

October 2021 Weather Review





SEYCHELLES METEOROLOGICAL AUTHORITY

November 2021 Climate and Weather Bulletin



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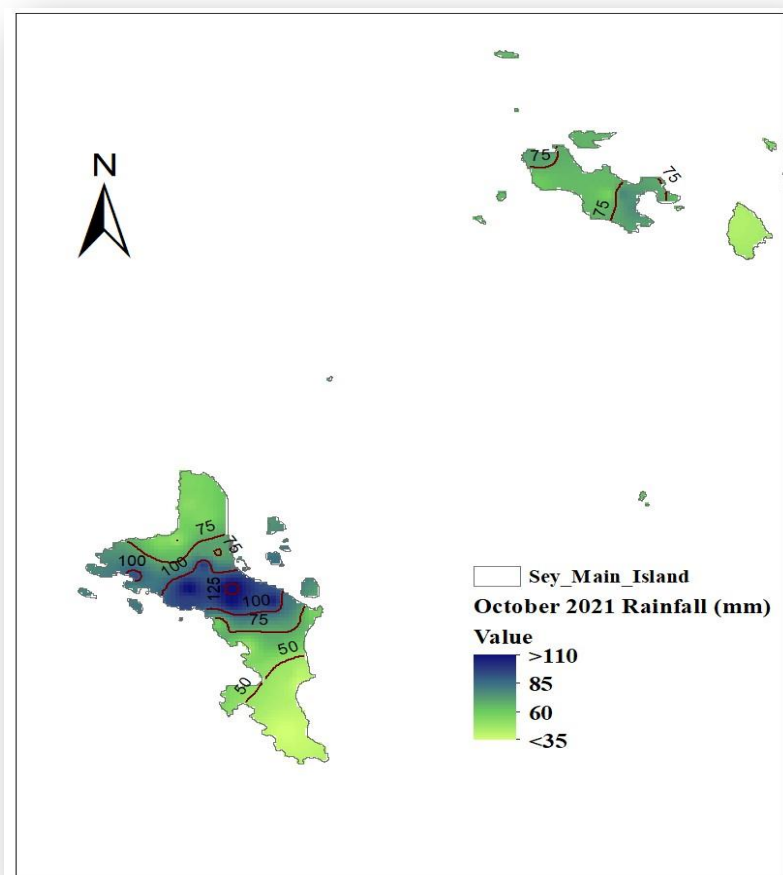
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1. Introduction

This bulletin reviews climate conditions over Mahe, Praslin, and La Digue, and highlights the status of the climate systems during the month of October 2021. The month of October was generally a dry month with a significant drop in rainfall amounts over Mahe, Praslin, and La Digue. The Equatorial Trough remained more active to the east, while the western side of the South-West Indian Ocean basin remained clear of any significant convective activities.

2. Rainfall Performance in October 2021

2.1 Spatial Rainfall Distribution for October 2021



The spatial rainfall distribution (Figure 1) shows that most of the rainfall for the month of October was recorded over the central part of Mahe, around the La Misere area with rainfall amounts slightly above 100 mm. A maximum of 131.8 mm was recorded at the Fairview station at La Misere. The northern and southern tips of Mahe, Praslin and La Digue, received rainfall amounts below the 75mm mark. The minimum of 30.8 mm was recorded at the Quatre Bornes station in the south of Mahe. During the month of October a reduction in rainfall was observed over the Inner Islands compared to the month of September.

Figure 1: October 2021 Spatial Rainfall Distribution

Figure 2 show that all stations recorded rainfall amounts well below their respective long-term mean during the month of October. The extent of the dry condition can be seen in Figure 3, which shows that the rainfall recorded over most stations was below 50% of their respective long-term mean. This means that most stations received less than half of their normal rainfall for October. However, central Mahe and large parts of Praslin performed slightly better in relation to their long-term mean. The driest station was Quartre Bornes which only managed to record 19.4 % of the normal rainfall for October. Overall, October was a very dry month whereby all stations reported below normal rainfall (Table 1).

