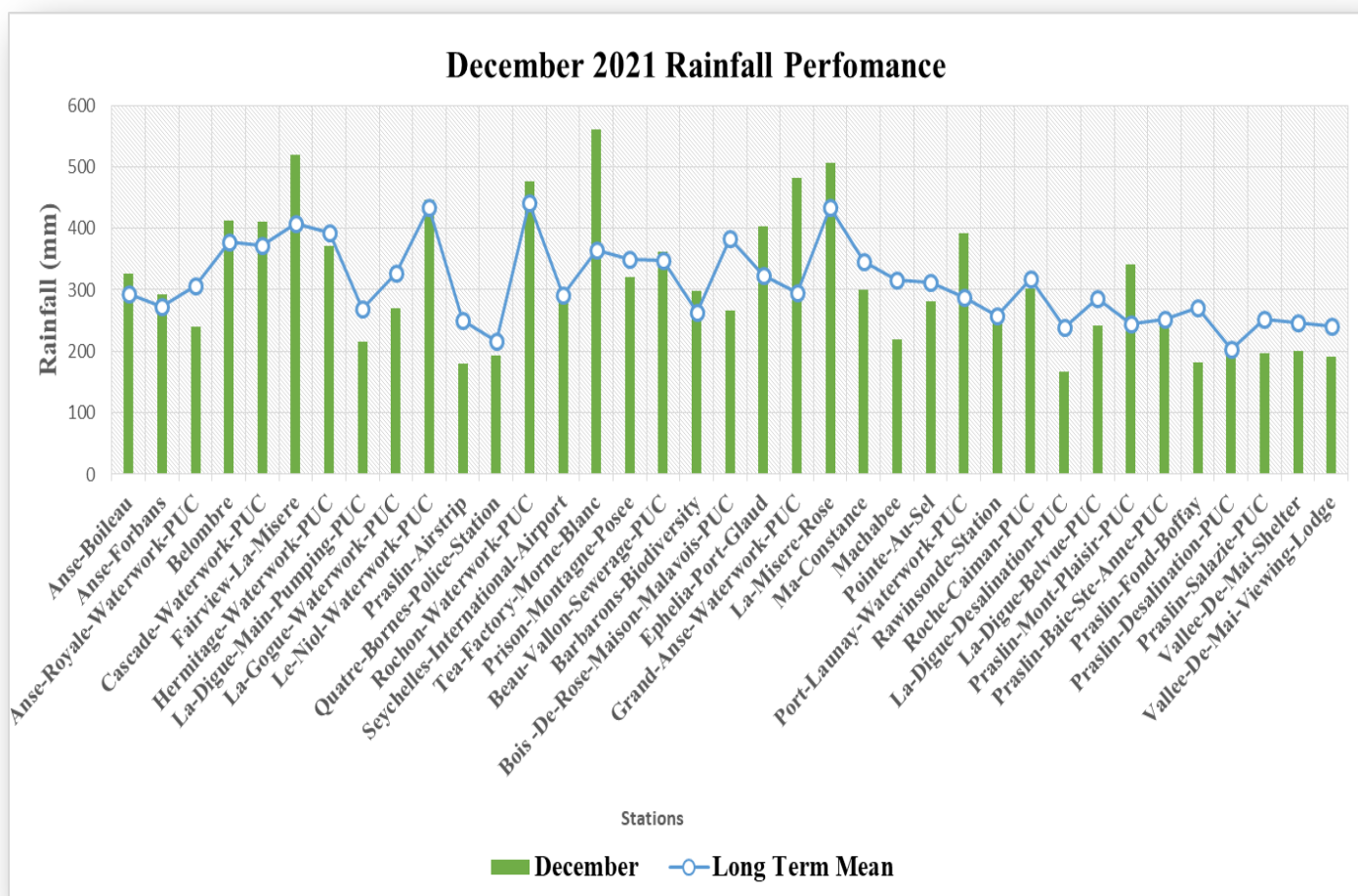
