

# STATE OF CLIMATE

# 2025

AUGUST 2026

**Seychelles Meteorological Authority**

# THE STATE OF CLIMATE 2025 FOR SEYCHELLES

# AUGUST - 2026

## SEYCHELLES METEOROLOGICAL AUTHORITY (SMA)

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## ABBREVIATIONS

| | |
|---|---|
| AMJ | April-May-June |
| DJF | December-January-February |
| DRMD | Department of Risk and Disaster Management |
| ECMWF | European Centre for Medium Range Weather Forecasting |
| ENSO | El Niño-Southern Oscillation |
| IOD | Indian Ocean Dipole |
| ITCZ | Intertropical Convergence Zone |
| JAS | July-August-September |
| JFM | January-February-March |
| JJA | June-July-August |
| MAM | March-April-May |
| MJO | Madden Julian Oscillation |
| NOAA | National Oceanic and Atmospheric Administrative |
| OND | October-November-December |
| PRCP | Precipitation |
| PUC | Public Utility Cooperation |
| SMA | Seychelles Meteorological Authority |
| SON | September-October-November |
| SPI | Standardized Precipitation Index |
| SPI-3 | Standardized Precipitation Index at 3-month |
| SPI-6 | Standardized Precipitation Index at 6-month |
| SSTs | Sea surface temperatures |
| TMax | Maximum Temperature |
| TMean | Mean Temperature |
| TMin | Minimum Temperature |
| WMO | World Meteorological Organization |

## FOREWORD

Seychelles, like many Small Island Developing States, is increasingly experiencing the impacts of climate change and variability, with implications for key sectors including water resources, agriculture, fisheries, tourism, public health, energy, infrastructure and other climate-sensitive activities. In this context, continuous monitoring, assessment and dissemination of reliable weather and climate information are essential for improving understanding of Seychelles' changing climate and supporting evidence-based adaptation, resilience and risk-reduction efforts.

The Seychelles Meteorological Authority (SMA), as the national institution responsible for meteorological and climate services, plays a central role in monitoring and documenting the country's climate. The Annual State of the Climate Report provides a comprehensive assessment of observed climate conditions, trends, variability, and significant events during the year, placing them within the context of historical climate records. The report is intended to provide an accessible and scientifically robust source of climate information for decision-makers, policymakers, researchers, development partners, the private sector and the public, thereby supporting climate-informed planning and decision-making.

This 2025 State of the Climate Report marks the first edition of this important publication by the Seychelles Meteorological Authority. Its development represents a significant step towards strengthening systematic climate monitoring, assessment and reporting in Seychelles and contributes to the implementation of the National Framework for Climate Services. The production of this report has been made possible through the valuable support of ClimSA project activities, which has contributed to strengthening climate services and the capacity to generate and communicate climate information for decision-making.

The preparation of this inaugural report would not have been possible without the commitment and collaboration of the SMA team and the support of national stakeholders and partners. We extend our sincere appreciation to all those who contributed data, technical expertise, analysis, review, and guidance towards its development. Their continued collaboration is essential as SMA aspires to establish the State of the Climate Report as a regular and authoritative reference on Seychelles' climate.

Mr. Vincent Josee Amelie

Chief Executive Officer (CEO)

Seychelles Meteorological Authority

# 1. INTRODUCTION

## 1.1. Purpose and Scope of the Report

Climate is a fundamental component of the natural environment and an important determinant of Seychelles' natural resources, ecosystems, economy and societal well-being. Its influence extends across a wide range of sectors, including water resources, agriculture, fisheries, tourism, infrastructure, public health and disaster risk management. As a Small Island Developing State, Seychelles is particularly sensitive to variations in climate and to the growing impacts of climate change, making reliable climate observations, monitoring and information essential for national planning. Such information supports informed decision-making, sustainable development and climate adaptation, while strengthening the protection of communities and natural ecosystems against adverse climate extremes.

The preparation of the *State of Climate Report 2025* is therefore an important contribution to strengthening the national understanding of climate conditions and emerging trends. This responsibility is underpinned by the mandate of the Seychelles Meteorological Authority (SMA), established under the Meteorological Act of 2015, to provide early warning on weather and climate phenomena, maintain and develop meteorological observations, and provide authoritative meteorological and climate information to government and other stakeholders. The report also supports Seychelles' broader climate policy framework, including the National Climate Change Policy (2020), which provides a framework for integrating climate mitigation and adaptation considerations across national sectors and the Early Warning for All initiatives.

The 2025 Annual state of climate report for Seychelles, therefore, provides a comprehensive overview of the annual climatic conditions of the country. The report reveals key rainfall and temperature, wind, sunshine, sea surface temperature and extreme weather events trends. It also offers a historical context for observed climate patterns and severe weather occurrences. This report therefore aims to inform decision-makers, researchers and the general public about the state of the 2025 climate variability and its implications for critical sectors such as tourism, water resources, agriculture, fisheries, energy, public health and disaster risk management among others.

Generally, the year 2025 was marked by significant climatic variability across Seychelles, characterised by notable temperature anomalies, episodes of sporadic intense rainfall and prolonged periods of below-normal rainfall. Drought conditions affected several periods of the year, contributing to reduced freshwater replenishment of reservoirs and prompting the Public

Utilities Corporation (PUC) to implement water rationing measures to maintain domestic water supply to communities. The observed variability in climate conditions and weather patterns during 2025 was associated with the combined influence of large-scale and regional climate drivers, including the state and evolution of the El Niño-Southern Oscillation (ENSO), the Indian Ocean Dipole (IOD), the passage and influence of tropical weather systems, and the seasonal migration of the Intertropical Convergence Zone (ITCZ). These interacting climate drivers contributed to variations in rainfall distribution, temperature, atmospheric circulation, and the occurrence of extreme weather events across the country during the year.

## 1.2. Data Sources and Methodologies

The analysis and information presented in this report is based on the data collected from SMA observation networks while supplementary gridded data from NOAA and ECMWF are utilized to support generation of regional patterns of wind and sea surface temperature.

The report is structured to present monthly, seasonal and annual perspectives on rainfall and temperature extreme weather events as well as key climate drivers of 2025. For this report, the period 1991-2020 is used as the climate reference period designated by the World Meteorological Organization (WMO). Therefore, the climate analyses were assessed against the reference period. Further, throughout the document, the usage of the terms “above/below average” refers specifically to the climatological reference period.

The Standardized Precipitation Index (SPI) was used to assess meteorological drought conditions across Mahe and the Inner Islands. Drought events and their characteristics were identified using the approach adopted by McKee et al. (1993). A drought event was considered to initiate when the SPI fell below -1.0. Drought duration was defined as the number of months from the first month in which the SPI goes lower than -1 to the last month with a negative value before the indicator returns to positive values. An isolated month with SPI <-1.0 was also considered a drought event.

# 2. RAINFALL

## 2.1. Spatial distribution of Annual Rainfall in 2025

Figure 1(a) shows the spatial distribution of annual rainfall accumulation across Mahe and Praslin from January to December 2025. Across Mahe, annual rainfall totals ranged from approximately 1,596 mm to 2,949 mm. The highest rainfall accumulation was observed over the northwestern part of the island, while the lowest totals were recorded in the extreme north and south. Therefore, much of western and central Mahe, as well as parts of the eastern side of the island, received between 2,000 mm to 2,949 mm during the year, while rainfall totals below 2,000 mm were mainly observed across the northern and southern parts of the island. Across Praslin Island, annual rainfall totals ranged from approximately 1,200 mm to 2,156 mm. The lowest accumulations were observed over the northwestern and western parts of the island, while the highest totals occurred over the southeastern part. Rainfall generally increased from west to east across Praslin.

Figure 1(b) shows the spatial distribution of annual rainfall anomalies relative to the 1991-2020 climatological average. Light peach to red shades represents relatively dry rainfall conditions while light blue to dark blue shades represents relatively wet rainfall conditions. Much of central and eastern Mahe, together with Praslin and La Digue, received less than 75% of the climatological average annual rainfall. In contrast, the western, southern, and extreme northern parts of Mahe received between 75% and 100% of the climatological average. The largest rainfall deficits were therefore concentrated across much of central and eastern Mahe, as well as Praslin and La Digue. Overall, the spatial distribution of the annual relative anomaly indicates that rainfall totals were generally lower than the 1991-2020 climatological average across Mahe and the Inner Islands during 2025, an indication of poor rainfall performance.

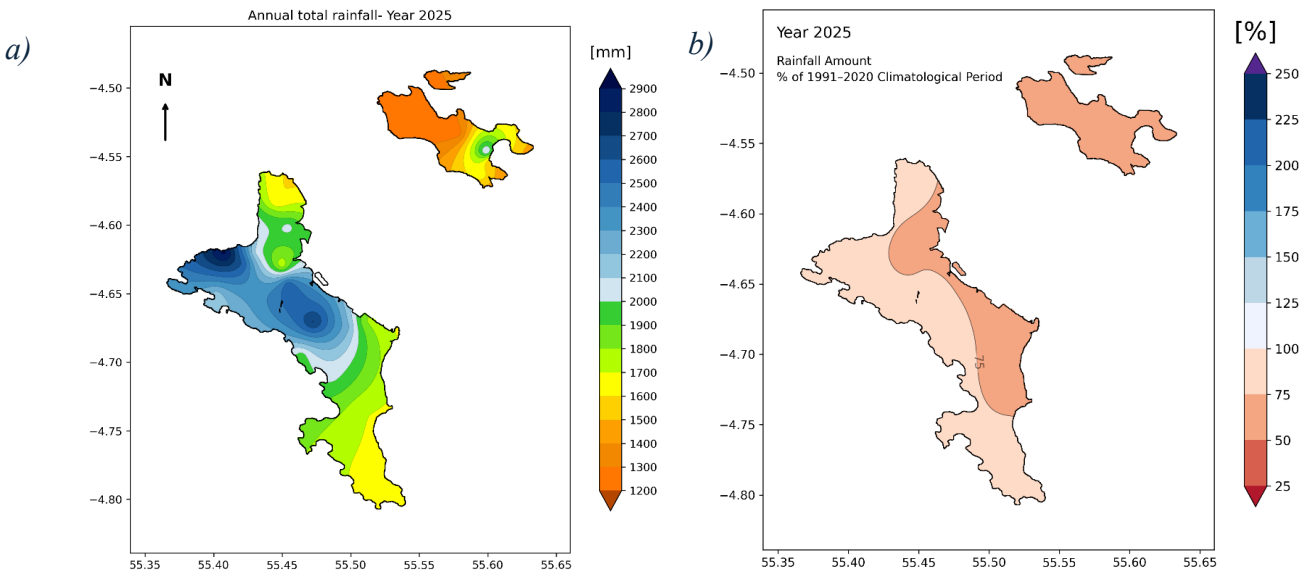



*Figure 1 : (a) Annual rainfall totals (mm) for the Mahe and Praslin in 2025. (b) rainfall anomalies (%) relative to 1991-2020 for the year 2025.*

## 2.2. Seasonal spatial distribution of Rainfall in 2025

Figures 2 (a), (b), (c) and (d) show the spatial distribution of seasonal rainfall accumulation across Mahe, Praslin during the JFM, AMJ, JAS, and OND seasons of 2025. During January-February-March (JFM) 2025, rainfall accumulation ranged approximately from 875 mm to more than 1,300 mm across Mahe, with the highest accumulations concentrated over the central part of the island. Much of western, central and southern Mahe received more than 1,000 mm, while seasonal accumulation less than 950 mm was observed over parts of northern and extreme south of Mahe. Across Praslin, rainfall generally ranged from about 725 mm to more than 1,250 mm, with the highest accumulation occurring over the southeastern part of the island.

A marked decrease in rainfall accumulation was observed during April-May-June (AMJ) 2025. Much of northern and southern Mahe received approximately 125-275 mm, with relatively low accumulations also observed along parts of the eastern side of the island. Total accumulation between 275 mm to 425 mm, was concentrated over western and central Mahe, with a localized area of higher accumulation in the east-central to southeastern part of the island. Praslin received considerably lower rainfall during the season, with totals generally around 125-200 mm.

Rainfall accumulation remained relatively low during July-August-September (JAS) 2025. The lowest totals were observed over northern and much of southern Mahe, as well as across Praslin, where seasonal accumulation was generally below 200 mm. In contrast, rainfall was

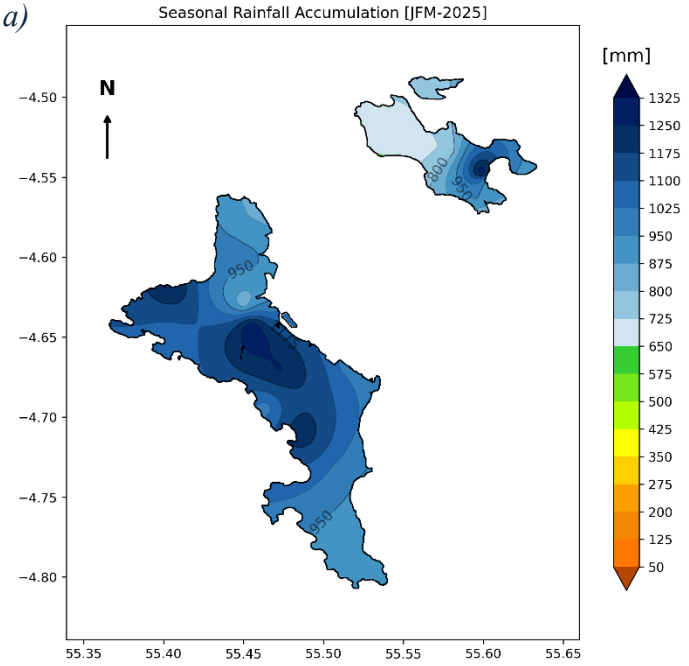
higher over western and central Mahe, with totals generally ranging from 350 mm to 500 mm. The highest accumulation occurred over the northwestern part of Mahe, where the seasonal total accumulation reached approximately 500-575 mm.

During October-November-December (OND) 2025, regions of northern, central, western and eastern Mahe recorded seasonal rainfall from 500 mm to 650 mm. Lower accumulations, generally between 350 mm to 500 mm, were observed across much of southern Mahe. Praslin received approximately 350-500 mm, with a localized area of higher rainfall accumulation over the southeastern part of the island. Overall, the analysis shows a clear seasonal variation in rainfall accumulation during 2025, with the highest totals occurring during JFM, substantially lower accumulations during AMJ and JAS, followed by slight increase during OND season.

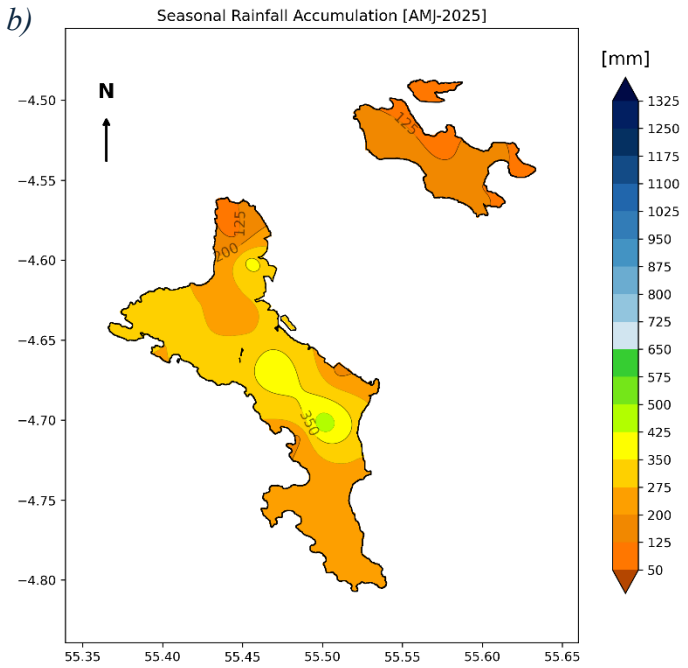
Figures 2 (e), (f), (g). And (h) represent the spatial distribution of seasonal rainfall anomalies relative to the 1991-2020 climatological average across Mahe, Praslin during the JFM, AMJ, JAS, and OND seasons of 2025. During the JFM-2025 season, rainfall was generally near to above normal across Mahe and Praslin. The spatial distribution of seasonal rainfall anomalies shows that much of Mahe and Praslin received between 100% to 125% of normal rainfall. The highest positive rainfall anomalies were observed over southern Mahe, where seasonal rainfall exceeded 125% of normal. In contrast, parts of central Mahe, northern Mahe, and a small area in northwestern Praslin received between 75% to 100% of normal rainfall, indicating near-normal to below-normal rainfall conditions. Rainfall conditions deteriorated during the AMJ-2025 season, with seasonal rainfall totals falling below 75% of the 1991-2020 climatological average across both Mahe and Praslin. This indicates that rainfall deficits became widespread across the islands. The dry conditions persisted during the JAS-2025 season. Praslin, together with northern, eastern, and southern Mahe, recorded seasonal rainfall anomalies below 50% of the climatological average. In contrast, parts of western Mahe received between 75% to 100% of normal rainfall. During the OND-2025 season, Mahe and Praslin were between 50% to 75% of the 1991-2020 climatological average, while the extreme northern and portion of areas in western parts of Mahe recorded between 75% to 100% of normal rainfall. This indicates that below-normal rainfall conditions persisted across Mahe and Praslin during OND-2025.

Overall, the seasonal rainfall anomalies from JFM to OND indicate that rainfall deficits dominated much of 2025. The year began with relatively wet conditions during JFM 2025. Thereafter, rainfall deficits became widespread during AMJ and JAS and persisted into OND, with large parts of Mahe and Praslin receiving less than 50% of their respective seasonal climatological averages.