2.2 October Rainfall Totals Compared to Long-Term Mean

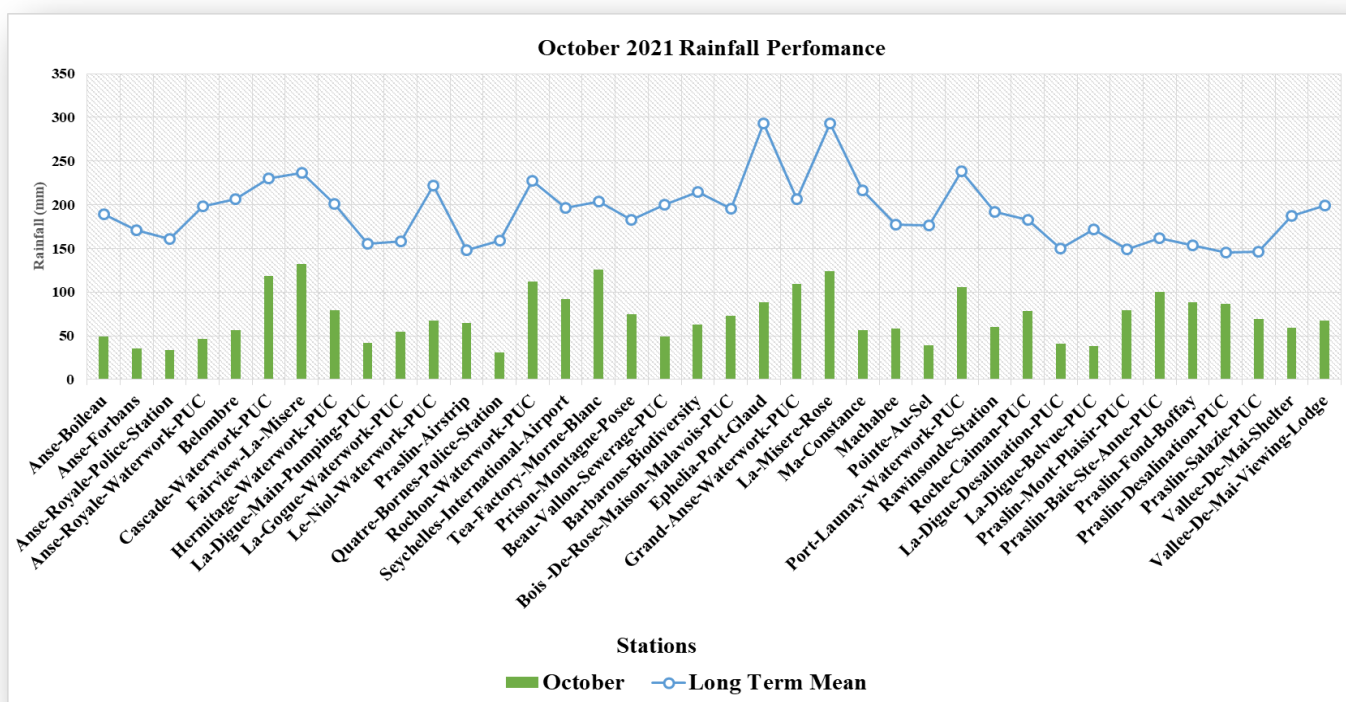


Figure 2: October 2021 Rainfall totals compared to the long-term mean

2.3 Percentage of Mean Rainfall for October 2021