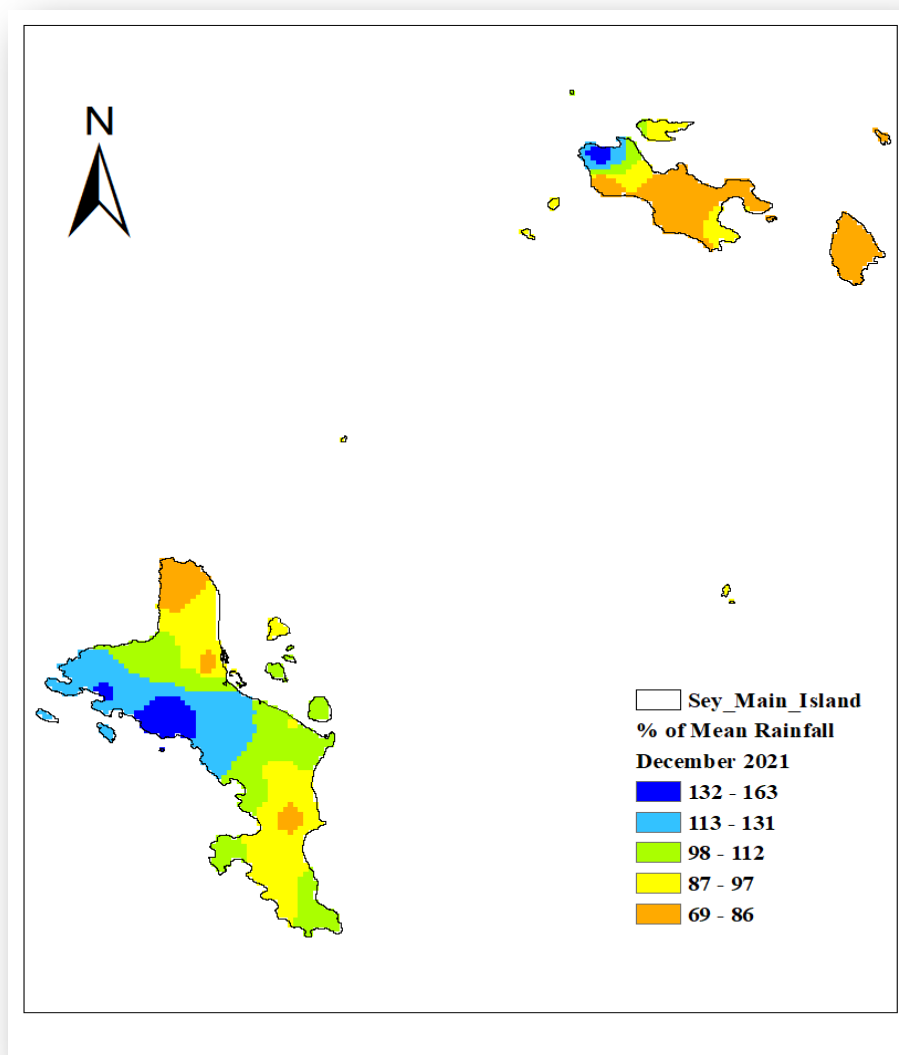