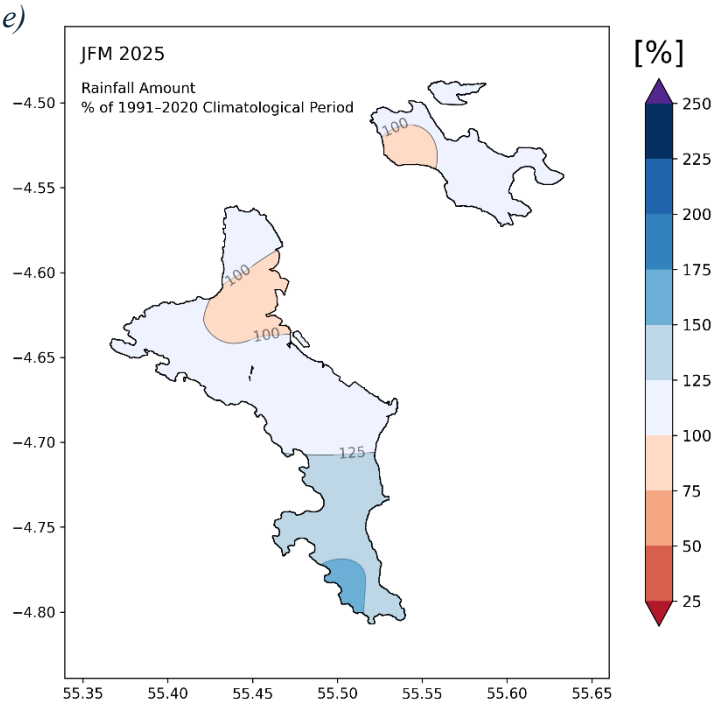
*a)*


Seasonal Rainfall Accumulation [JFM-2025]
N
[mm]
1325
1250
1175
1100
1025
950
875
800
725
650
575
500
425
350
275
200
125
50
−4.50
−4.55
−4.60
−4.65
−4.70
−4.75
−4.80
55.35
55.40
55.45
55.50
55.55
55.60
55.65

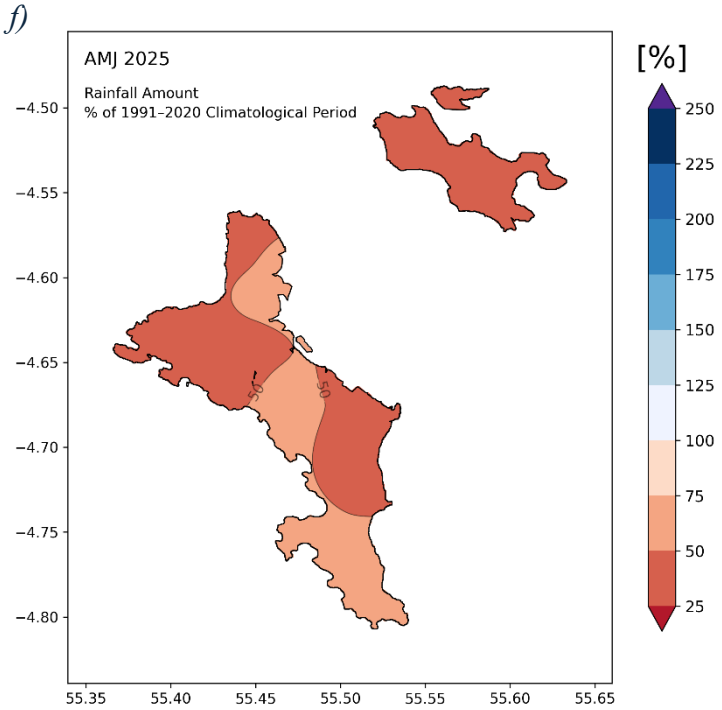
*b)*


Seasonal Rainfall Accumulation [AMJ-2025]
N
[mm]
1325
1250
1175
1100
1025
950
875
800
725
650
575
500
425
350
275
200
125
50
−4.50
−4.55
−4.60
−4.65
−4.70
−4.75
−4.80
55.35
55.40
55.45
55.50
55.55
55.60
55.65

*e)*


JFM 2025
Rainfall Amount
% of 1991–2020 Climatological Period
[%]
250
225
200
175
150
125
100
75
50
25
−4.50
−4.55
−4.60
−4.65
−4.70
−4.75
−4.80
55.35
55.40
55.45
55.50
55.55
55.60
55.65

*f)*


AMJ 2025
Rainfall Amount
% of 1991–2020 Climatological Period
[%]
250
225
200
175
150
125
100
75
50
25
−4.50
−4.55
−4.60
−4.65
−4.70
−4.75
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55.35
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55.45
55.50
55.55
55.60
55.65

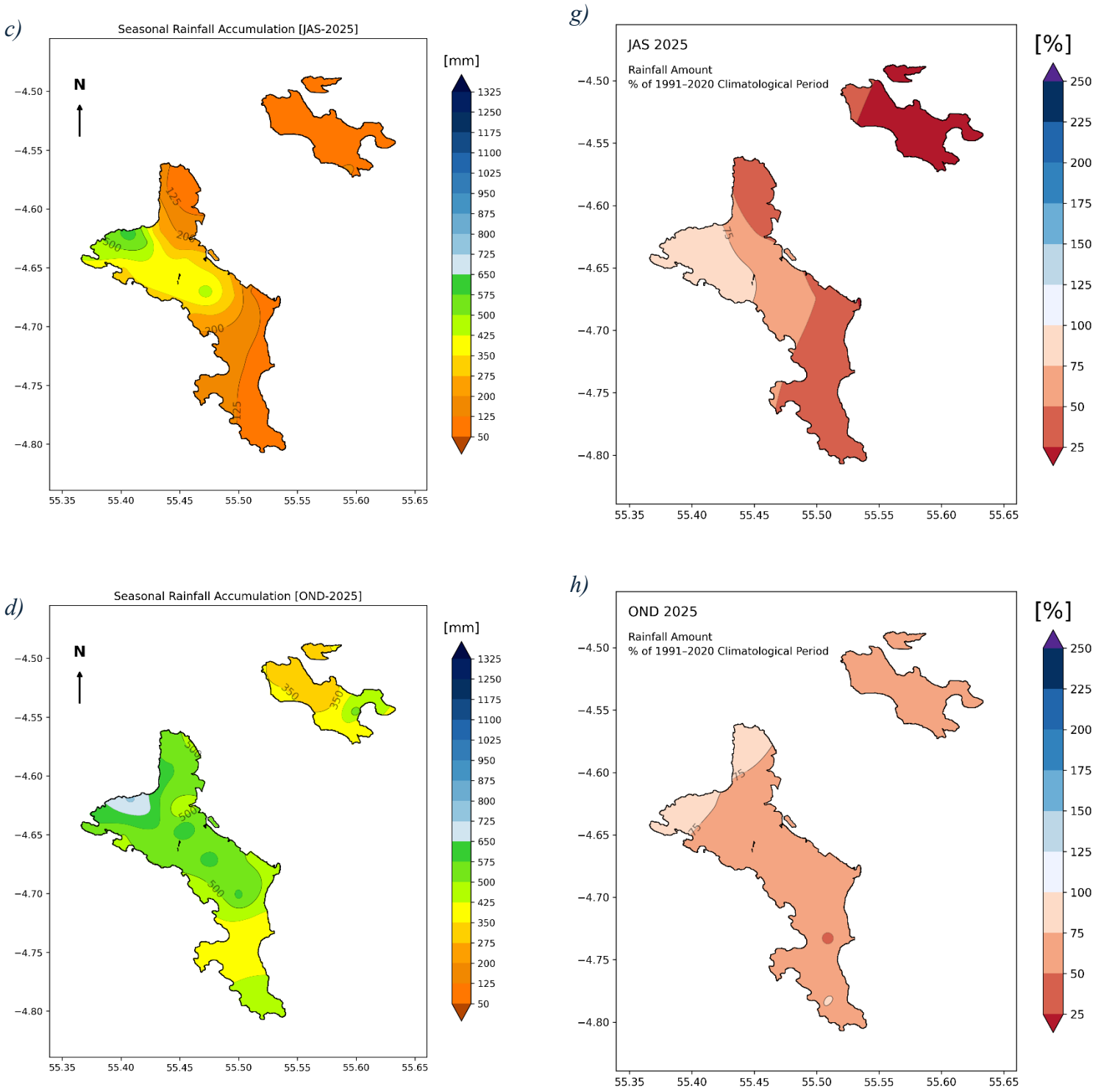


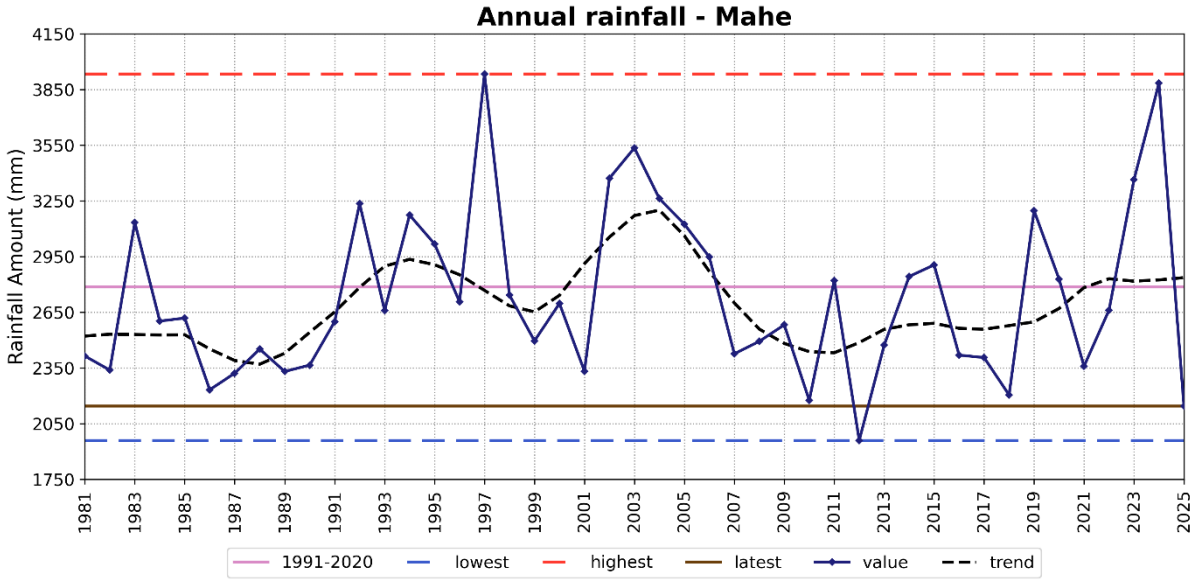

*Figure 2 : Seasonal rainfall accumulation for (a) JFM-2025, (b) AMJ-2025, (c) JAS-2025, (d) OND-2025. Seasonal rainfall anomalies (%) relative to 1991-2020 climatological period for (e) JFM-2025, (f) AMJ-2025, (g) JAS-2025, (h) OND-2025.*

## 2.3. Annual trends Rainfall (1981-2025)

The areal-average annual rainfall over Mahe was 2144.1 mm in 2025. This annual accumulation was below the 1991-2020 climatological average of 2786 mm by 77 % and ranked as the second driest year since 1981. The other two driest years were 2012 and 2010 with annual totals of 1959.7mm and 2175.7 mm respectively. The three wettest years were 1997, 2024 and 2003 with annual totals of 3932.9 mm, 3884.1 mm, and 3535.0 mm respectively. The annual rainfall times series for Mahe from 1981 to 2025 shows a slight increasing trend of approximately 28.7mm per decade. However, this trend is not statistically significant at the 5% level. *Refer to figure 3 (a) below.*

Praslin recorded an annual areal-average rainfall of 1,264 mm in 2025, indicating a below normal rainfall performance by 64% against the climatological of 1970 mm and making it as the third driest year since 1981. The other driest year were 1991, with 807.3 mm, followed by 2022, which recorded 1238.8 mm. Like Mahe, 1997 was the wettest year on record, with 3410.4 mm, followed by 2002 with 2868.1 mm and 2015 with 2606 mm. Further on the annual rainfall time series for Praslin from 1981 to 2025 presents an increasing trend of approximately 111.2 mm per decade, which is statistically significant at the 5% level. *Refer to figure 3 (b) below*

*a)*



*b)*

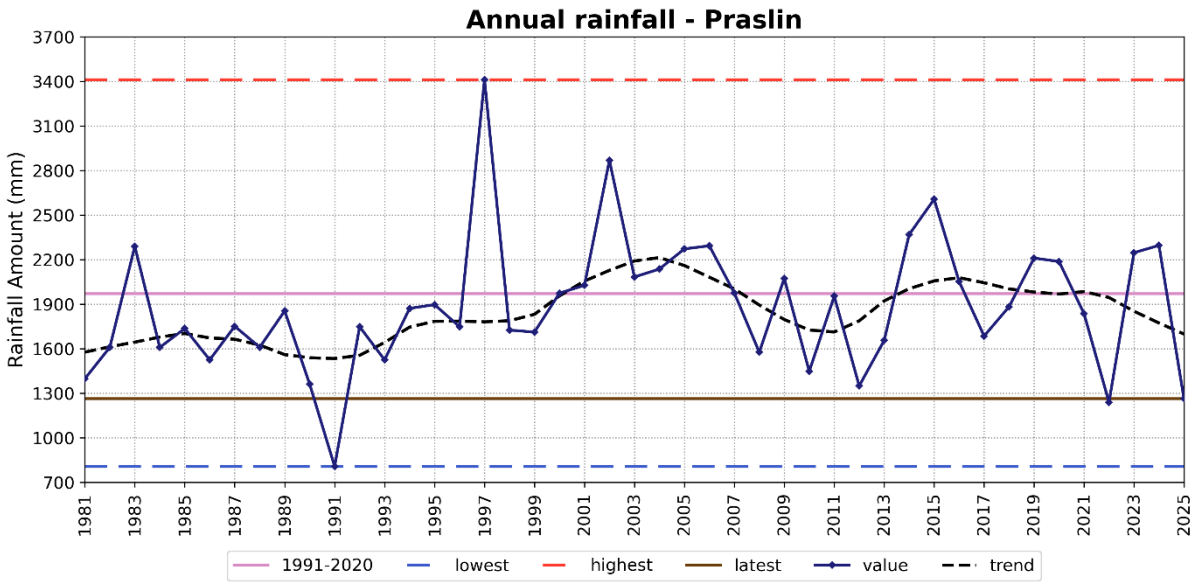



*Figure 3 : (a) Annual rainfall total (mm) for Mahe from 1981 to 2025, (b) Annual rainfall total (mm) for Praslin from 1981 to 2025.*

# 3. COUNTS OF RAINFALL EVENTS EXCEEDING A THRESHOLD

## 3.1 Annual count of wet days/ days when PRCP ≥ 1mm in 2025

During 2025,the nortwestern, much of western , and central areas of Mahe recorded approximately 150 to 190 rainy days, with the highest values observed over parts of central Mahe. Fewer rainy days were recorded towards the northern and southern Mahe, where the annual wet days ranged from approximately 120 to 140 days. Praslin experienced approximately 90 to 110 days during the year. *(Refer to Figure 4 (a)).*

Based on the 1991-2020 climatological period, negative anomalies in the annual number of rainy days prevailed across most of Mahe and Praslin (*Refer to Figure 4 (b*)). The largest deficits over Mahe were observed across much of the eastern and southern parts of the island, where the number of rainy days was approximately 20 to 40 days below normal. Elsewhere, deficits were ranging from 2 to 15 days below normal. Across Praslin, the number of rainy days was approximately 20 to 30 days below normal.

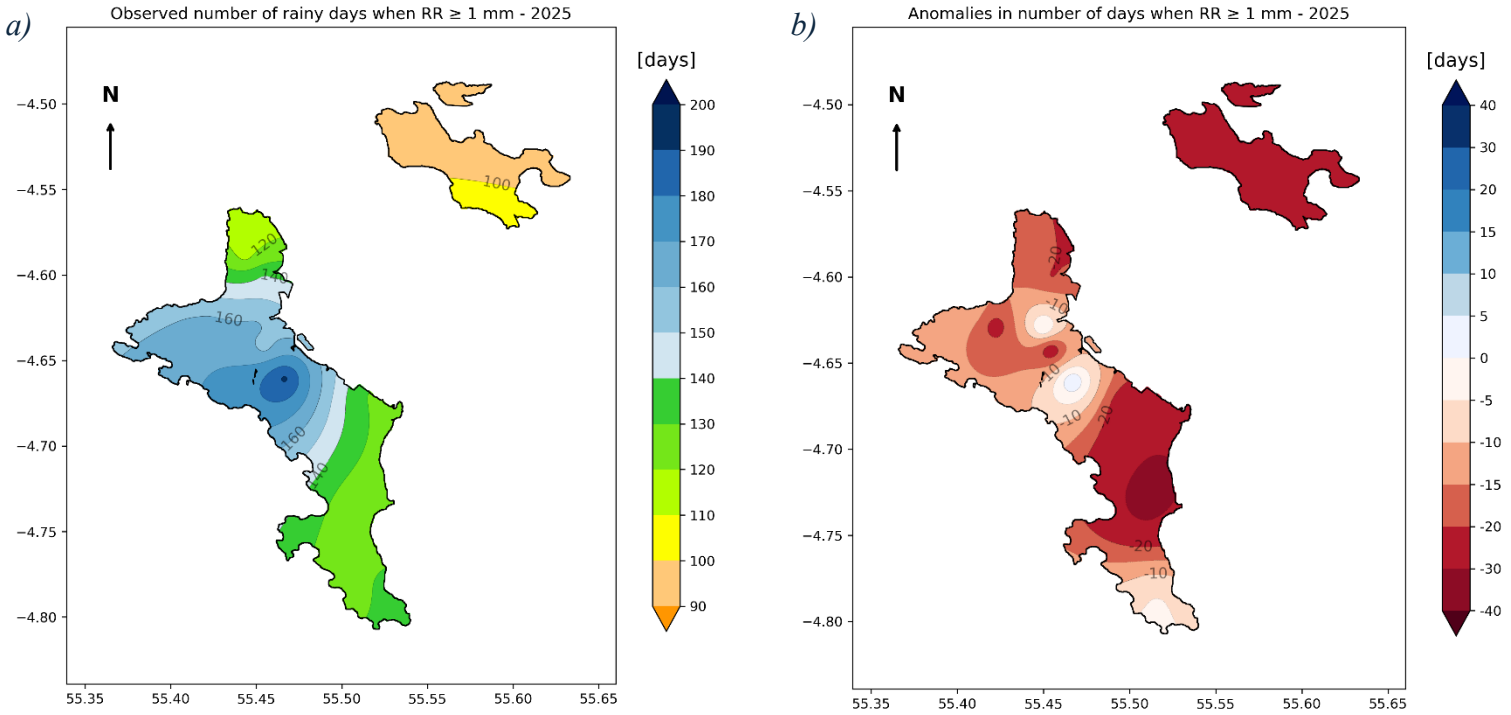



*Figure 4 : (a)annual count of days when PRCP ≥ 1 mm, (b) Anomalies in number of days wet days.*

## 3.2. Annual count of days when PRCP ≥ 10mm

During 2025, the northwestern and western parts of Mahe recorded approximately 60 to 80 days with daily rainfall exceeding 10 mm. In contrast, the extreme north and much of the southern and eastern parts of Mahe recorded less than 50 days with daily rainfall exceeding 10 mm. Praslin experienced approximately 20 to 30 days with daily rainfall above 10 mm. *Refer to Figure 5(a)* below.