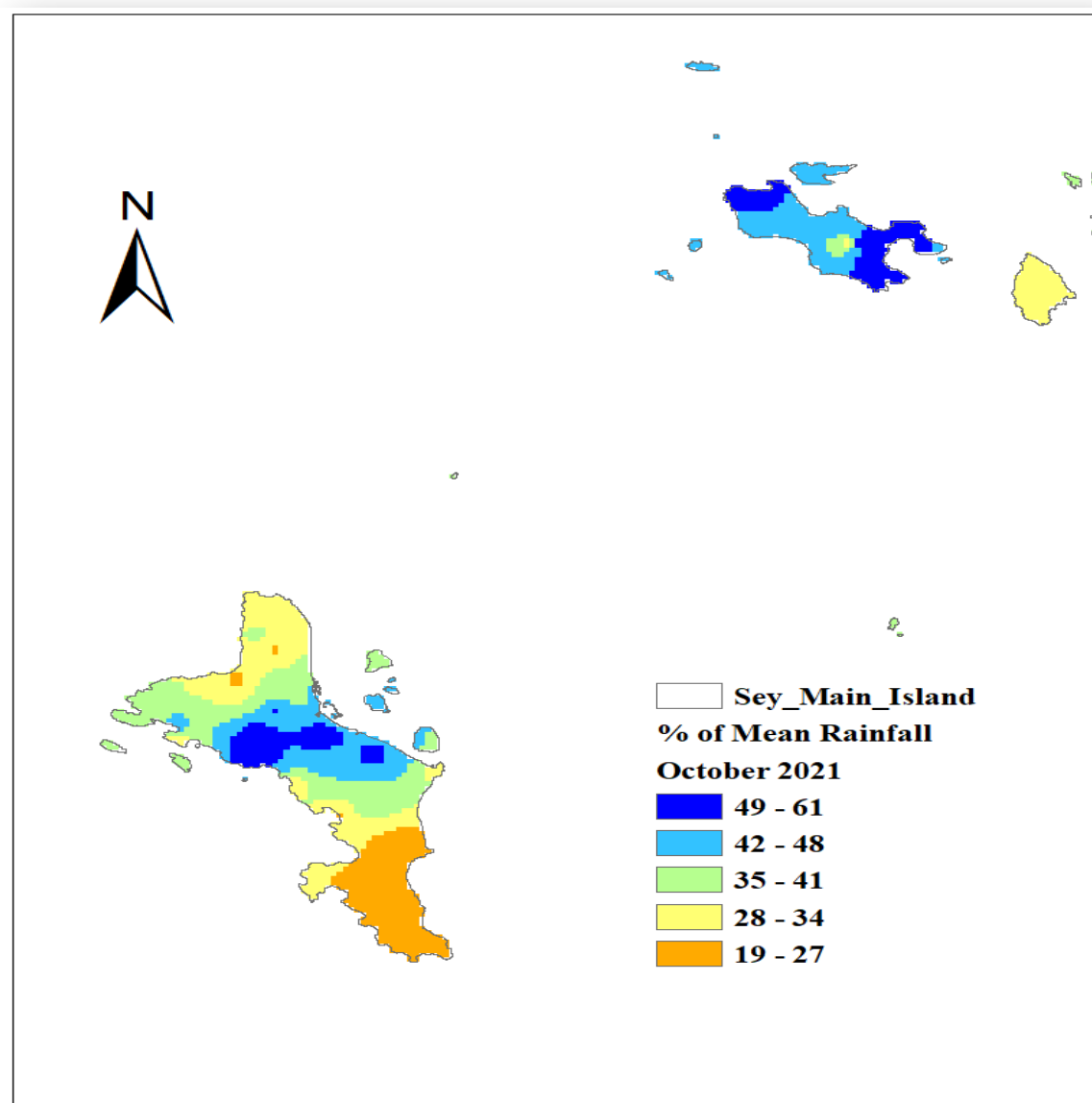


Figure 3: Percentage of mean Rainfall for October 2021



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Table 1: Rainfall performance in October

