

**SEA SURFACE TEMPERATURE FLUCTUATIONS AROUND THE
SEYCHELLES CRW MAHE SITE ON SEYCHELLES ISLAND,
THROUGHOUT A 25-YEAR PERIOD (1998–2022), CONSISTING
OF CORAL REEF ECOSYSTEMS**

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Abstract - The increase in sea surface temperature caused by global warming is one of the major threats to coral reefs. The Republic of Seychelles is one of the world's most isolated and aesthetically pleasing groups of islands, and it has coral beaches. Therefore, this study was designed to study the fluctuation of inter-annual and intra-annual sea surface temperature from 1998 to 2022 over the most prominent coral reef in the Seychelles, the CRW Mahe Site coral reef. The data was gathered using the Coral Health and Monitoring Program Portal online database, which provides daily data from the fixed sea surface temperature sensor of the relevant reef. There was an annual average sea surface temperature trend increasing by 0.02 °C per year. The maximum and minimum monthly average sea surface temperatures recorded in April and August were 29.74°C and 26.075°C, respectively. The maximum and minimum yearly average sea surface temperatures recorded in 2019 and 2000 were 28.53°C and 27.39°C, respectively. The maximum yearly positive and negative anomaly sea surface temperatures recorded in 2019 and 2000 were 0.54 °C and -0.59°C, respectively. Comparatively, high positive yearly anomalies were recorded in 1998 (0.26°C), 2007 (0.24°C), 2009 (0.23°C), 2015 (0.39°C), 2016 (0.27°C), 2019 (0.54°C), and 2020 (0.48°C) years. El Niño, La Niña, Indian Ocean Dipole, and global warming all affect the region's usual yearly pattern of sea surface temperature variations. As a result, coral reefs can face thermal stress, which could cause coral bleaching and decrease the ecosystem's health.

Keywords: *Seychelles Island; coral reef; sea surface temperature; anomaly; average*