Negative anomalies in the number of days with daily rainfall exceeding 10 mm prevailed across Mahe and Praslin during 2025, indicating that such rainfall events occurred less frequently than normal. Anomalies ranging from -10 to -15 days were observed over northern and northwestern Mahe, much of the western part of the island, and the extreme south. Deficits ranging from -15 to -30 days were recorded across the remaining parts of Mahe and Praslin. *Refer to Figure 5(b)* below.

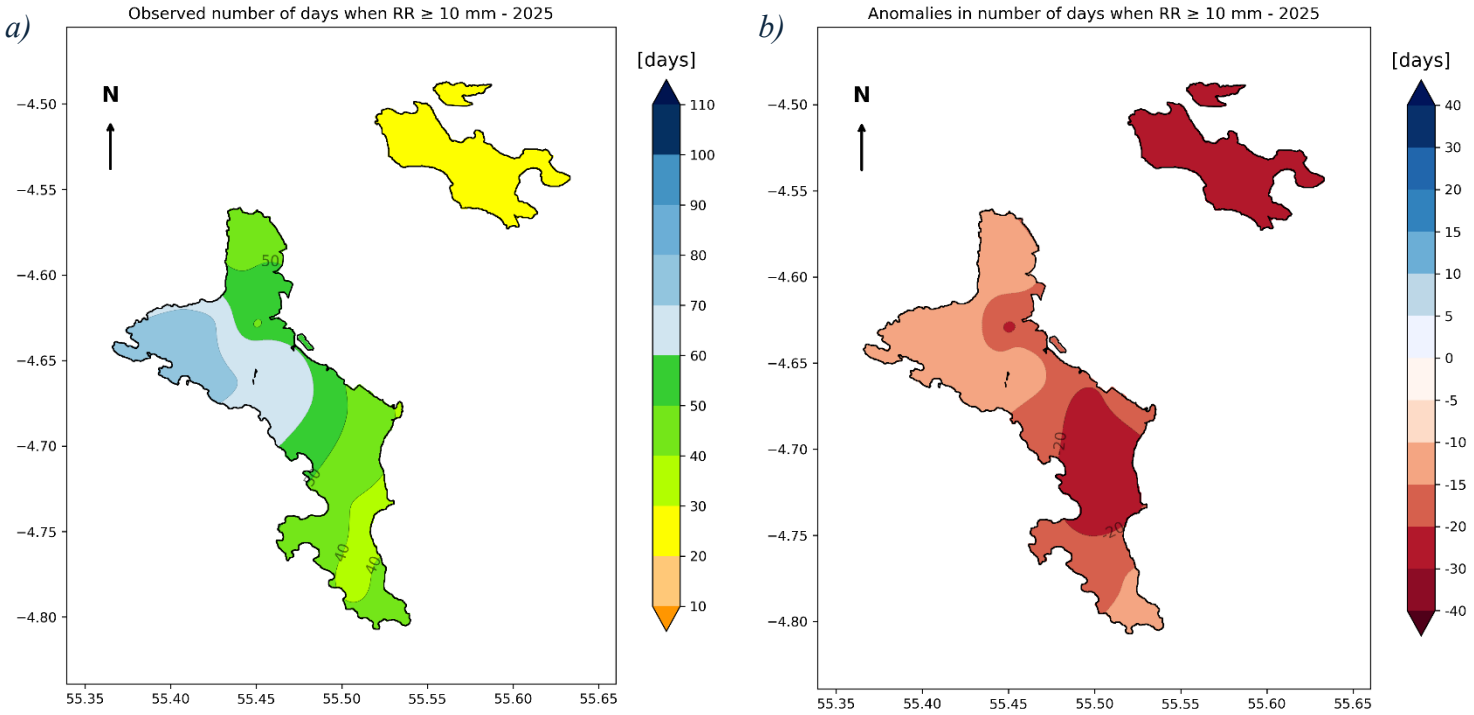



*Figure 5 : (a)annual count of days when PRCP ≥ 10 mm, (b) Anomalies in number of days when PRCP ≥ 10 mm.*

## 3.3. Annual count of days when PRCP ≥ 20mm

Across Mahe, much of the southern part of Mahe, along with pockets of areas in the central Mahe recorded less than 25 days with daily rainfall exceeding 20mm during 2025, while the northwestern, western part of Mahe experienced 35 to 50 days. In Praslin, 10 to 20 days with daily rainfall above 20mm were observed during the year.

During 2025, anomalies negative in the annual number of days with daily rainfall exceeding 20mm prevailed across Mahe and Praslin, indicating that these rainfall events occurred less than normal during the year. Across Mahe, anomalies of days with daily rainfall higher than 20mm ranged from -3 to -20 days, while Praslin recorded a deficit of -12 to -15 days. *Refer to Figure 6 (a) and (b*) below.

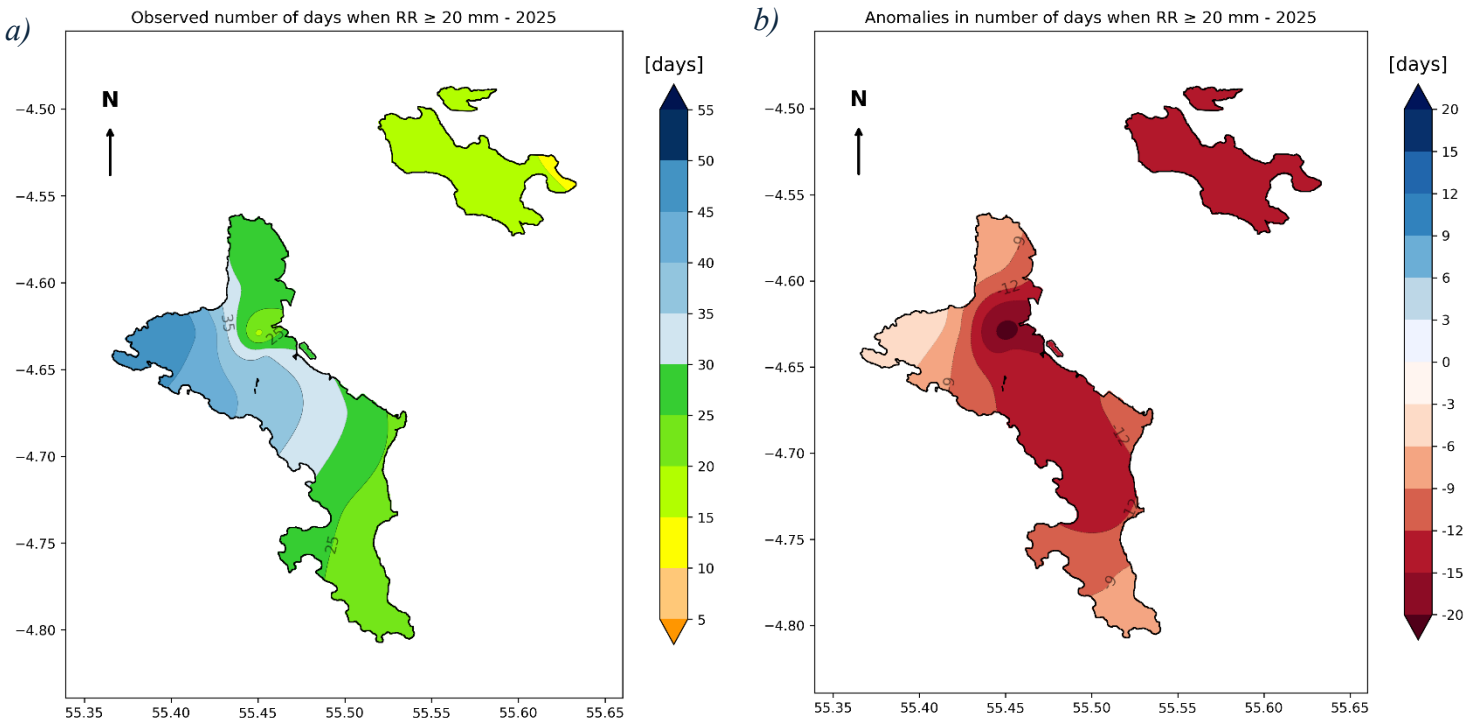



*Figure 6 : (a)annual count of days when PRCP ≥ 20 mm, (b) Anomalies in number of days when PRCP ≥ 20 mm.*

## 3.4. Annual count of days when PRCP ≥ 50mm

Figure 7 (a) illustrates the spatial distribution of the annual number of days with daily rainfall ≥ 50 mm during 2025. Much of the extreme northeast, central, eastern, and southern parts of Mahe, as well as Praslin, recorded between 5 to 10 days with daily rainfall exceeding 50 mm while the northwestern and western parts of Mahe recorded between 10 to 20 days during the year.

Further, Figure 7 (b) shows that negative anomalies predominated across Mahe and Praslin, indicating that the annual number of days with rainfall exceeding 50 mm was lower than the 1991-2020 climatological average, consistent with the below normal rainfall conditions observed during 2025.

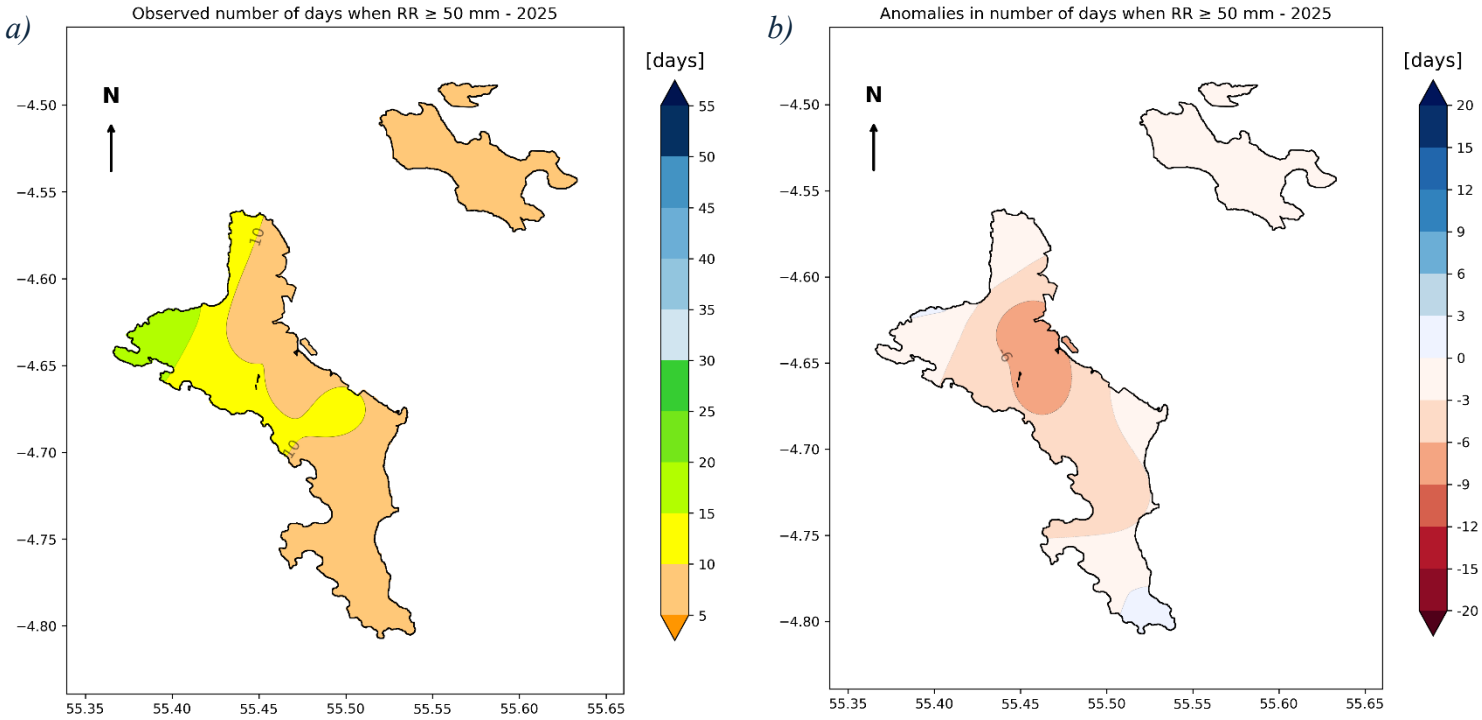



*Figure 7: (a) annual count of days when PRCP ≥ 50 mm, (b) Anomalies in number of days when PRCP ≥ 50 mm.*

# 4. EXTREME RAINFALL EVENTS

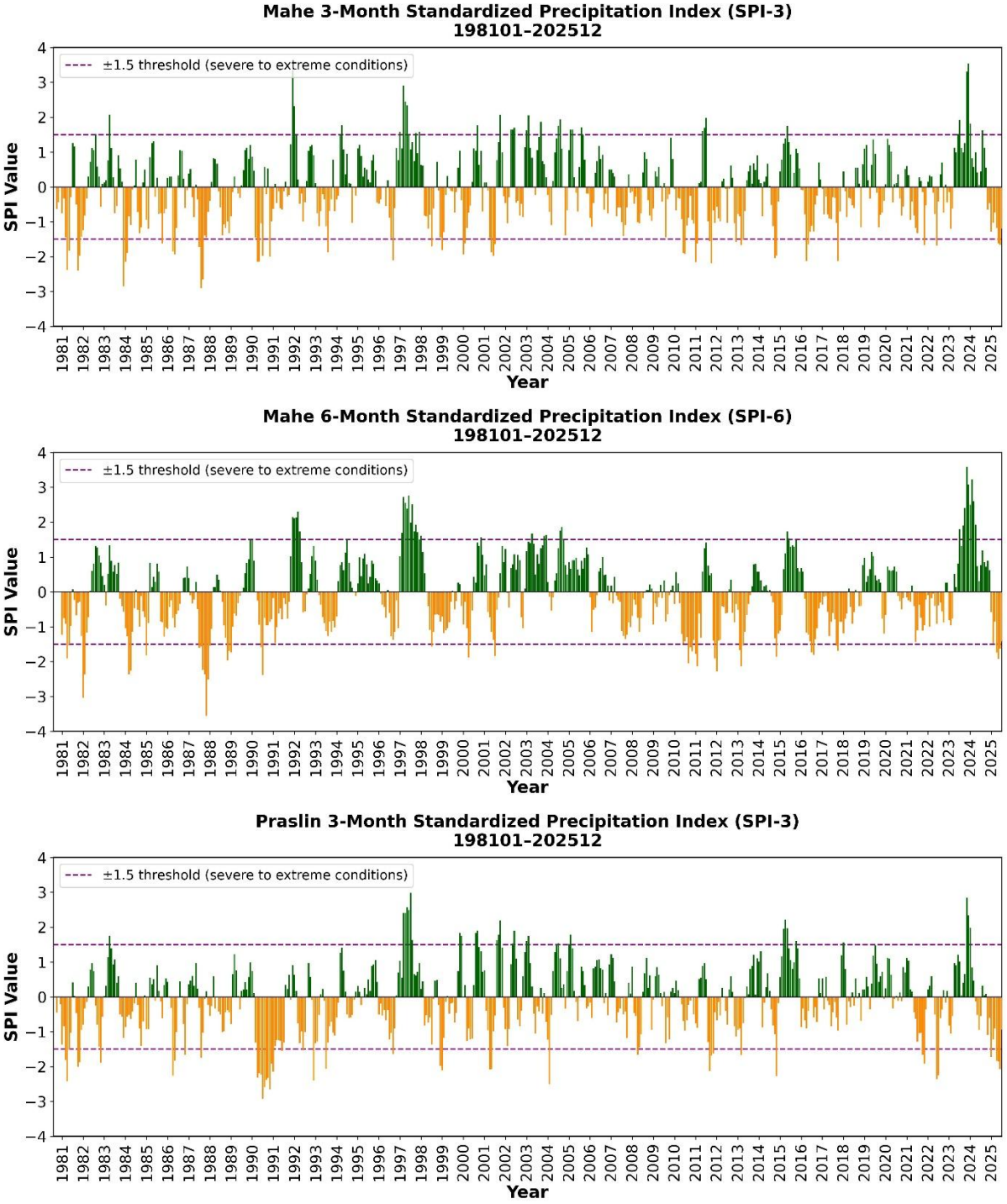
## 4.1. Standardized Precipitation Index (SPI)-Drought assessment

Figures 8 (a) presents the temporal evolution of SPI-3 and SPI-6 across Mahe and the Inner Islands of Praslin. The green bars indicate near-normal to extremely wet conditions, while the orange bars indicate near-normal to extremely dry conditions. The SPI time series shows several periods of meteorological drought across the islands.