| Stations | October | Long Term Mean | BN | AN | BN? | AN? | Anomalies |
|-----------------------------------|---------|----------------|---------|---------|-----|-----|-----------|
| Anse-Boileau | 49.1 | 189.2 | 141.9 | 236.5 | YES | NO | -140.1 |
| Anse-Forbans | 35.1 | 170.5 | 127.875 | 213.125 | YES | NO | -135.4 |
| Anse-Royale-Police-Station | 33.3 | 161.3 | 120.975 | 201.625 | YES | NO | -128.0 |
| Anse-Royale-Waterwork-PUC | 46.9 | 198.1 | 148.575 | 247.625 | YES | NO | -151.2 |
| Belombre | 56.1 | 206.1 | 154.575 | 257.625 | YES | NO | -150.0 |
| Cascade-Waterwork-PUC | 118.3 | 229.8 | 172.35 | 287.25 | YES | NO | -111.5 |
| Fairview-La-Misere | 131.8 | 236.5 | 177.375 | 295.625 | YES | NO | -104.7 |
| Hermitage-Waterwork-PUC | 79.2 | 200.7 | 150.525 | 250.875 | YES | NO | -121.5 |
| La-Digue-Main-Pumping-PUC | 42 | 155.7 | 116.775 | 194.625 | YES | NO | -113.7 |
| La-Gogue-Waterwork-PUC | 54.6 | 158.5 | 118.875 | 198.125 | YES | NO | -103.9 |
| Le-Niol-Waterwork-PUC | 67.4 | 221.6 | 166.2 | 277 | YES | NO | -154.2 |
| Praslin-Airstrip | 64.7 | 148.4 | 111.3 | 185.5 | YES | NO | -83.7 |
| Quatre-Bornes-Police-Station | 30.8 | 159.1 | 119.325 | 198.875 | YES | NO | -128.3 |
| Rochon-Waterwork-PUC | 112.3 | 227.6 | 170.7 | 284.5 | YES | NO | -115.3 |
| Seychelles-International-Airport | 92 | 196.5 | 147.375 | 245.625 | YES | NO | -104.5 |
| Tea-Factory-Morne-Blanc | 125.8 | 204 | 153 | 255 | YES | NO | -78.2 |
| Prison-Montagne-Posee | 74.6 | 182.4 | 136.8 | 228 | YES | NO | -107.8 |
| Beau-Vallon-Sewerage-PUC | 49.1 | 200.3 | 150.225 | 250.375 | YES | NO | -151.2 |
| Barbarons-Biodiversity | 63.1 | 215 | 161.25 | 268.75 | YES | NO | -151.9 |
| Bois -De-Rose-Maison-Malavois-PUC | 72.6 | 195.4 | 146.55 | 244.25 | YES | NO | -122.8 |
| Ephelia-Port-Glaud | 88.2 | 293.5 | 220.125 | 366.875 | YES | NO | -205.3 |
| Grand-Anse-Waterwork-PUC | 109.4 | 206.5 | 154.875 | 258.125 | YES | NO | -97.1 |
| La-Misere-Rose | 124.2 | 292.7 | 219.525 | 365.875 | YES | NO | -168.5 |
| Ma-Constance | 56.6 | 216.8 | 162.6 | 271 | YES | NO | -160.2 |
| Machabee | 58 | 177 | 132.75 | 221.25 | YES | NO | -119.0 |
| Pointe-Au-Sel | 39.1 | 176.7 | 132.525 | 220.875 | YES | NO | -137.6 |
| Port-Launay-Waterwork-PUC | 105.7 | 238.7 | 179.025 | 298.375 | YES | NO | -133.0 |
| Rawinsonde-Station | 60 | 192.3 | 144.225 | 240.375 | YES | NO | -132.3 |
| Roche-Caiman-PUC | 78.4 | 182.4 | 136.8 | 228 | YES | NO | -104.0 |
| La-Digue-Desalination-PUC | 41 | 149.9 | 112.425 | 187.375 | YES | NO | -108.9 |
| La-Digue-Belvue-PUC | 38.4 | 172.2 | 129.15 | 215.25 | YES | NO | -133.8 |
| Praslin-Mont-Plaisir-PUC | 79 | 149.4 | 112.05 | 186.75 | YES | NO | -70.4 |
| Praslin-Baie-St-Anne-PUC | 99.8 | 162.2 | 121.65 | 202.75 | YES | NO | -62.4 |
| Praslin-Fond-Boffay | 88.1 | 153.7 | 115.275 | 192.125 | YES | NO | -65.6 |
| Praslin-Desalination-PUC | 86.7 | 145.4 | 109.05 | 181.75 | YES | NO | -58.7 |
| Praslin-Salazie-PUC | 69.6 | 146.3 | 109.725 | 182.875 | YES | NO | -76.7 |
| Vallee-De-Mai-Shelter | 59.5 | 187.6 | 140.7 | 234.5 | YES | NO | -128.1 |
| Vallee-De-Mai-Viewing-Lodge | 67.5 | 199 | 149.25 | 248.75 | YES | NO | -131.5 |