Figure 2: December 2021 rainfall totals compared to the long-term mean

## 2.3 Percentage of Mean Rainfall for December 2021



*Figure 3: Percentage of mean Rainfall for December 2021*





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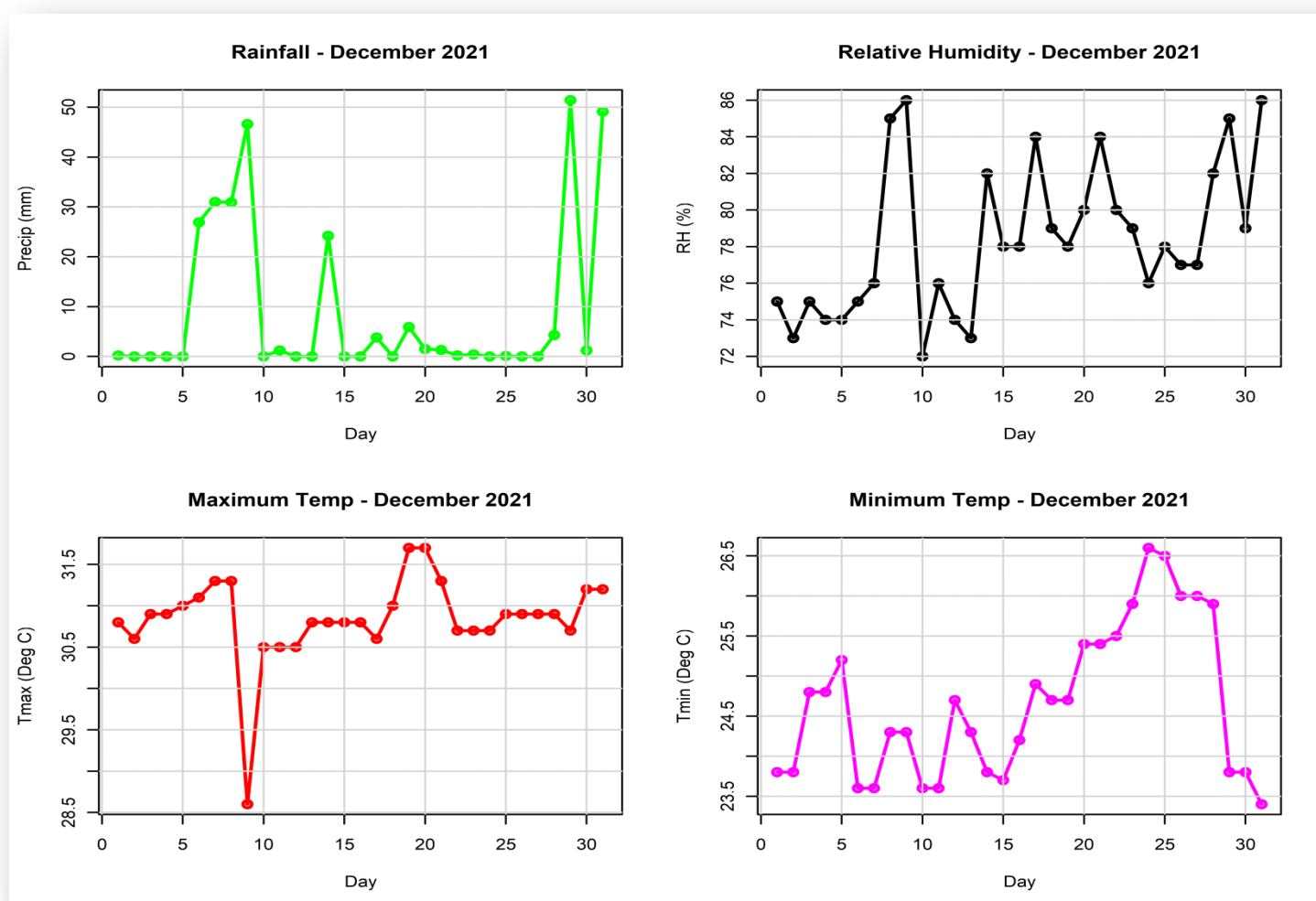