Analysis on the SPI-6 time series indicates that Mahe experienced approximately 24 meteorological drought events over the period 1981-2025. The longest drought event extended from September 2016 to August 2018, lasting 24 months. During this event, the peak drought occurred in January 2017, when SPI-6 reached the severely dry category. Although this event had the longest duration, it did not record the lowest SPI-6 value over Mahe since 1981. The lowest value of -3.56 (extremely dry category) was recorded in April 1988, when the drought event occurred from December 1987 to July 1988. Other prolonged drought episodes over Mahe include the drought event that extended from November 1990 to March 1992, lasted for 17 months and reached the extremely dry category in December 1990. Another 17-month drought occurred from November 2021 to March 2023, with its lowest SPI-6 value of -1.43 recorded in November 2021. The most recent drought event over Mahe commenced in July 2025, when SPI-6 declined to -1.48. The event subsequently intensified, reaching a minimum SPI-6 of -1.92 in October 2025, corresponding to severely dry conditions. SPI-6 remained below -1 through December 2025, indicating that the drought was still ongoing.

Based on the SPI-6 time series, approximately 22 meteorological drought events have been identified over Praslin since 1981. The longest drought event extended from November 1992 to July 1994, lasting 21 months. During this event, the peak drought condition occurred in August 1993, when SPI-6 reached -2.01 (extremely dry category). However, the lowest SPI-6 value over Praslin since 1981 was recorded in June 1991, when the index reached -3.19 (extremely dry category) during the prolonged drought event that extended from October 1990 to March 1992 and lasted for 18 months. The most recent drought event over Praslin started in July 2025, when SPI-6 declined to -1.73. The event subsequently intensified, reaching extremely dry conditions (SPI-6 of -2.60) in September 2025. SPI-6 remained below -1 through December 2025, indicating that the drought was still ongoing.

*a)*


Mahe 3-Month Standardized Precipitation Index (SPI-3)
198101-202512
±1.5 threshold (severe to extreme conditions)
SPI Value
Year
Mahe 6-Month Standardized Precipitation Index (SPI-6)
198101-202512
±1.5 threshold (severe to extreme conditions)
SPI Value
Year
Praslin 3-Month Standardized Precipitation Index (SPI-3)
198101-202512
±1.5 threshold (severe to extreme conditions)
SPI Value
Year

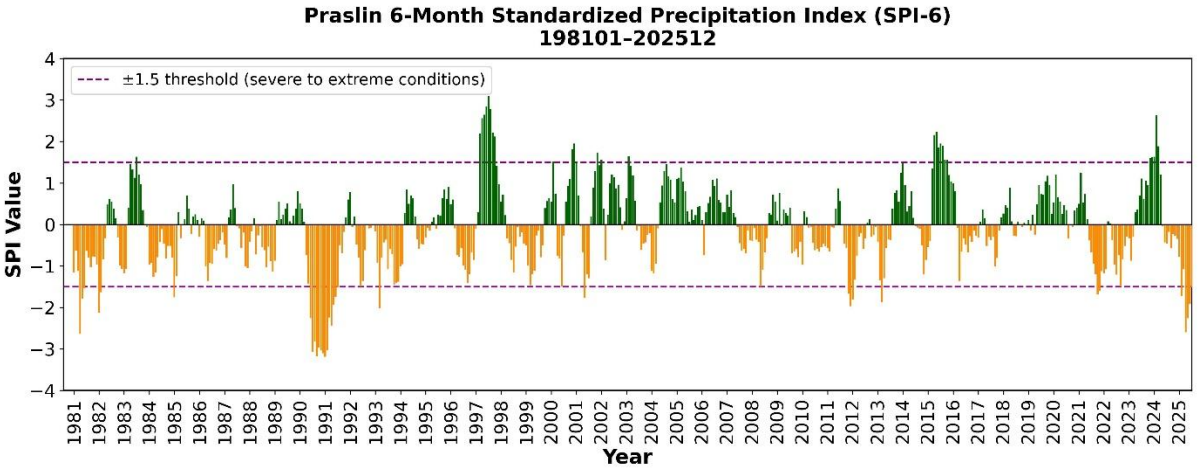



*Figure 8: ( a ) Standardized Precipitation Index at 3-month (SPI-3) and 6-month (SPI-6) timescales for Mahe and Praslin respectively.*

## 4.2. Drought monitoring across Mahe and Praslin Islands 2025

Figure 8 (b) shows drought monitoring based on the 3-month Standardized Precipitation Index (SPI-3) across Mahe and Praslin in 2025. The analysis depicts that all monitored regions experienced dry conditions at some point during the year with drought conditions becoming more pronounced from mid-year and intensifying during August-September period. The most severe conditions were observed over the southern and central regions of Mahe and Praslin Island, where SPI-3 values reached severe to extreme drought levels. The northern region of Mahe experienced comparatively milder dry conditions. The analysis, therefore, highlights considerable spatial and temporal variability in rainfall deficits across the monitored islands during 2025, with the most pronounced drought conditions occurring during the latter part of the year.

b)

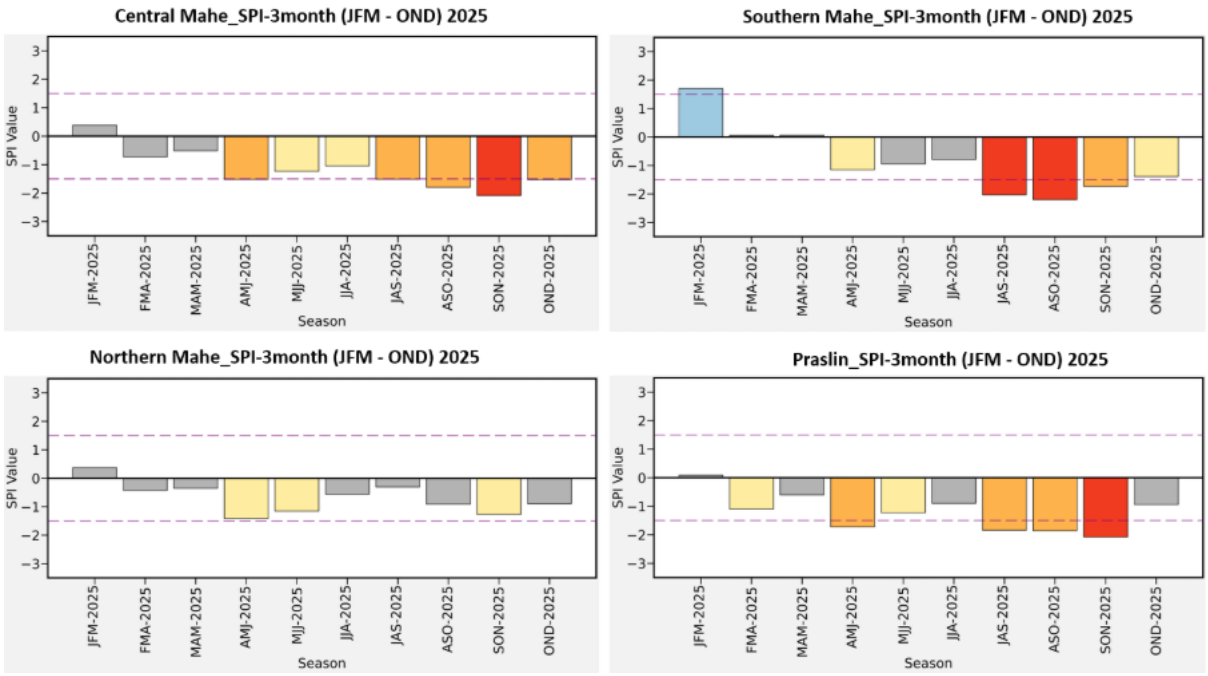



*Figure 8: ( b ) Seasonal drought monitoring (Jan-Dec) 2025 for regions in Mahe and Praslin*

## 4.3. Annual trends of Rainfall Intensity (1981-2025)

Figure 9 and Table 1 show the annual rainfall intensity over Mahe and Praslin for the period 1981-2025. In 2025, the annual rainfall intensity over Mahe was 11.61 mm day$^{-1}$, below both the 1991-2020 climatological average (13.76 mm/day) and the 2015-2025 average (13.60 mm/day). The highest rainfall intensities during the record occurred in 1997, 2004, and 2024, corresponding to years with above-normal rainfall. In contrast, the lowest values were recorded in 1988, 2012, and 2007. 2025 is ranked as the sixth lowest rainfall intensity since 1981. Despite the relatively low value recorded in 2025, the time series indicates a tendency towards increasing rainfall intensity over the recent decade.

At Praslin, the rainfall intensity in 2025 was 12.61 mm/day, which was also below both the 1991-2020 climatological average (15.63 mm/day) and the 2015-2025 average (14.50 mm/day). The highest rainfall intensities were recorded in 1997, 2002, and 2005, whereas the lowest values occurred in 1991, 2022, and 2010. In contrast to Mahe, the smoothed time series suggests a gradual decline in rainfall intensity over the past decade.

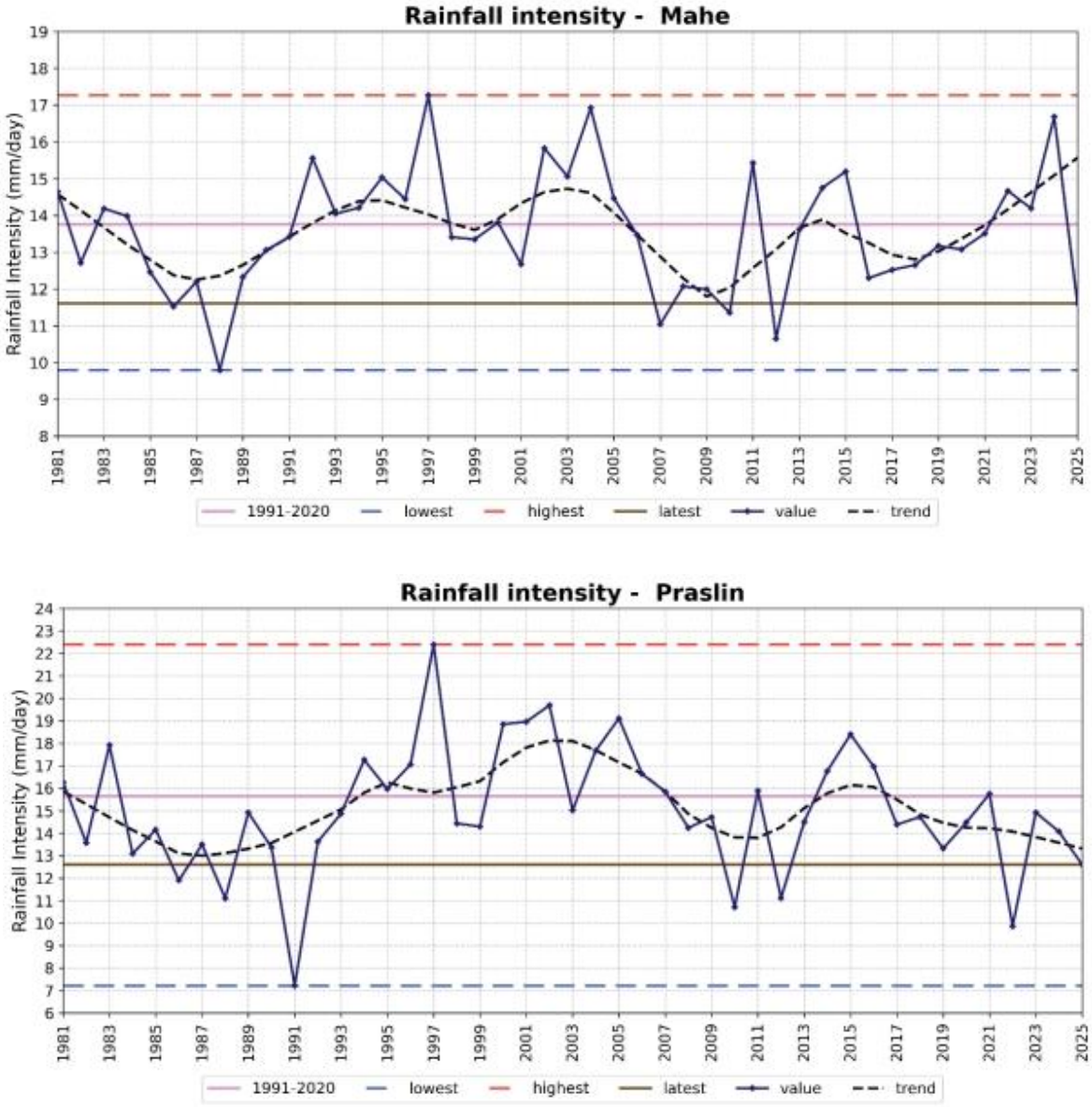



*Figure 8 : Annual rainfall intensity (mm/day) for the Mahe and Praslin from 1981 to 2025.*

*Table 1 : shows values for Mahe, Northern zone, Central zone, and Southern zone of Mahe together with Praslin (mm/day).*

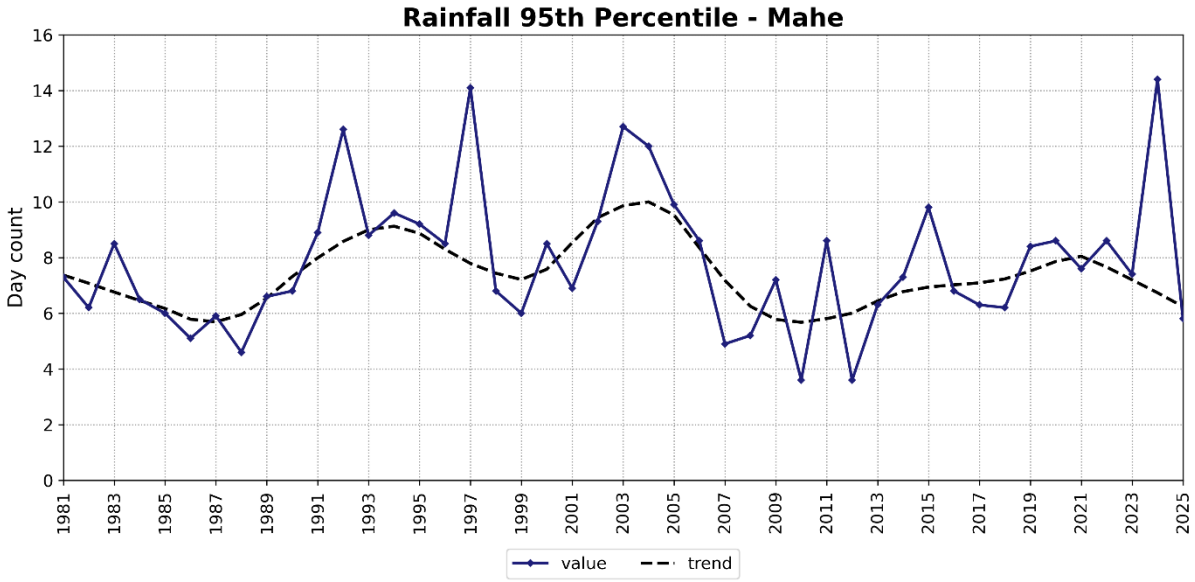
| **Rainfall Intensity (mm/day)** | | | |
|---|---|---|---|
| Zone | 1991-2020 | 2015-2025 | 2025 |
| Mahe | 13.76 | 13.6 | 11.61 |
| Northern Zone | 16.46 | 16.17 | 13.49 |
| Central Zone | 15.25 | 14.8 | 12.84 |
| Southern Zone | 13.23 | 13.02 | 11.62 |
| Praslin | 15.63 | 14.5 | 12.61 |

## 4.4. Trends in exceptional Rainfall presented in percentile thresholds

### 4.4.1. Very wet days: Daily rainfall exceeding the 95th percentile

The 95th and the 99th percentile rainfall thresholds were calculated from daily areal-average rainfall during the 1991-2020 reference period to qualify the historical extremes in rainfall. Figure 10 and Table 2 present the annual number of days exceeding 95th thresholds for Mahe and Praslin from 1981 to 2025. Mahe recorded an average of 6 days exceeding the 95th percentile threshold in 2025. This value was below the 1991-2020 climatological average of 8 days. The highest annual number of days exceeding the 95th percentile threshold was recorded in 2024 with an average of 14.4 days and closely followed by 1997 with average of 14.1 days. Over the period of 1981 to 2025, the annual number of days exceeding the 95th percentile over Mahe shows a slight increasing trend of approximately 0.09 days per decade but not statistically significant at 0.05 level.

Praslin recorded 4.0 days exceeding the 95th percentile threshold in 2025. This value was also below the 1991-2020 climatological average of 6.3 days. The highest annual count occurred in 1997, when 16 days exceeded the 95th percentile threshold. The time series of the annual number of days exceeding the 95th percentile for Praslin suggests that no significant long-term trend was observed from 1981 to 2025.