3. Daily Weather for October 2021 at the Seychelles International Airport

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

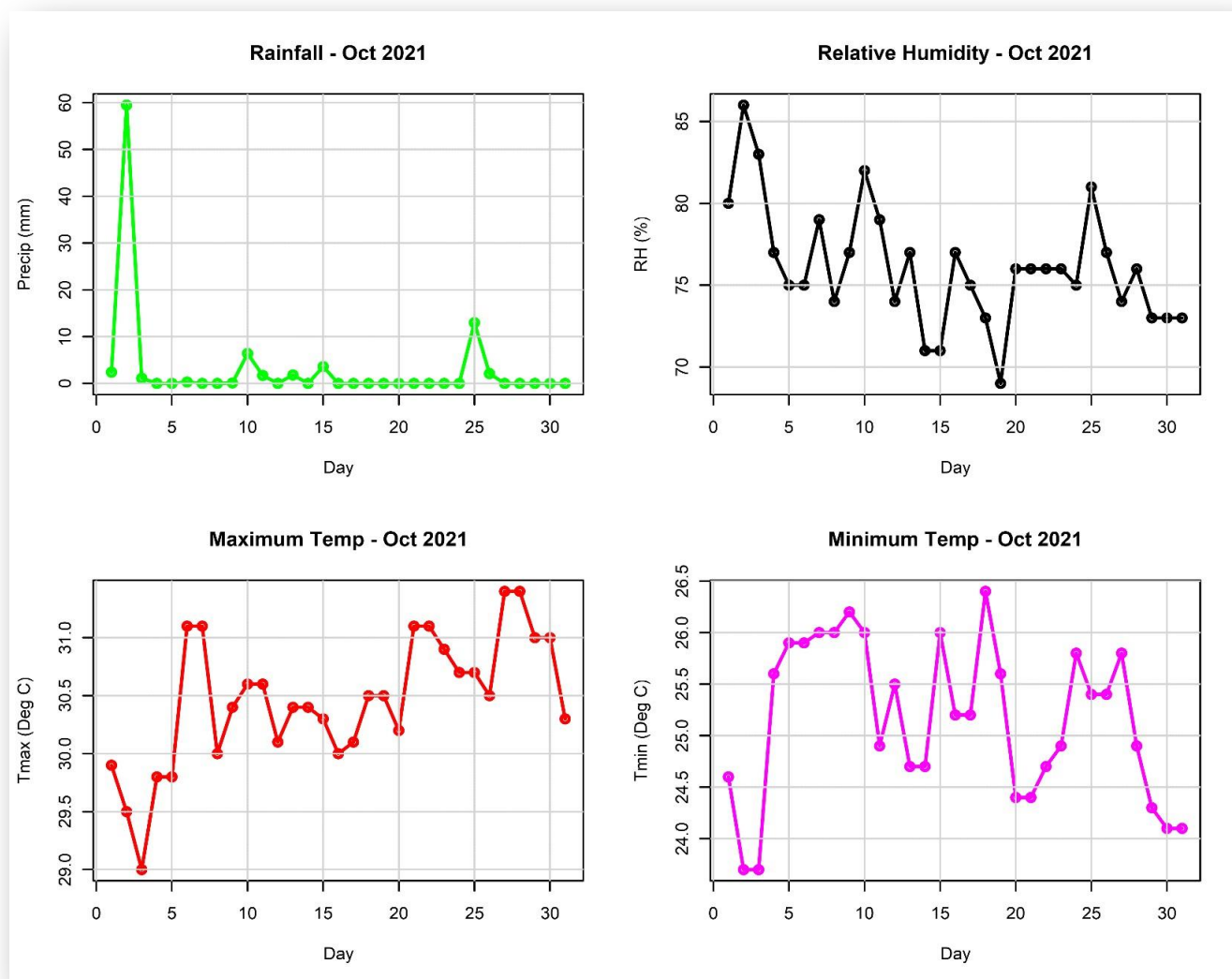


Figure 4: Daily rainfall, relative humidity, maximum and minimum temperatures in October 2021

The highest daily rainfall recorded at the Airport Station was 59.5 mm on the 2nd, with 17 dry days during the month. The maximum Relative Humidity of 86% was also recorded on the 2nd, and the minimum of 69% was recorded on the 19th. The daily maximum temperature was mostly above 30.0°C for the entire month apart from the first few days whereby the maximum temperature was below the 30.0°C mark. The highest temperature for October was 31.4°C recorded on the 27th and 28th while the lowest temperature of 23.7°C was recorded on the 2nd of October.