*Table 1: Rainfall performance in December*

Stations	December	LTM	BN	AN	BN?	AN?	Anomalies
Anse-Boileau	325.1	294.1	220.6	367.6	NO	NO	31.0
Anse-Forbans	292.5	272	204.0	340.0	NO	NO	20.5
Anse-Royale-Waterwork-PUC	239	307	230.3	383.8	NO	NO	-68.0
Belombre	413.2	377.1	282.8	471.4	NO	NO	36.1
Cascade-Waterwork-PUC	409.8	372.9	279.7	466.1	NO	NO	36.9
Fairview-La-Misere	519.3	408.1	306.1	510.1	NO	YES	111.2
Hermitage-Waterwork-PUC	371.2	393.4	295.1	491.8	NO	NO	-22.2
La-Digue-Main-Pumping-PUC	214.7	268.9	201.7	336.1	NO	NO	-54.2
La-Gogue-Waterwork-PUC	269	326.1	244.6	407.6	NO	NO	-57.1
Le-Niol-Waterwork-PUC	445.6	433.6	325.2	542.0	NO	NO	12.0
Praslin-Airstrip	180.1	249.6	187.2	312.0	YES	NO	-69.5
Quatre-Bornes-Police-Station	192.7	215.7	161.8	269.6	NO	NO	-23.0
Rochon-Waterwork-PUC	476	442.3	331.7	552.9	NO	NO	33.7
Seychelles-International-Airport	280.2	291.7	218.8	364.6	NO	NO	-11.5
Tea-Factory-Morne-Blanc	560.3	363.7	272.8	454.6	NO	YES	196.6
Prison-Montagne-Posee	320.6	350.2	262.7	437.8	NO	NO	-29.6
Beau-Vallon-Sewerage-PUC	362.5	347.6	260.7	434.5	NO	NO	14.9
Barbarons-Biodiversity	298.5	264	198.0	330.0	NO	NO	34.5
Bois -De-Rose-Maison-Malavois-PUC	266.3	384	288.0	480.0	YES	NO	-117.7
Ephelia-Port-Glaud	403.1	322.6	242.0	403.3	NO	NO	80.5
Grand-Anse-Waterwork-PUC	481	294.8	221.1	368.5	NO	YES	186.2
La-Misere-Rose	506.2	434.1	325.6	542.6	NO	NO	72.1
Ma-Constance	299.2	345.5	259.1	431.9	NO	NO	-46.3
Machabee	219.3	315.1	236.3	393.9	YES	NO	-95.8
Pointe-Au-Sel	281.8	312.2	234.2	390.3	NO	NO	-30.4
Port-Launay-Waterwork-PUC	392.5	288.0	216.0	360.0	NO	YES	104.5
Rawinsonde-Station	259.5	257.9	193.4	322.4	NO	NO	1.6
Roche-Caiman-PUC	301.9	317.4	238.1	396.8	NO	NO	-15.5
La-Digue-Desalination-PUC	166	238.3	178.7	297.9	YES	NO	-72.3
La-Digue-Belvue-PUC	241.2	285.5	214.1	356.9	NO	NO	-44.3
Praslin-Mont-Plaisir-PUC	340.2	244.7	183.5	305.9	NO	YES	95.5
Praslin-Baie-Ste-Anne-PUC	254.1	252.1	189.1	315.1	NO	NO	2.0
Praslin-Fond-Boffay	182.1	269.9	202.4	337.4	YES	NO	-87.8
Praslin-Desalination-PUC	196.4	203.3	152.5	254.1	NO	NO	-6.9
Praslin-Salazie-PUC	197.1	252.2	189.2	315.3	NO	NO	-55.1
Vallee-De-Mai-Shelter	201	245.6	184.2	307.0	NO	NO	-44.6
Vallee-De-Mai-Viewing-Lodge	190	241	180.8	301.3	NO	NO	-51.0