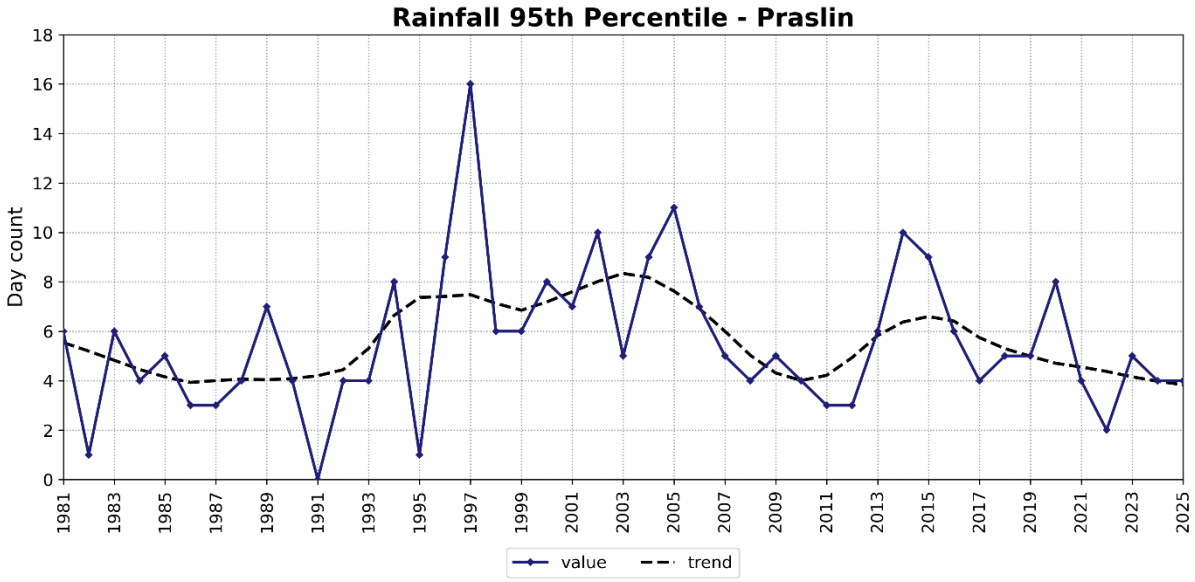



*Figure 9 : Number of days each year where rainfall totals have exceeded the 95th percentile for Mahe and Praslin.*

*Table 2 : Shows values for Mahe, Northern zone, Central zone and Southern zone of Mahe together with Praslin (day).*

| 95th Percentile | | |
|---|---|---|
| Zone | 1991-2020 | 2025 |
| Mahe | 8.2 | 5.8 |
| Northern Zone | 8.7 | 5.3 |
| Central Zone | 8.6 | 6.7 |
| Southern Zone | 7.1 | 5.7 |
| Praslin | 6.3 | 4.0 |

### 4.4.2. Extremely wet days: Daily rainfall exceeding the 99th percentile

In 2025, Mahe recorded an average of 1 day exceeding the 99th percentile threshold, while no days exceeded the 99th percentile threshold in Praslin. These values indicate that very extreme rainfall events were relatively infrequent across both islands during 2025 as noted in Table 3.

Figure 11 indicates that Mahe showed a slight decrease in the annual number of days exceeding the 99th percentile from 1981 to 2025. However, the trend is not statistically significant. Praslin exhibits non long-term trend in observed annual number of days exceeding the 99th percentile rainfall threshold over the period 1981-2025. The highest annual number of days exceeding the 99th percentile threshold was recorded in 1997 for both Mahe and Praslin.

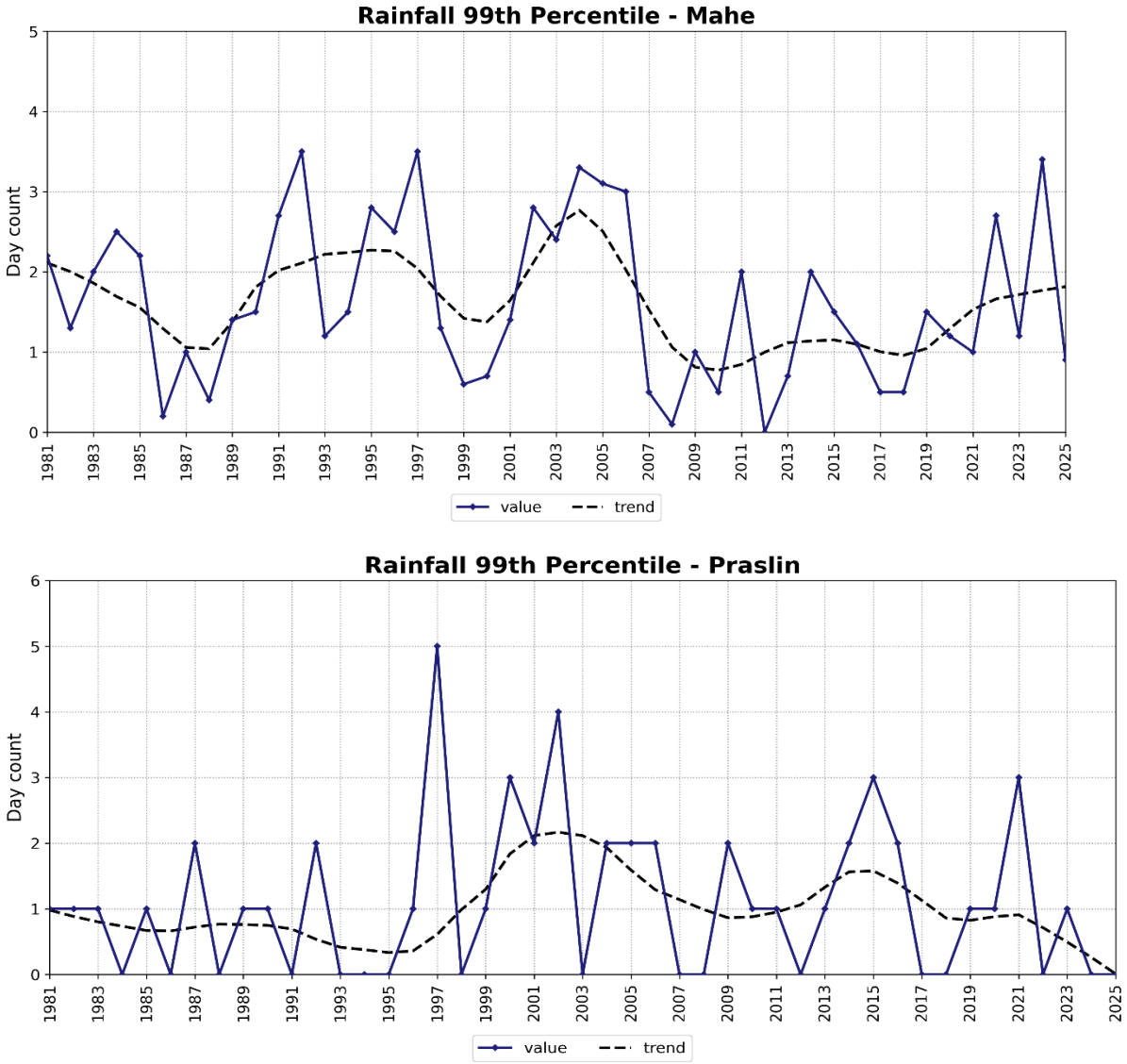



*Figure 10 : Number of days each year where rainfall totals have exceeded the 99th percentile for Mahe and Praslin.*

*Table 3 : Shows values for Mahe, Northern zone, Central zone and Southern zone of Mahe together with Praslin (day).*

| 99th Percentile | | |
|---|---|---|
| Zone | 1991-2020 | 2025 |
| Mahe | 1.7 | 0.9 |
| Northern Zone | 1.8 | 1.0 |
| Central Zone | 1.7 | 0.0 |
| Southern Zone | 1.4 | 1.7 |
| Praslin | 1.3 | 0.0 |

# 5.TEMPERATURE

This section presents an assessment of the historical and 2025 temperature patterns across Seychelles. The analysis is based on the long-term series of daily weather observations from the Seychelles International Airport meteorological station. It examines annual temperature trends, year-to-year rankings, and temperature extremes, including maximum (daytime), minimum (nighttime), and mean temperatures.

At a glance, the analysis indicates that 2025 falls within the cluster of the warmest years on record for daytime, nighttime, and overall mean temperatures. Furthermore, the results reveal a notable concentration of warmer years in the recent period, particularly from the mid-2000s onwards, highlighting the persistence of elevated temperatures in the country's recent climate record. The detailed analysis is presented the following sections (5.1 to 5.3) below.

## 5.1. Observed temperature variation in 2025

The general summary of the daily maximum and minimum temperatures in Seychelles during 2025 followed the expected seasonal climatological cycle based on the 1991-2020 reference period, with variations remaining largely within the historical range of observed conditions.

From the observed statistics, maximum temperatures increased from approximately 30 °C in January to a seasonal peak of 31-32 °C during April-May. A decline to around 28-29 °C was observed during July-August southeast monsoon period with a rise to approximately 30-31 °C observed toward November-December period. Several short-lived warm anomalies were observed during March-May and in November, where daily maxima exceeded the 90$^{th}$ percentile. Sustained warmer temperatures were further observed from mid-April to June, indicating persistent above-average daytime conditions. The highest maximum temperature recorded during the year was 34.7 °C on 23$^{rd}$ and 24$^{th}$ of March 2025. The record nearly reached the historical climatological extreme of 34.8 °C ever observed since 1972. The lowest daily maximum temperature was 27.5 °C, observed on 6$^{th}$ August 2025 and falling within the cooler July-August period.

The minimum temperatures also reflected the seasonal cycle, increasing from approximately 24-25 °C in January to around 26 °C during April-May, before decreasing to 24-25 °C between July to September, and gradually rising toward the end of the year. Warm nighttime conditions were observed during the first half of the year (January to July), with several nights exceeding the 90$^{th}$ percentile. The highest minimum temperature recorded in 2025 was 28.2 °C, observed

on 13th April 2025 while the highest ever recorded since 1972 is 28.8 °C. The lowest minimum temperature was 22.2 °C, observed on 4th and 5th of November 2025.

A comprehensive analysis in Figure 12 below shows the evolution of daily maximum (Tmax) and minimum (Tmin) temperatures over Seychelles throughout 2025, relative to the 1991-2020 climatological average and percentile ranges. Temperatures exhibited the characteristic of tropical maritime climate of Seychelles, with relatively small seasonal variations. Daily temperatures generally remained within the historical climatological range, although several periods approached or exceeded the upper percentile thresholds and historical high-temperature envelope. The results revealed that for maximum temperature, relatively warmer conditions were evident during the first half of the year, particularly from February to May, when daily temperatures frequently remained above the 1991-2020 mean and occasionally approached the historical upper extremes. A gradual decline in temperatures was observed during the southeast monsoon period from around June to September, consistent with increased influence of cooler southeasterly trade winds. Temperatures subsequently increased again towards the final quarter of the year, with several warm episodes observed during October to December.

Regarding minimum temperature, the analysis further displayed relatively modest seasonal variability, reflecting the strong moderating influence of the surrounding Indian Ocean. Night-time temperatures were generally warmer than average during the period of February to July while the later period of the year observed isolated cooler episodes.

Therefore, the daily temperature evolution during 2025 highlights the relatively stable thermal regime of Seychelles, while also demonstrating substantial day-to-day variability associated with changes in cloud cover, rainfall, wind patterns and the seasonal progression between the northwest and southeast monsoon regimes. The occurrence of several days near the upper end of the historical temperature distribution nevertheless indicates periods of notable warmth during the year.

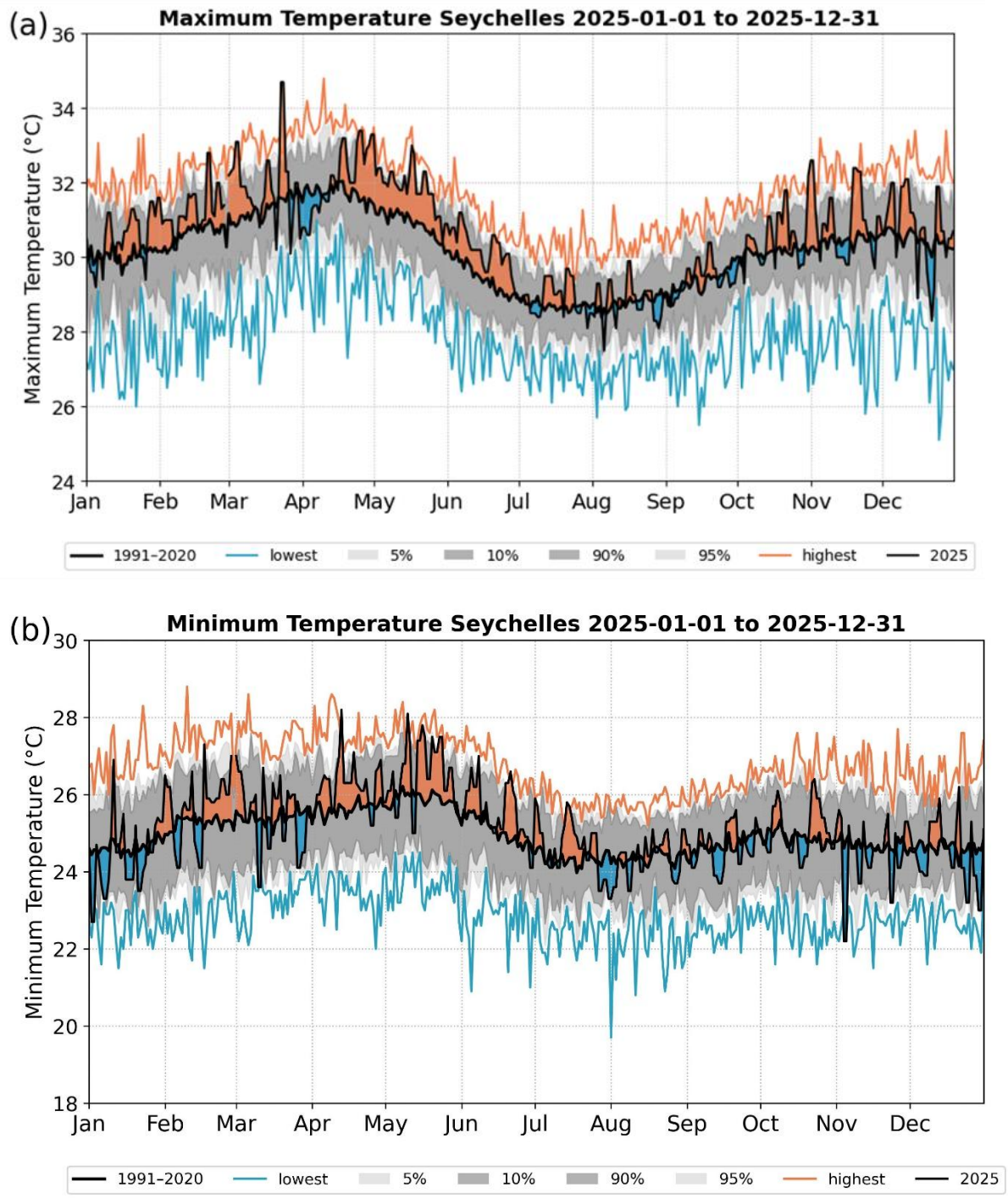



*Figure 11 : Daily temperature for (a) Seychelles mean Tmax and (b) Seychelles mean Tmin (°C) for each calendar day of the year 2025. The central black line shows the 1991-2020 average for each calendar day; the outermost red and blue lines represent the highest and lowest values and the grey shading represents the percentile values for each calendar day of the year based on the period 1972 to 2025 inclusive.*

## 5.2. Annual temperature anomaly (Maximum, Minimum and Mean) trends

The annual maximum, minimum, and mean temperature anomalies (Figure 13, 14 and 15) carried out using the temperature data for Seychelles International Airport show a clear long-term warming trend. Maximum temperature warmed with a decadal rate of change of 0.16 °C per decade, minimum temperatures at 0.20 °C per decade while mean temperature warmed at a rate of 0.18 °C per decade. Earlier decades were predominantly cooler than the long-term average, while warmer-than-average years have become increasingly frequent and pronounced since the early 2000s, particularly after 2010. Further, the stronger warming trend in minimum temperatures indicates a notable increase in night-time temperatures.

Figure 16 on annual mean temperatures show substantial year-to-year variability superimposed on a pronounced long-term warming trend. Temperatures have risen from generally below 27.5 °C during the 1970s and 1980s to predominantly above the 1991-2020 average in recent decades. Several recent years approached historical high values, highlighting the continued warming of Seychelles' climate and the increasing prevalence of exceptionally warm years.