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

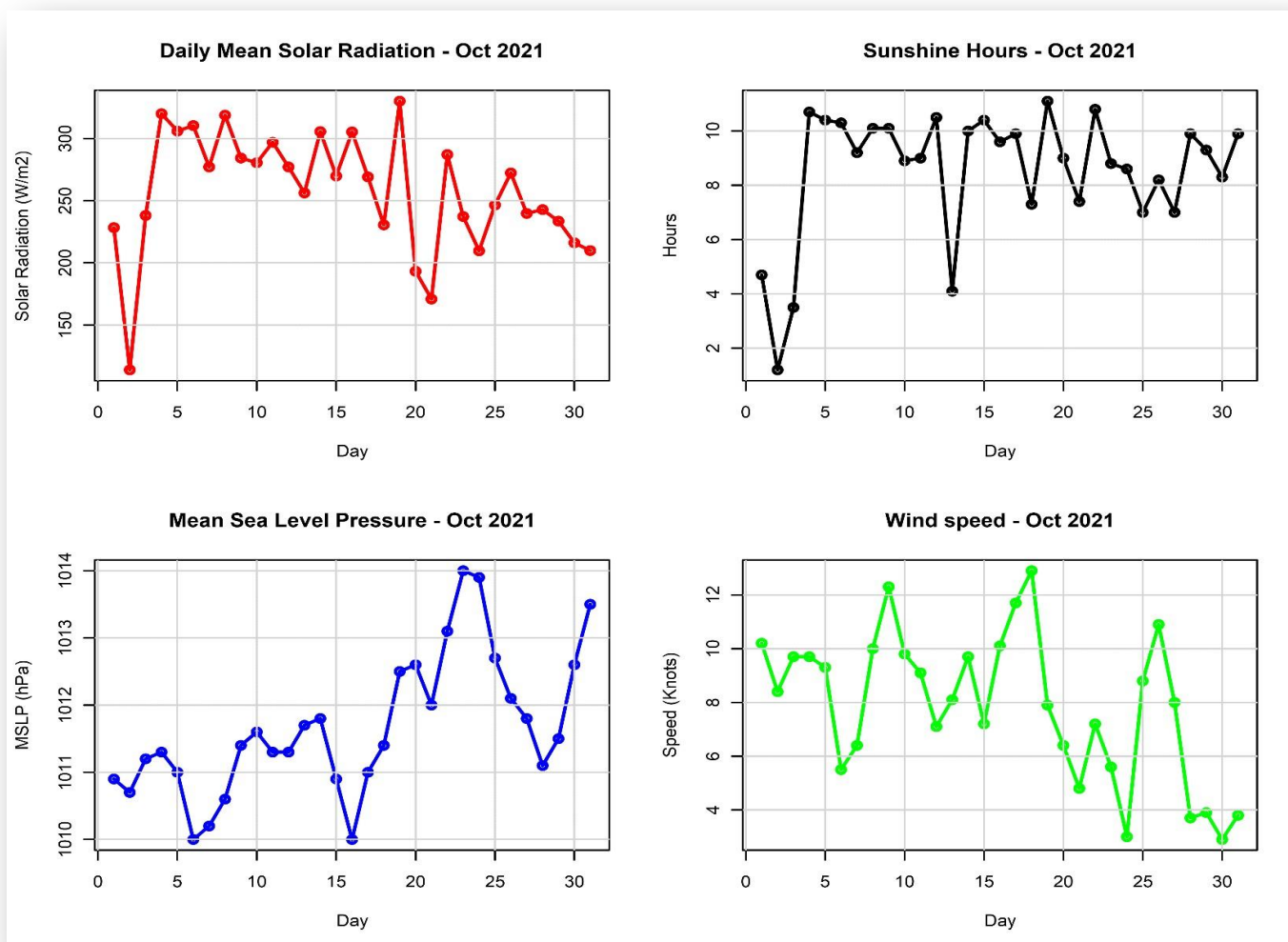


Figure 5: Daily solar Radiation, Sunshine hours, Mean Sea Level Pressure, and Surface wind speeds in October 2021

The average mean daily solar radiation during October was 257.3 W/m², with a maximum of 330.1 W/m² recorded on the 19th and a minimum of 113.7 W/m² on the 2nd. The diurnal variation of the mean solar radiation closely matched the sunshine hours with a maximum 11.1 hours of sunshine recorded on the 19th. The wind strength ranged roughly between 4-12 Knots which showed a reduction compared to the month of September. The mean sea level pressure showed a positive trend with the highest value of 1014 HPA recorded on the 23rd (Figure 5).