### 3. Daily Weather for December 2021 at the Seychelles International Airport

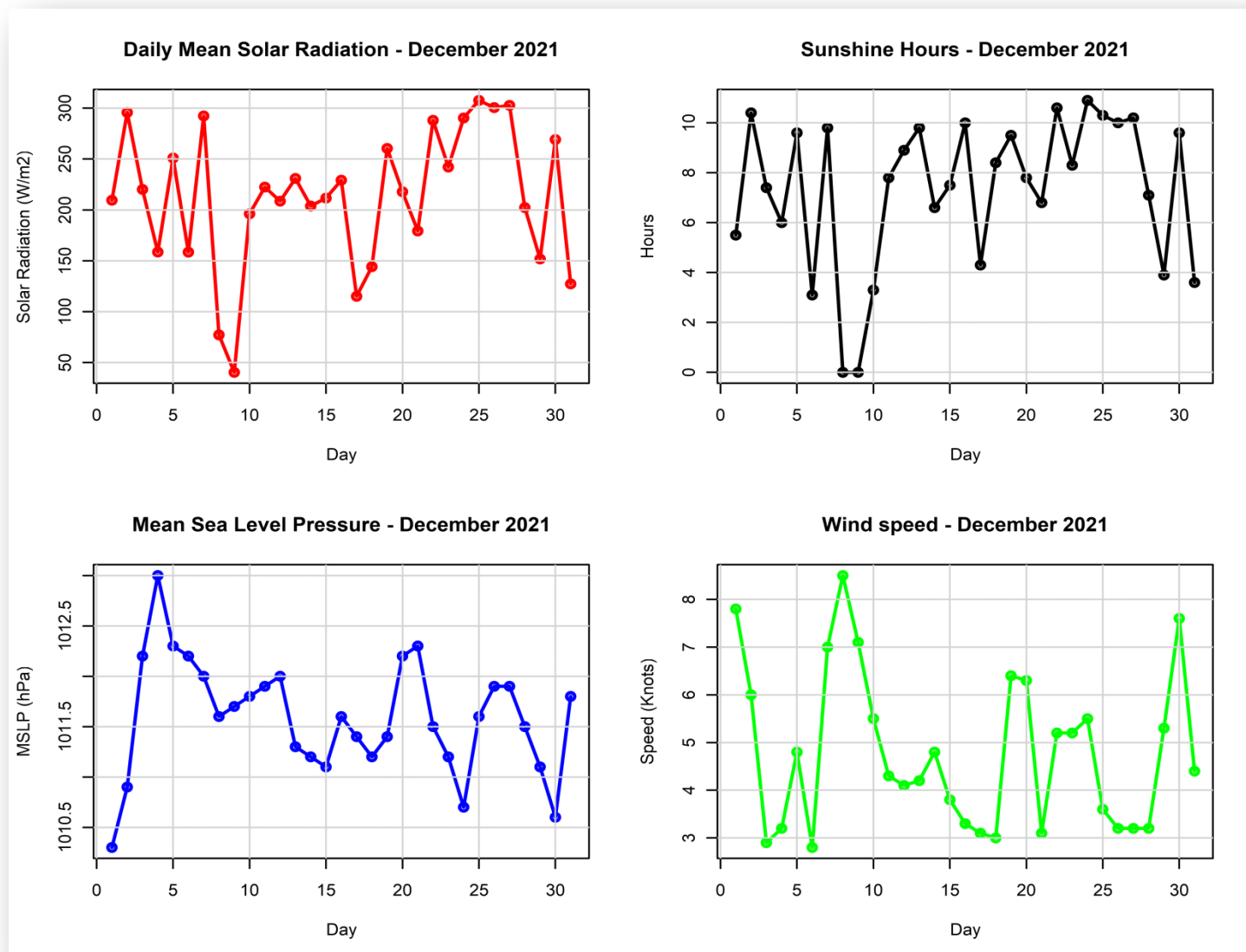
#### 3.1 Daily rainfall, relative humidity, maximum and minimum temperatures in December 2021



*Figure 4: Daily rainfall, relative humidity, maximum and minimum temperatures in December 2021*

The highest recorded daily rainfall in December at the Airport Station was 51.4 mm recorded on the 29<sup>th</sup>, with 10 dry days during the month. The trend for relative humidity during the month of December indicates an increasing trend with the relative humidity increasing towards the end of the month (Figure 4). The highest relative humidity was recorded on the 9<sup>th</sup> and 31<sup>st</sup> with a value of 86%. The daily maximum temperature generally remained above 30.5°C with a maximum of 31.7°C recorded on the 19<sup>th</sup> and 20<sup>th</sup>. The minimum temperature varied between 23.4°C to 26.6°C with the lowest of 23.4°C reported on 31<sup>st</sup>, while the highest value of 26.6°C reported on the 24<sup>th</sup>.