Specific to the year 2025, Seychelles recorded another notably warm year, with annual mean temperature remaining well above the 1991-2020 climatological average. Both maximum and minimum temperature anomalies were positive, reinforcing the predominance of warmer-than-average conditions observed in recent years. Although 2025 did not surpass the highest annual mean temperature on record, it contributed to the persistent warming pattern evident since the mid-2010s. The positive anomalies in both daytime and night-time temperatures are consistent with the long-term warming trends exhibited in the decadal changes for maximum, minimum, and mean temperatures respectively. This highlights the continued influence of global warming on the thermal regime of Seychelles. *Refer to the Figure (Figure 13, 14 and 15 and 16) below for results in-depth interpretation.*

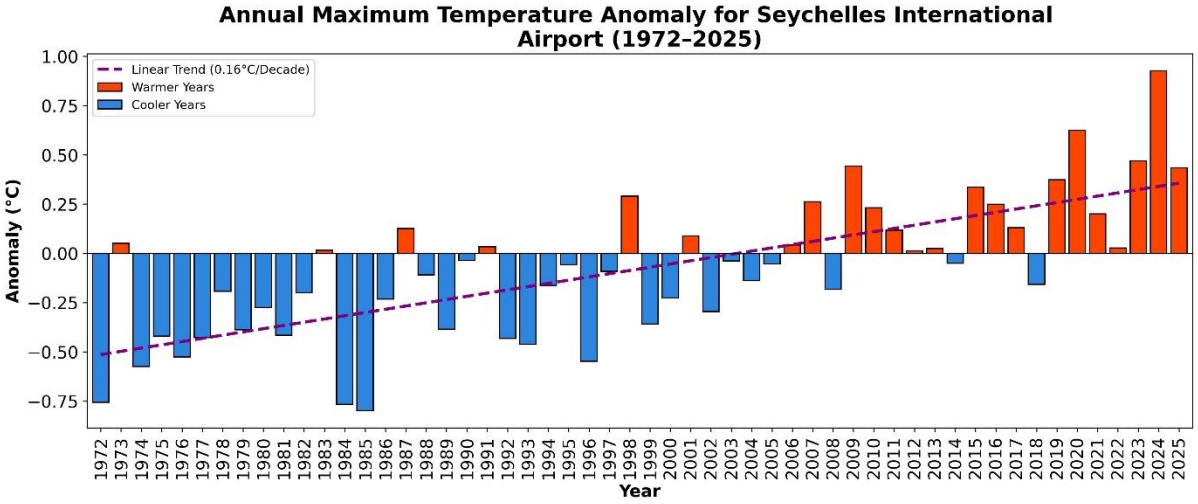



*Figure 12 : Annual mean maximum temperature anomalies for the Seychelles, 1972-2025 relative to 1992-2020 climatological long-term average.*

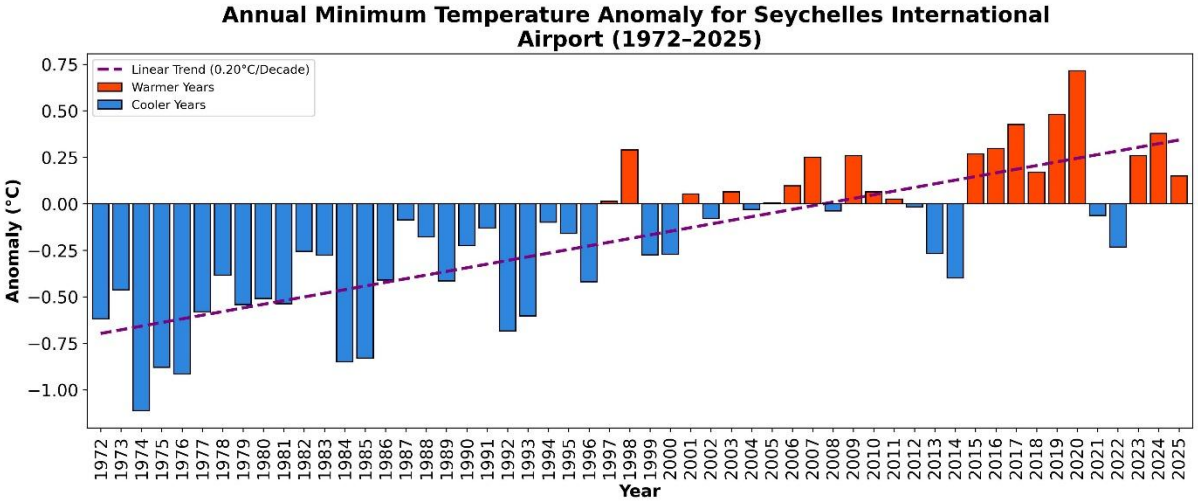



*Figure 13 : Annual mean minimum temperature anomalies for the Seychelles, 1972-2025 relative to 1992-2020 climatological long-term average.*

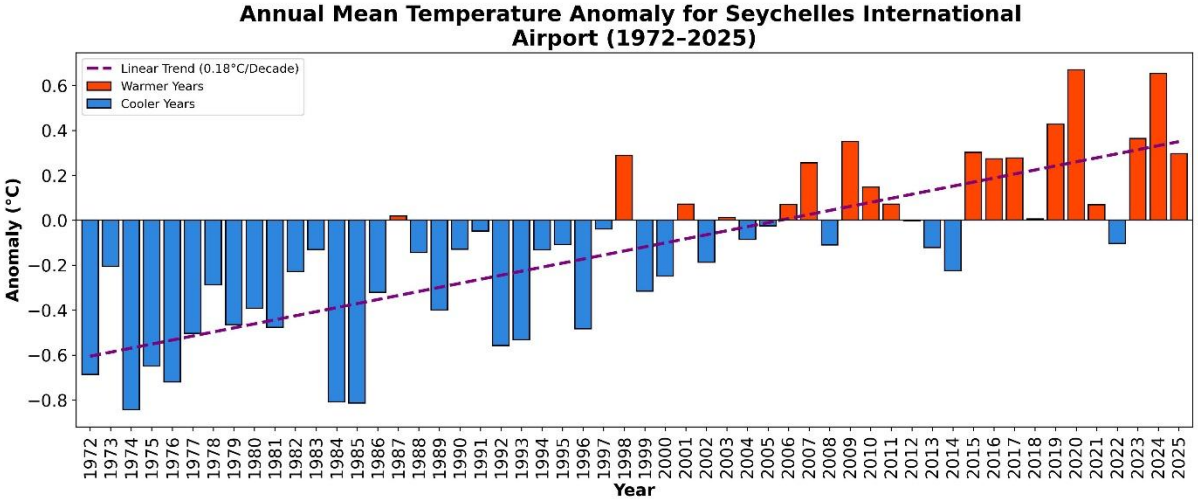



*Figure 14 : Annual mean temperature anomalies for the Seychelles, 1972-2025 relative to 1992-2020 climatological long-term average.*

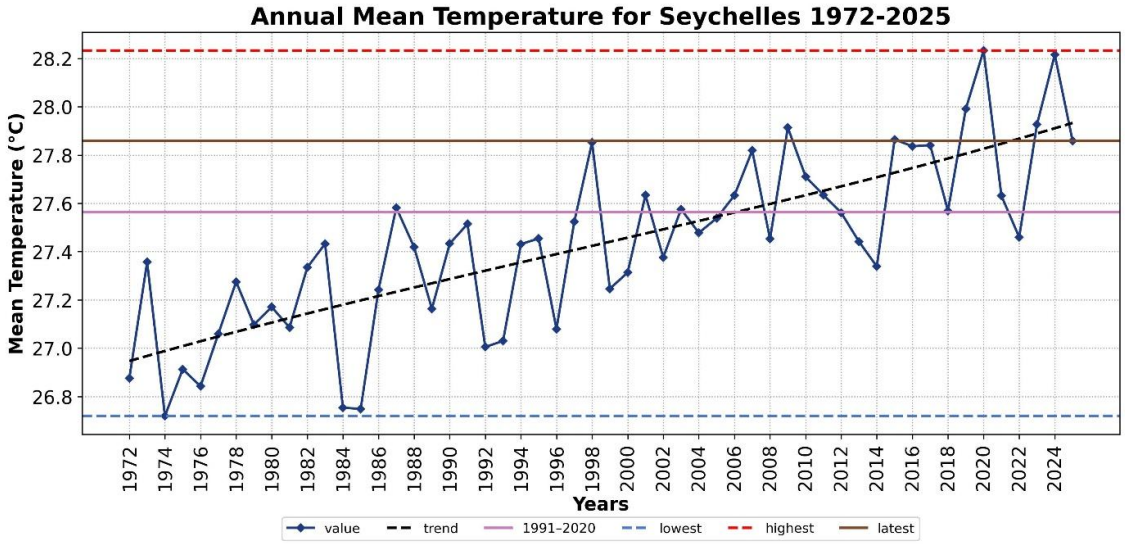



*Figure 15 : Annual Mean Temperature Evolution (1972-2025) for the Seychelles.*

## 5.3. Ranked (coolest to warmest) annual temperature anomaly

Figure 17, 18, and 19 shows the ranked annual temperature anomalies in maximum, minimum, and mean temperatures respectively, with the results clearly illustrating the long-term warming of Seychelles. In all the figures, the coolest years are predominantly concentrated in the earlier part of the record, while the warmest years occur mainly in recent decades. This shift is particularly evident from the 2000s onwards, with a strong concentration of positive anomalies after 2010.

The ranking highlights the exceptional nature of recent warming. 2024 ranks as the warmest year for annual maximum temperature, while 2020 records the highest minimum temperature anomaly. For the annual mean temperature, 2020 and 2024 rank among the warmest years in the record. Therefore, the clustering of recent years at the warm end in all three distributions provides clear evidence of a sustained shift towards warmer conditions in Seychelles, affecting both daytime and night-time temperatures.

Specific to 2025, the annual mean temperature at Seychelles International Airport was 0.29°C above the 1991-2020 average, and ranking as the seventh-warmest year on record since 1972. Above average temperatures persisted throughout the year, with the strongest positive anomalies recorded during the first half of the year. Mean temperature anomalies ranged from +0.32°C to +0.64°C during January-March (JFM) and April-June (AMJ), before moderating between +0.10°C and +0.16°C during July-September (JAS) and October-December (OND). *Refer to Figure 17, 18, and 19 for further analysis of results.*

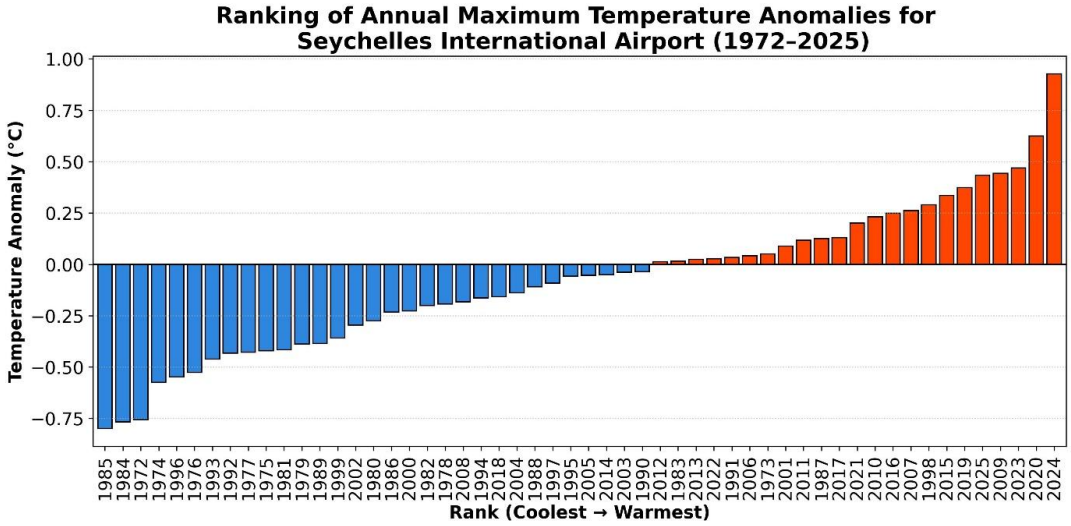



*Figure 16 : Annual Mean Temperature Evolution (1972-2025) for the Seychelles.*

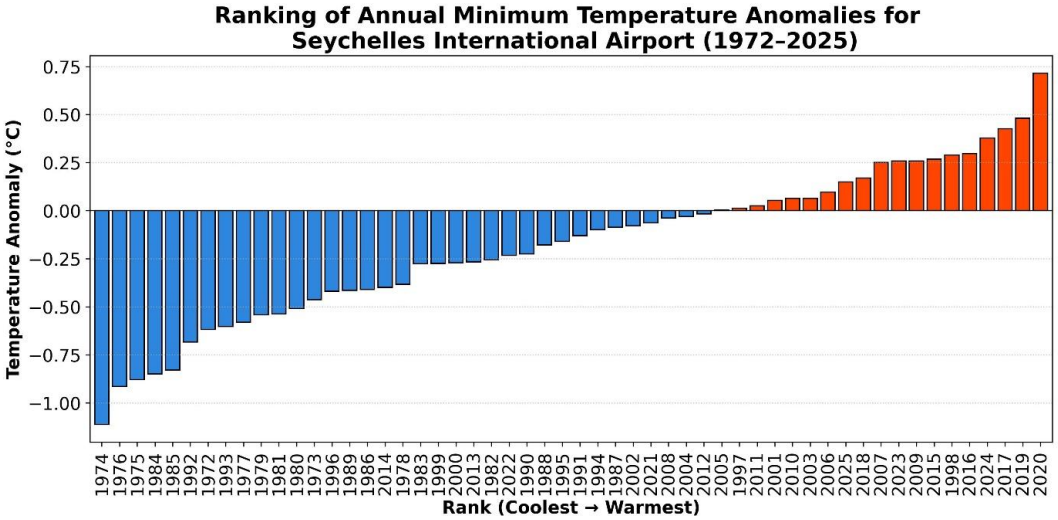



*Figure 17 : Annual Mean Temperature Evolution (1972-2025) for the Seychelles.*

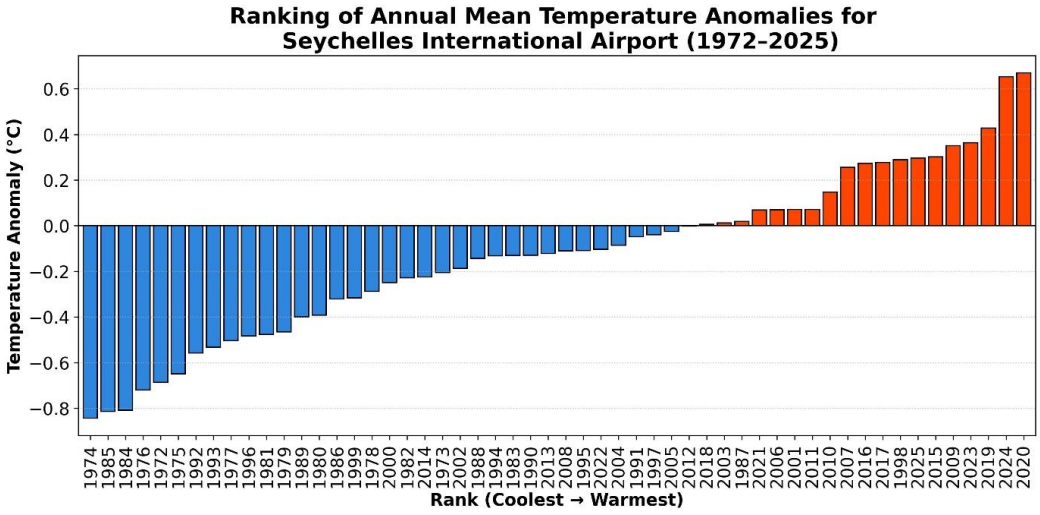



*Figure 18 : Annual Mean Temperature Evolution (1972-2025) for the Seychelles.*

## 6. RANKED BASE ANALYSIS OF RAINFALL AND TEMPERATURE

The rank-based diagram (Figure 20) provides a combined assessment of annual temperature and rainfall conditions with each year classified according to its decile ranking. The rank-based diagram therefore highlights clear shifts in the joint behaviour of annual rainfall and temperature at Seychelles International Airport from 1981 to 2025. Earlier years (1981-1990) are concentrated in the lower half of the plot, indicating generally cooler conditions, with many years falling into the cold-dry and cold-humid categories. The period 1991 to 2000 show greater spread across all four quadrants, reflecting a transitional period with higher variability in both rainfall and temperature.

From 2001 onward, a noticeable upward shift in temperature is evident, with most years falling within the warmer categories. In particular, years after 2015 increasingly cluster in the warm-humid and warm-dry quadrants. This therefore indicates that, although the long-term warming signal is consistent, rainfall variability remains substantial. Such recent years include 2019, 2020, 2023, and 2024 which fall within the warm-humid category, demonstrate that exceptionally warm conditions in Seychelles have occurred under varying rainfall regimes. The clustering of recent years toward the warmer portion of the diagram further reinforces the predominance of warmer conditions in recent decades, while rainfall continues to exhibit considerable year-to-year variability that is not necessarily aligned with the long-term temperature trend.

However, 2025 stands out as an exceptionally warm and dry year, ranking in the 9$^{th}$ temperature decile and 1$^{st}$ rainfall decile. This indicates that 2025 was among the warmest years in the historical record while simultaneously being among the driest. Similar warm-dry conditions occurred in 1998 while 2025 was distinguished by its particularly low rainfall ranking.

These patterns likely reflect the combined influence of long-term climate change and natural climate variability. The persistent warming in recent decades is consistent with global warming associated with increasing greenhouse gas concentrations and rising air and sea-surface temperatures. Warmer ocean conditions may increase atmospheric moisture availability, contributing to the occurrence of recent warm-humid years. Rainfall variability, however, remains strongly influenced by natural climate variability, including ENSO and the IOD, whose effects over Seychelles are complex and seasonally dependent. Their influence is further modulated by the ITCZ, monsoon circulation, MJO, and other regional weather systems. The

coexistence of warm-humid and warm-dry years therefore reflects a persistent warming trend alongside substantial year-to-year rainfall variability.