4. Wind Patterns in October 2021

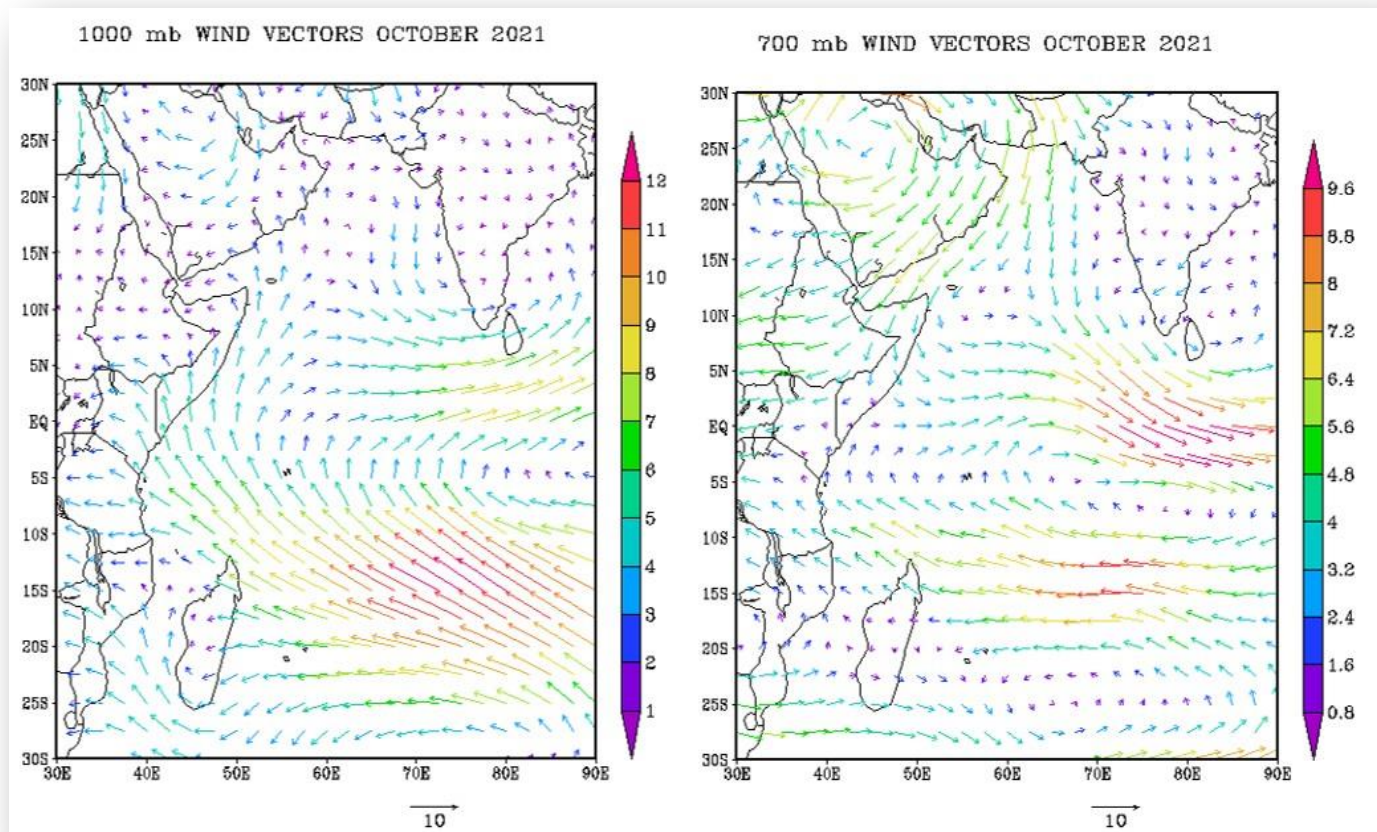


Figure 6: Surface wind flow (left) and wind flow at 700mb (right)

The surface analysis at 1000 mb (Figure 6) shows a Near Equatorial Trough configuration being more active to the east of the main Island Mahe, with average wind speed ranging between 4 and 5 Knots. At 700 mb the same configuration can be seen, however a more pronounced presence of the Arabian high can be seen to the north of Mahe. The weak ridge from the north impeded convective development over the Inner Islands and contributed to the reduction in rainfall for the month of October.