### 3.2 Daily solar Radiation, Sunshine hours, Mean Sea Level Pressure, and Surface wind speeds in December 2021

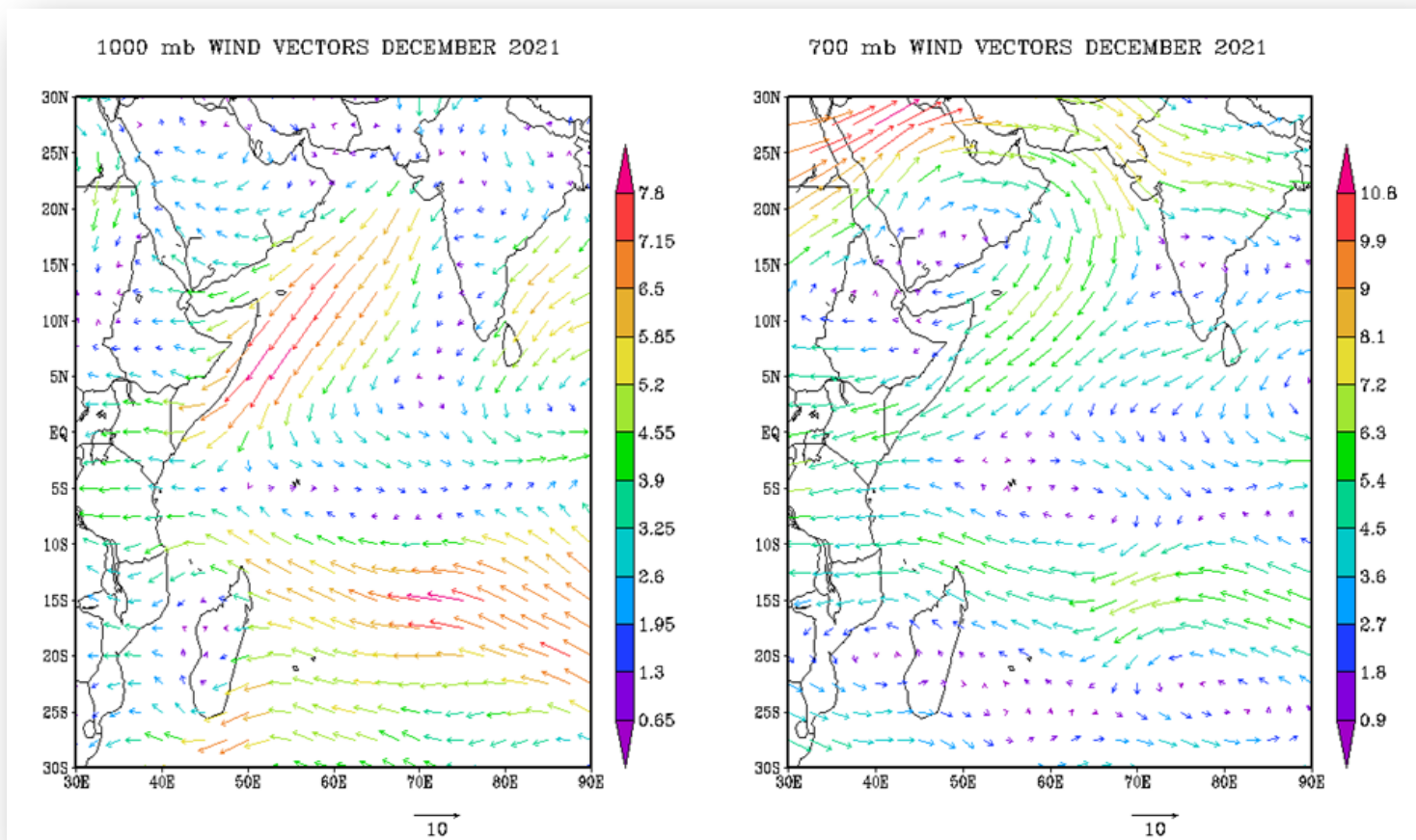


*Figure 5: Daily solar Radiation, Sunshine hours, Mean Sea Level Pressure, and Surface wind speeds in December 2021*

On average, the mean solar radiation during the month of December remained mostly above 150 W/m<sup>2</sup>, and the diurnal variation closely matched the sunshine hours. The wind speed remained light, ranging between 2.8-8.5 Knots, with an average of 4.8 knots for the entire month. Meanwhile the mean sea level pressure ranged between 1010.3-1013.0hPa (Figure 5).



## 4. Wind Patterns in December 2021



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

The analysis (Figure 6) indicates that light winds prevailed over the Seychelles during the month of December. The emergence of the Intertropical Convergence Zone (ITCZ) is apparent at the surface (1000mb) at around 5° South of the equator. The analysis at 700mb shows the presence of the Arabian High over the Arabian peninsula driving the North-Westerly flow of winds over the Seychelles. This configuration is typical during the rainy season signaling an increase in rainfall amounts.