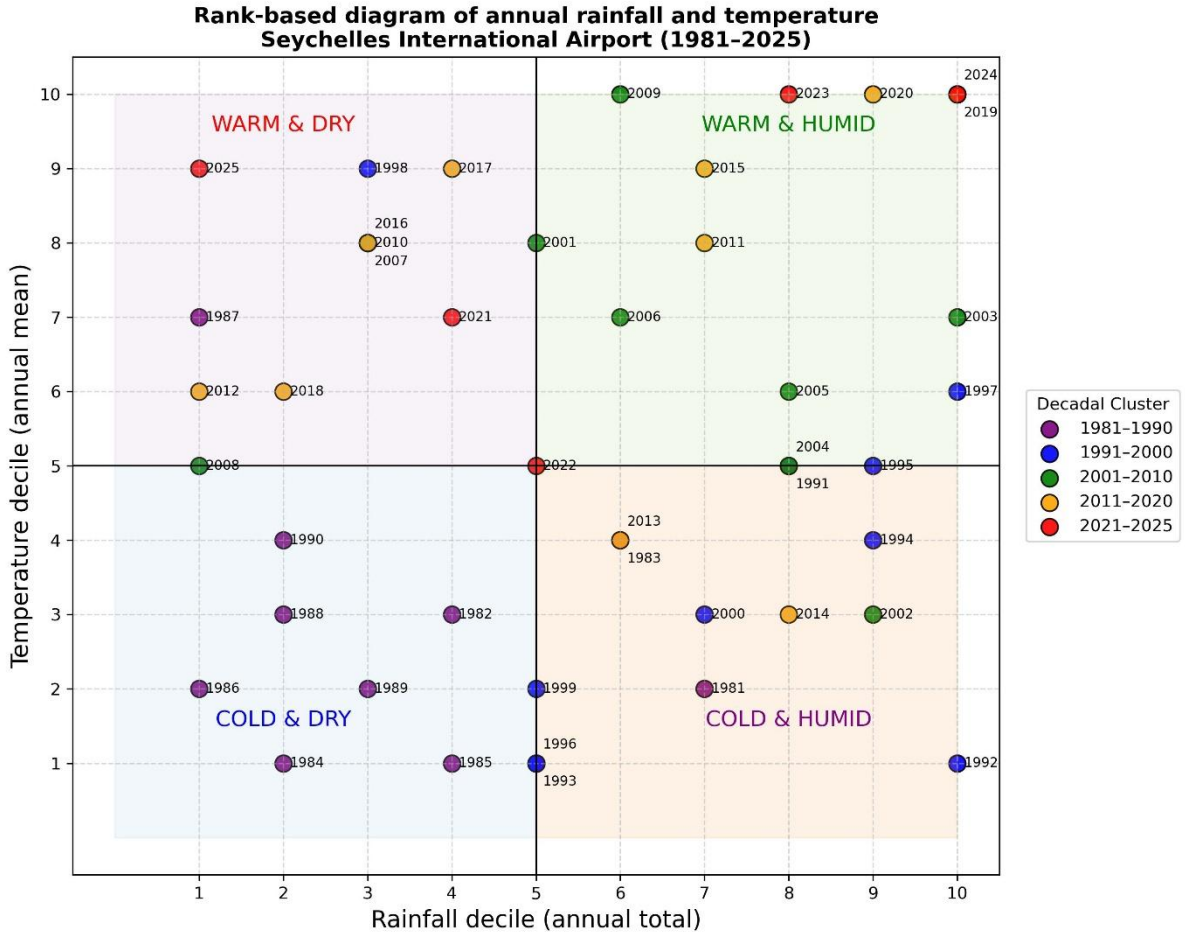



*Figure 19 : Rank-based classification of annual rainfall and temperature at Seychelles International Airport for 1981-2025, showing the distribution of years across dry/wet and cool/warm conditions based on rainfall and temperature deciles. The vertical axis represents mean temperatures (warmer toward the top and colder toward the bottom), while the horizontal axis represents accumulated rainfall (dry on the left and humid/wet on the right).*

## 7. SUNSHINE DURATION

Figure 21 presents the annual mean sunshine duration recorded at the Seychelles International Airport during the period 1981-2025. In 2025, the annual mean sunshine duration was 7.6 hours/day, which was above the 1991-2020 climatological average of 7.0 hours/day and was the sunniest year since 1981. This was followed by 2021 and 2005 with mean durations of 7.5 hours/day and 7.4 hours/day respectively.

In contrast, 1983 recorded the lowest annual mean sunshine duration, with an average of 6.2 hours/day. The general pattern therefore depicts a non significant increasing trend in annual mean sunshine duration.

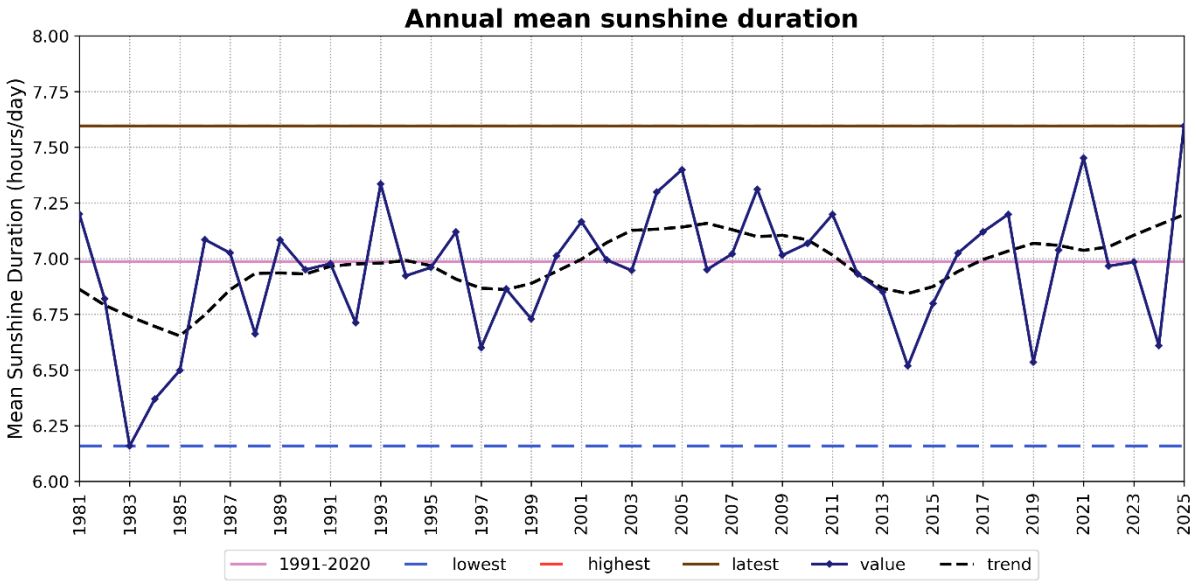



*Figure 20: Annual mean sunshine durations from 1981 to 2025.*

# 8. WIND (SPEED AND DIRECTION)

## 8.1. Monthly wind Rose Diagrams

The wind conditions (speed and direction) in 2025 based on the observatory at Seychelles International Airport showed a pronounced seasonal reversal wind direction. Westerly to north-westerly winds dominated during January to March and returned in December, while southeasterly winds became established from May and persisted through October. The greatest frequency and strength of southeasterly wind prevailed during June to September period. April and November represented the main wind transition months, marking the reversal between the westerly/north-westerly and south-easterly seasonal wind regimes respectively. The 2 months were further characterized by more variable wind directions and a weakening/reversal of the dominant seasonal flow. *Refer to Figure 22 below for month-to-month wind plot during 2025.*

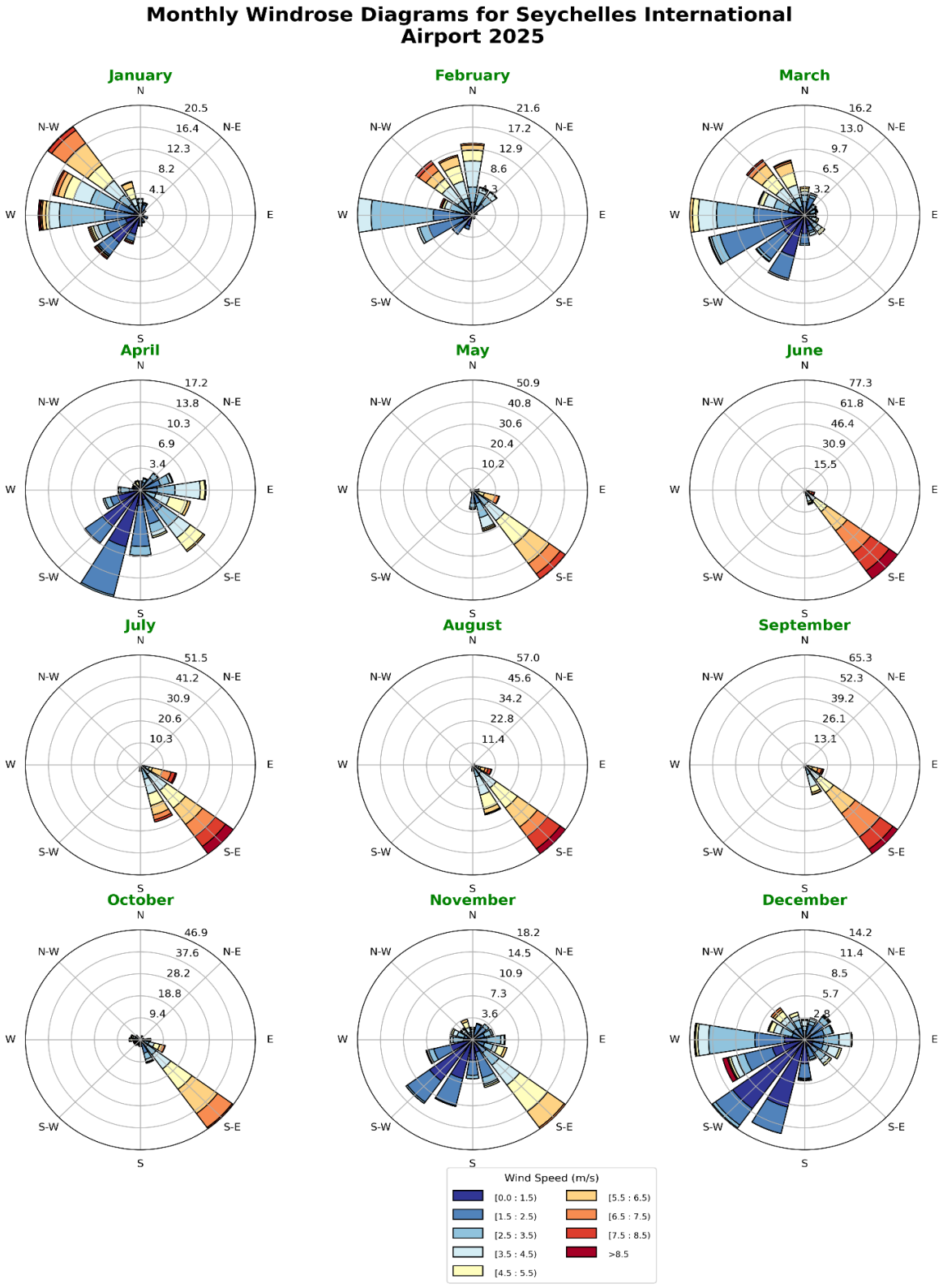



*Figure 21 :Monthly wind roses at Seychelles International Airport in 2025. The diagrams show the frequency distribution of wind direction and speed for each month (Jan-Dec). Wind speed is represented by the colour categories, while the radial extent indicates the frequency of occurrence.*

## 8.2. Seasonal composite wind analysis (Climatology and Anomaly for 2025)

The seasonal circulation maps as shown in Figure 23 similarly show the contrasting DJF and JJA wind regimes across the western Indian Ocean, with stronger and more extensive southeasterly flow during JJA. The 2025 anomaly fields indicate notable departures from the 1991-2020 climatological circulation in both wind direction and magnitude. The observed wind regime therefore retained the characteristic seasonal reversal of Seychelles, although the magnitude and direction of the flow differed from the climatological conditions in several periods. Further, to the east Seychelles, strong westerly wind flow is evident in both seasons.

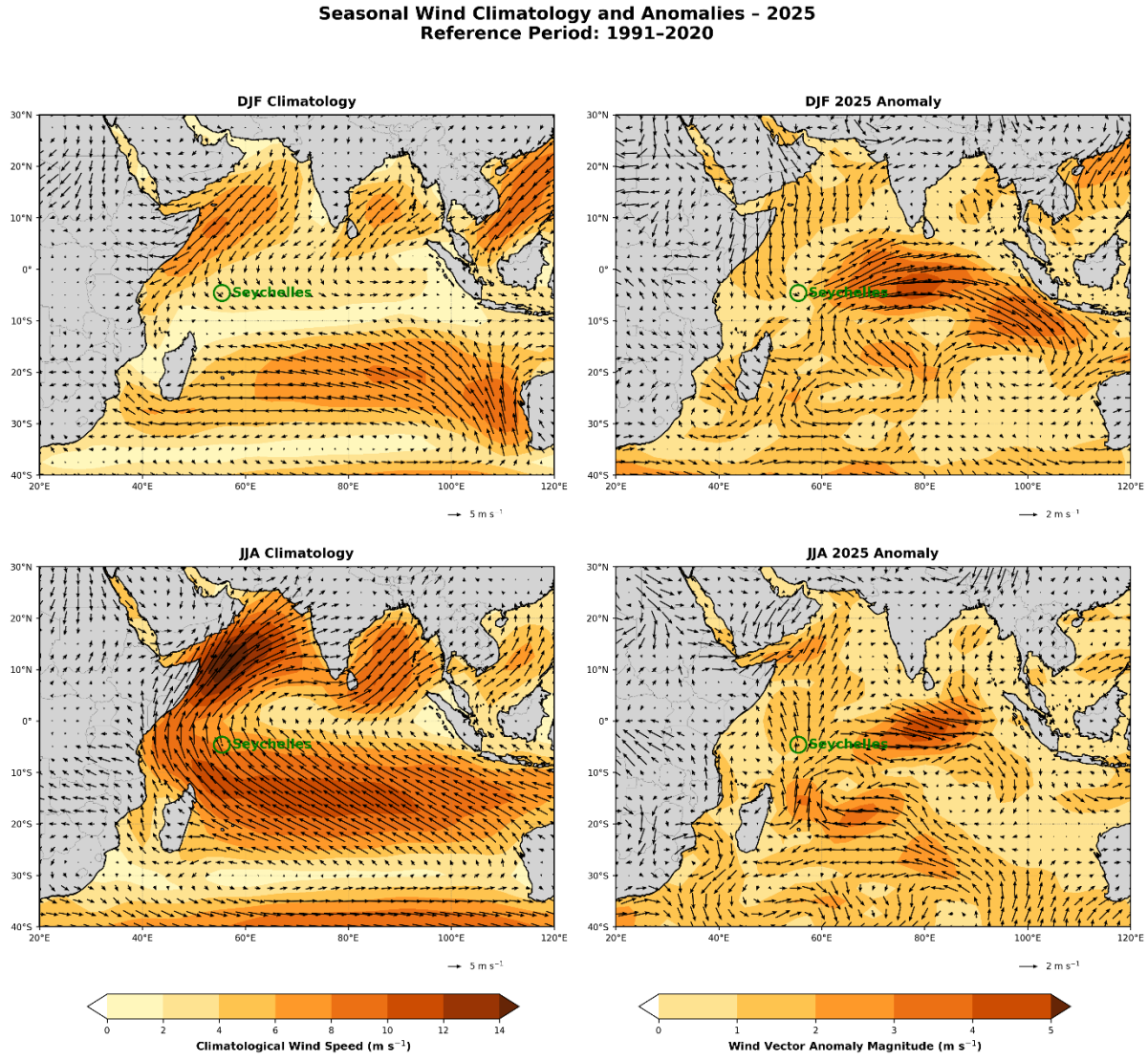



*Figure 22 : Seasonal wind climatology and 2025 wind-vector anomalies over the western Indian Ocean. Left: 1991-2020 DJF and JJA wind climatology; right: corresponding 2025 wind-vector anomalies. Shading shows wind speed and anomaly magnitude, respectively. Seychelles is marked in green.*

## 9. SEA SURFACE TEMPERATURE

Around Seychelles, weak positive SST anomalies were observed during MAM and JJA 2025, while weak negative anomalies prevailed during DJF and SON 2025. During DJF, strong positive SST anomalies were observed in the southeast of Madagascar, near western Australia, and over parts of the Bay of Bengal. In contrast, cooler-than-normal SSTs were observed over parts of the western Arabian Sea. During MAM 2025, warmer-than-normal SSTs became more widespread across much of the Indian Ocean basin, including the region surrounding Seychelles. In JJA, positive SST anomalies persisted across much of the central and southern Indian Ocean, while cooler conditions became more evident in parts of the western of Arabian sea. By SON 2025, the east-west contrast in SST anomalies became more pronounced, with relatively cooler conditions over the western equatorial Indian Ocean and warmer conditions toward the eastern Indian Ocean. This spatial pattern is consistent with the SST gradient associated with a negative Indian Ocean Dipole (IOD), which appeared more pronounced during SON 2025. (*refer to Figure 24*)

Figure 25 shows the annual sea surface temperature (SST) anomalies around Seychelles from 1981 to 2025, relative to the 1991-2020 reference period. A warming trend is evident over the period, with SST increasing at a rate of approximately 0.16°C per decade. The time series also shows a noticeable shift from predominantly cooler-than-average conditions during the 1980s and 1990s to generally warmer-than-average conditions in recent years. Further, the years with strong positive SST anomaly (2019, 2023, 2015) are consistent with the positive phase of IOD. In 2025, the annual SST anomaly was approximately +0.20°C, indicating that SSTs around Seychelles remained warmer than the 1991-2020 average, although the anomaly was less pronounced than those recorded in 2023 and 2024.

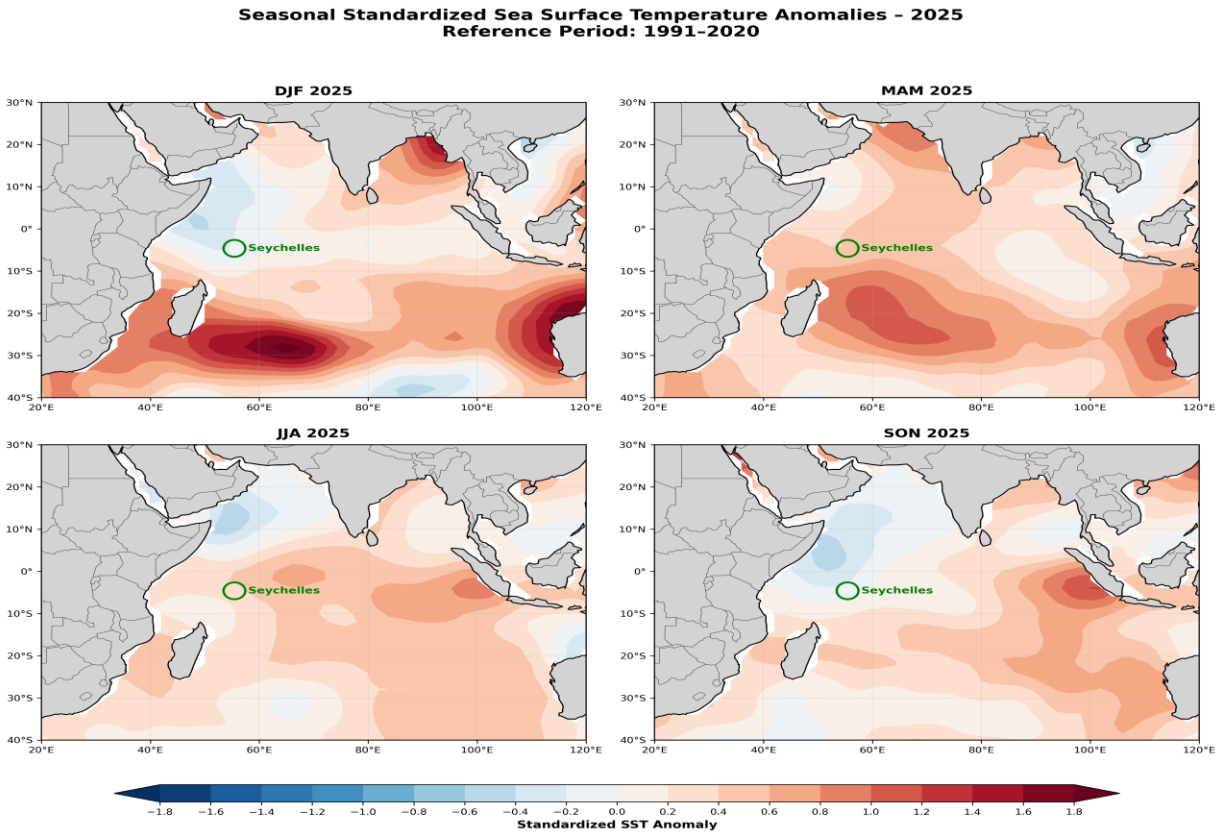



*Figure 23 : Seasonal sea surface temperature (SST) anomalies for DJF 2024/2025, MAM 2025, JJA 2025, and SON 2025, relative to the 1991-2020 reference period. Positive anomalies (light red to red) indicate warmer-than-normal SSTs, while negative anomalies (light blue to dark blue) indicate cooler-than-normal SSTs.*

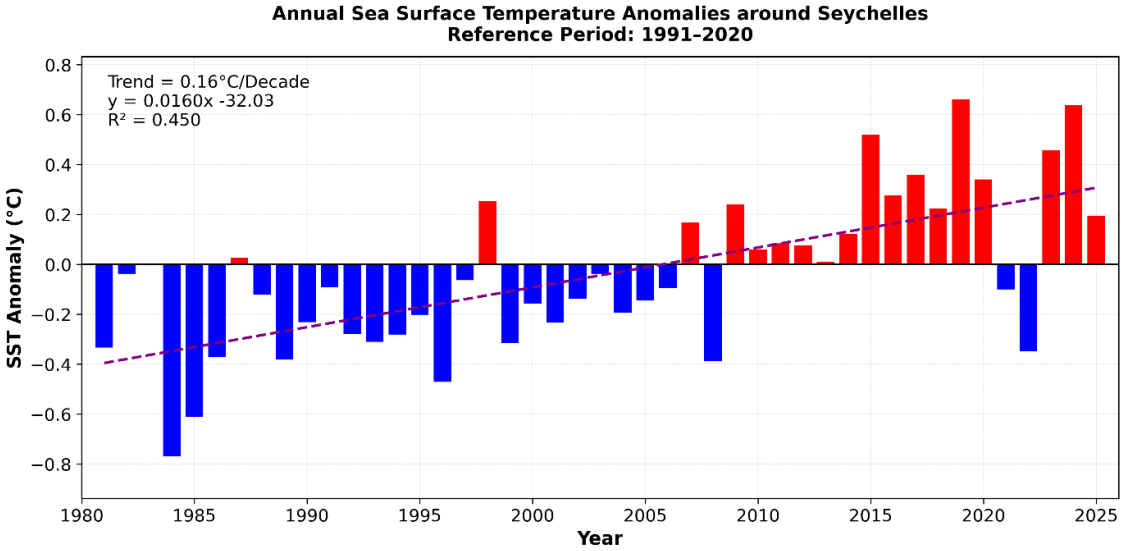



*Figure 24 : Annual sea surface temperature anomalies around the Seychelles, for the period 1981 to 2025, relative to 1991-2020 climatological long-term average. Positive (negative) anomalies indicate warmer (cooler) than average sea surface conditions. The purple dashed line represents the linear warming trend.*

# 10. CLIMATE AND GLOBAL-REGIONAL CLIMATE DRIVERS

## 10.1. Brief characterization of Seychelles climate

Seychelles has a warm, humid tropical maritime climate with a pronounced seasonal rainfall cycle but no completely dry season. The wet season generally extends from November to April, beginning with the onset of the northwest monsoon in November and reaching its peak during December-January as the ITCZ moves southward. April-May marks the principal monsoon transition, characterized initially by light and variable winds before the southeast trade winds become established. May-October constitutes the relatively dry season, with JJA representing its core and the period of strongest southeast trade winds.

However, despite reduced rainfall during the typical southeast monsoon period, brief passing showers remain a normal feature, particularly over windward and elevated areas as moist southeast trade-wind air interacts with the islands' mountainous terrain. Furthermore, temperatures remain relatively uniform throughout the year, with the warmest conditions generally occurring from February to May and a peak around April, while the coolest conditions occur during July-August due to the influence of the southeast monsoon and advection of cool air from the Southern hemisphere winter configuration. Relative humidity remains high throughout the year, generally increasing during the wet season. Sea conditions are generally calmer during the northwest monsoon but become progressively rougher during the southeast trade-wind season, particularly along exposed southern and southeastern coasts.

Tropical cyclones are not a frequent direct hazard to the main Seychelles islands, including Mahe and the Inner Islands, due to their proximity to the equator. However, tropical cyclones and disturbances developing over the southwest Indian Ocean during the November-April cyclone season can occasionally influence the archipelago indirectly through enhanced rainfall, stronger winds, increased ocean swells, and changes in regional weather patterns. The Outer Islands, particularly those located farther south and southeast of Mahe, are generally more exposed to the direct and indirect effects of tropical systems than the main granitic islands.

## 10.2. Global and Regional Drivers of Seychelles climate

Seychelles' climate is influenced by the interaction of large-scale global climate variability, regional ocean-atmosphere processes, and local geographical characteristics. Its location in the western tropical Indian Ocean, close to the equator, makes the archipelago particularly sensitive to variations in sea-surface temperatures, atmospheric circulation, moisture transport and tropical convection. These factors influence rainfall, temperature, wind patterns, humidity and the occurrence of extreme weather events across the islands.

At the regional scale, the Near-Equatorial Trough (NET) is one of the important controls of Seychelles' rainfall regime. The NET is a broad zone of low-level convergence and enhanced convection that develops and migrates seasonally across the equatorial Indian Ocean. Its position and intensity influence the transport and convergence of moisture over Seychelles and contribute to the development of cloud and convective rainfall, particularly during the wetter months. The seasonal movement of the NET is closely associated with changes in equatorial

convection, the regional wind field and the broader migration of the Intertropical Convergence Zone (ITCZ). Variations in the position, intensity and persistence of the NET can therefore contribute to changes in the timing, duration and intensity of wet and dry spells across the archipelago.

The Intertropical Convergence Zone (ITCZ) also contributes to the seasonal cycle of rainfall. Its north-south migration across the tropical Indian Ocean, together with changes in equatorial convection and low-level wind circulation, influences the availability of moisture and the development of rainfall-producing systems over Seychelles. During the austral summer, the southward displacement of the tropical convergence zone and the associated westerly to northwesterly wind component contribute to the wetter conditions experienced across much of the archipelago. The interaction between these winds, the NET and the surrounding warm ocean provides favourable conditions for convection and rainfall.

The surrounding Indian Ocean sea-surface temperatures (SSTs) provide an important source of heat and atmospheric moisture and consequently play a fundamental role in regulating Seychelles' climate. Variations in SSTs influence evaporation, atmospheric moisture, convection and atmospheric stability. Anomalously warm or cool ocean conditions can therefore contribute to rainfall and temperature anomalies over the islands. These oceanic conditions also interact with large-scale climate modes, resulting in variations in the timing and intensity of rainfall and other weather conditions.

The Mascarene High, a semi-permanent subtropical high-pressure system over the southern Indian Ocean, is another important regional climate driver. Its seasonal position and intensity influence the strength and direction of the southeast trade winds, moisture transport and rainfall distribution across Seychelles. During the austral winter, strengthened southeast trade winds can transport moist air towards the islands and enhance rainfall on exposed, windward slopes, particularly through orographic effects.

On the global scale, the El Niño-Southern Oscillation (ENSO) is an important source of interannual climate variability. Changes in tropical Pacific Ocean temperatures associated with El Niño and La Niña alter global atmospheric circulation and tropical convection, with associated impacts extending into the Indian Ocean. These changes can influence rainfall patterns, the persistence of wet and dry conditions and temperature anomalies over Seychelles.

The Indian Ocean Dipole (IOD) is particularly relevant to Seychelles because of its direct influence on the tropical Indian Ocean. Variations in the east-west gradient of sea-surface temperatures associated with positive and negative IOD events can modify atmospheric convection and moisture distribution across the basin. Consequently, IOD events can contribute to significant rainfall variability over the western Indian Ocean, including Seychelles.

On intraseasonal timescales, the Madden-Julian Oscillation (MJO) can substantially modulate rainfall and convection. The eastward propagation of enhanced and suppressed tropical convection associated with the MJO can result in alternating periods of wetter and drier conditions over Seychelles, particularly during the rainy season. Its influence can interact with

the NET, ITCZ, ENSO and IOD, contributing to considerable week-to-week variability in rainfall.

Seychelles' weather can also be affected by tropical disturbances and tropical cyclones developing over the Southwest Indian Ocean. Although Mahe and the Inner Islands are generally less exposed to direct tropical cyclone impacts because of their proximity to the equator, distant systems can influence the archipelago indirectly through enhanced rainfall, stronger winds, increased ocean swells and changes in regional atmospheric circulation. Such influences are generally more relevant to the southern and southeastern parts of the archipelago and the more southerly outer islands.

At the local scale, the topography and orientation of the islands strongly modify the regional climate signal. The mountainous terrain of Mahé enhances rainfall through orographic lifting when moist air is transported towards the island, resulting in substantial spatial differences in rainfall over relatively short distances. Exposure to prevailing winds, together with land-sea interactions and local sea-breeze circulation, further contributes to spatial and temporal variations in rainfall, temperature, humidity and wind conditions across the archipelago.

## GLOSSARY

**Climate Standard Normal:** Averages of climatological data calculated for the following consecutive 30-yr periods: 1 January 1981 to 31 December 2010, 1 January 1991 to 31 December 2020, etc. The current WMO climatological standard normal period is **1991-2020**.

**Reference period/baseline period:** specified period against which observations, statistics, anomalies or changes are compared.

**Above Normal:** Conditions falling within the upper tercile of the climatological distribution for the reference period.

**Below Normal:** Conditions falling within the lower tercile of the climatological distribution for the reference period.

**Near Normal:** Conditions falling within the middle tercile of the climatological distribution for the reference period

**Anomaly:** The deviation of (usually) temperature or precipitation in a given station/region over a specified period from the long-term average value for the same station/region. For temperature, positive anomalies indicate warmer-than-average conditions, while negative anomalies indicate cooler-than-average conditions. For precipitation, positive anomalies indicate wetter-than-average conditions, while negative anomalies indicate drier-than-average conditions.

**ENSO (El Niño-Southern Oscillation):** A recurring climate phenomenon involving changes in tropical Pacific Ocean sea surface temperatures and atmospheric pressure, with widespread effects on global weather and climate.

**El Niño:** The warm phase of ENSO, characterised by unusually warm sea surface temperatures in the central and eastern tropical Pacific Ocean, which can alter rainfall and temperature patterns worldwide.

**La Niña:** The cool phase of ENSO, characterised by unusually cool sea surface temperatures in the central and eastern tropical Pacific Ocean, often producing climate patterns broadly opposite to those associated with El Niño.

**Indian Ocean Dipole (IOD):** A climate phenomenon characterised by differences in sea surface temperatures between the western and eastern tropical Indian Ocean, influencing rainfall and temperature patterns around the Indian Ocean region.

**Positive Indian Ocean Dipole (Positive IOD):** A phase of the IOD characterised by warmer-than-normal sea surface temperatures in the western tropical Indian Ocean and cooler-than-normal temperatures in the eastern tropical Indian Ocean.

**Negative Indian Ocean Dipole (Negative IOD):** A phase of the IOD characterised by cooler-than-normal sea surface temperatures in the western tropical Indian Ocean and warmer-than-normal temperatures in the eastern tropical Indian Ocean.

**MJO (Madden-Julian Oscillation):** A large-scale tropical disturbance that moves eastward around the tropics, characterised by alternating periods of enhanced and suppressed rainfall and convection. It typically occurs on timescales of about 30-60 days.

**Intertropical Convergence Zone (ITCZ):** A belt of low pressure near the equator where the trade winds from the Northern and Southern Hemispheres converge. It is associated with rising air, cloud formation and rainfall, and its seasonal movement influences rainfall patterns over Seychelles.

**Near Equatorial Trough (NET):** A broad zone of low-level convergence and enhanced convection near the equator that shifts seasonally across the Indian Ocean and influences rainfall over Seychelles.

**Tropical Cyclones:** Intense rotating low-pressure systems that develop over warm tropical oceans and can produce strong winds, heavy rainfall and rough seas.

**Southeast Monsoon (SEM):** The cooler and generally drier season in Seychelles, typically occurring from May to October, characterized by persistent southeast trade winds.

**Northwest Monsoon (NWM):** The warmer and wetter season in Seychelles, typically occurring from November to April, associated with increased humidity, rainfall and convective activity.

**Mascarene High:** A semi-permanent high-pressure system over the southern Indian Ocean that strengthens southeast trade winds and influences the dry-season weather over Seychelles.

# REPORT DEVELOPMENT, ACCESS AND CITATION

**State of the Climate in Seychelles 2025**

The State of the Climate in Seychelles 2025 is the inaugural State of the Climate report for Seychelles. It provides a snapshot of the state of the climate in Seychelles during 2025, examining key weather and climate events and placing them in the context of the 1991-2020 climatological reference period. The report also highlights the observed and potential impacts of climate variability and extremes on key socioeconomic sectors in Seychelles.

**Access:** The complete report is available on the Seychelles Meteorological Authority (SMA) website: https://www.meteo.sc/

**Developers:** The State of the Climate in Seychelles 2025 was developed by staff of the Climate and Research Division, Seychelles Meteorological Authority (***Mr. Tojo Lalaina Nomenjanahary, Mr. Samuel Ekwacu and Ms. Hyacinth Seeward***) with the supervision of the Chief Executive Officer of the Seychelles Meteorological Authority, **Mr. Vincent Josee Amelie.**

**Suggested Citation:** SMA (2026). *State of the Climate in Seychelles 2025, Seychelles Meteorological Authority, Seychelles.*

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## REFERENCE


i. ***WMO-No. 100 - Guide to Climatological Practices;*** *Foundational guidance for climate observations, data processing, climatological analysis, variability, extremes and presentation of climate information. WMO Guide to Climatological Practices*

ii. ***WMO-No. 1203 - Guidelines on the Calculation of Climate Normals;*** *Provides standardized procedures for calculating climate normals and anomalies, supporting the use of the 1991-2020 reference period. WMO Climatological Normals*

iii. ***WMO Regional State of the Climate - Datasets and Methods;*** *Provides guidance on datasets, climate indicators and analytical methods for State of the Climate assessments. WMO Regional State of the Climate - Datasets and Methods*

iv. ***WMO State of the Global Climate Reports;*** *Provides a framework for assessing and communicating climate indicators, variability, trends, extremes and associated impacts. WMO State of the Global Climate*

v. ***WMO-No. 1269 - Guidelines on Surface Station Climate Data Quality Control and Quality Assurance;*** *Provides guidance for ensuring the quality and reliability of surface observations used for climate analysis, trends and extremes.*
*WMO Climate Data - WMO guidance and standards*

vi. ***WMO Guidance on Climate Extremes and Climate Indices (Climpact);*** *Provides guidance and tools for calculating and analysing climate extremes and indices, including TX90p, TXx, R95pTOT, R10mm, R50mm, CDD and CWD.*
*WMO Climpact - Generating Climate Indices to Support Climate Services*



# STATE OF CLIMATE IN SEYCHELLES

# 2025

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