

AIR TEMPERATURES

Mean Air Temperature

The year 2023 was the 8th warmest year on record in Fiji with the national average mean air temperature of 26.1°C, which was 0.5°C warmer than the normal. The national mean annual air temperature has increased by 1.0°C between 1959 and 2023 (Figure 1). This trend is consistent with the global pattern of rising air temperatures as greenhouse gas concentration increases in the atmosphere.

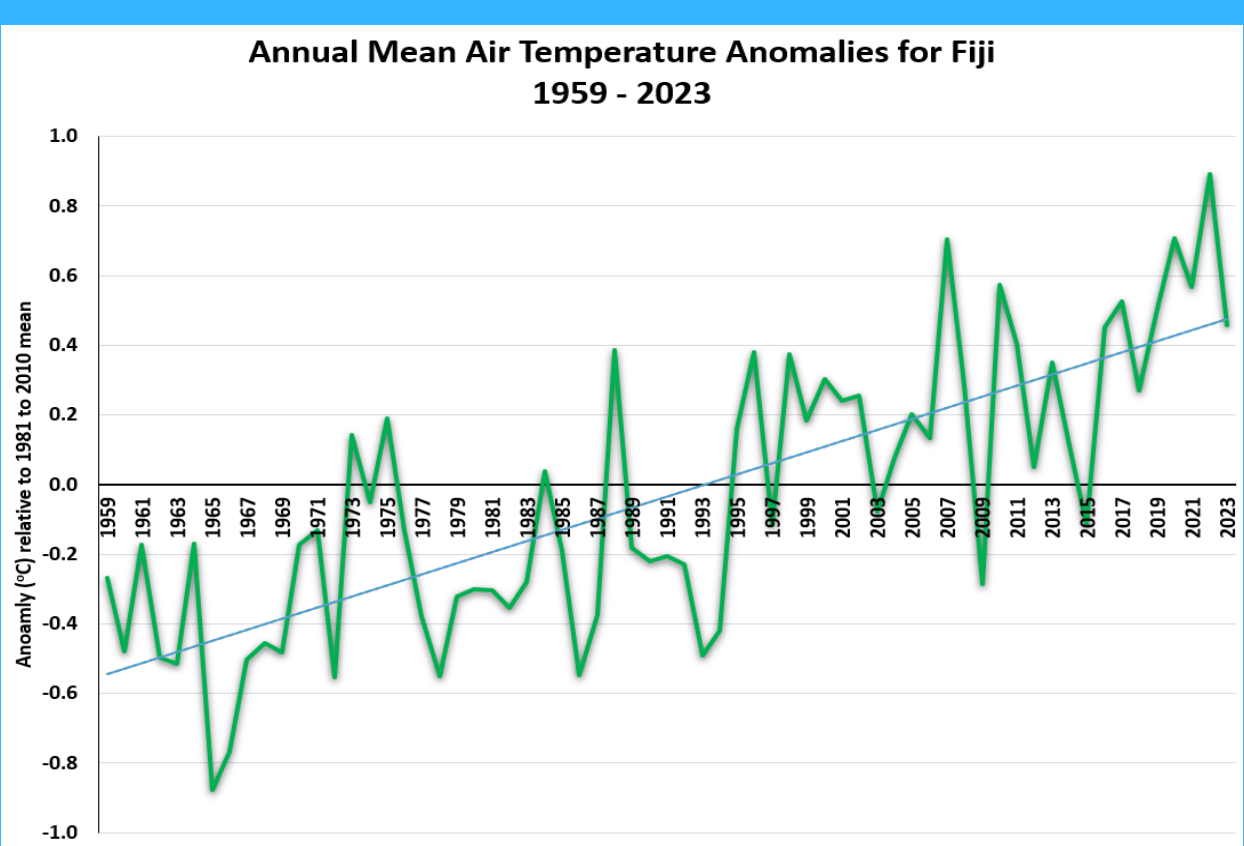


Figure 1: Time series of national average mean annual air temperature anomaly

Maximum Air Temperature

The national average annual maximum air temperature during 2023 was 29.9°C, which was 0.7°C warmer than the normal. This categorises it as the 2nd warmest national annual maximum air temperature on record since 1959. The year 2022 is warmest on record, followed by 2023 and 2021. The national average maximum air temperature has increased by 1.1°C between 1959 and 2023 (Figure 2).

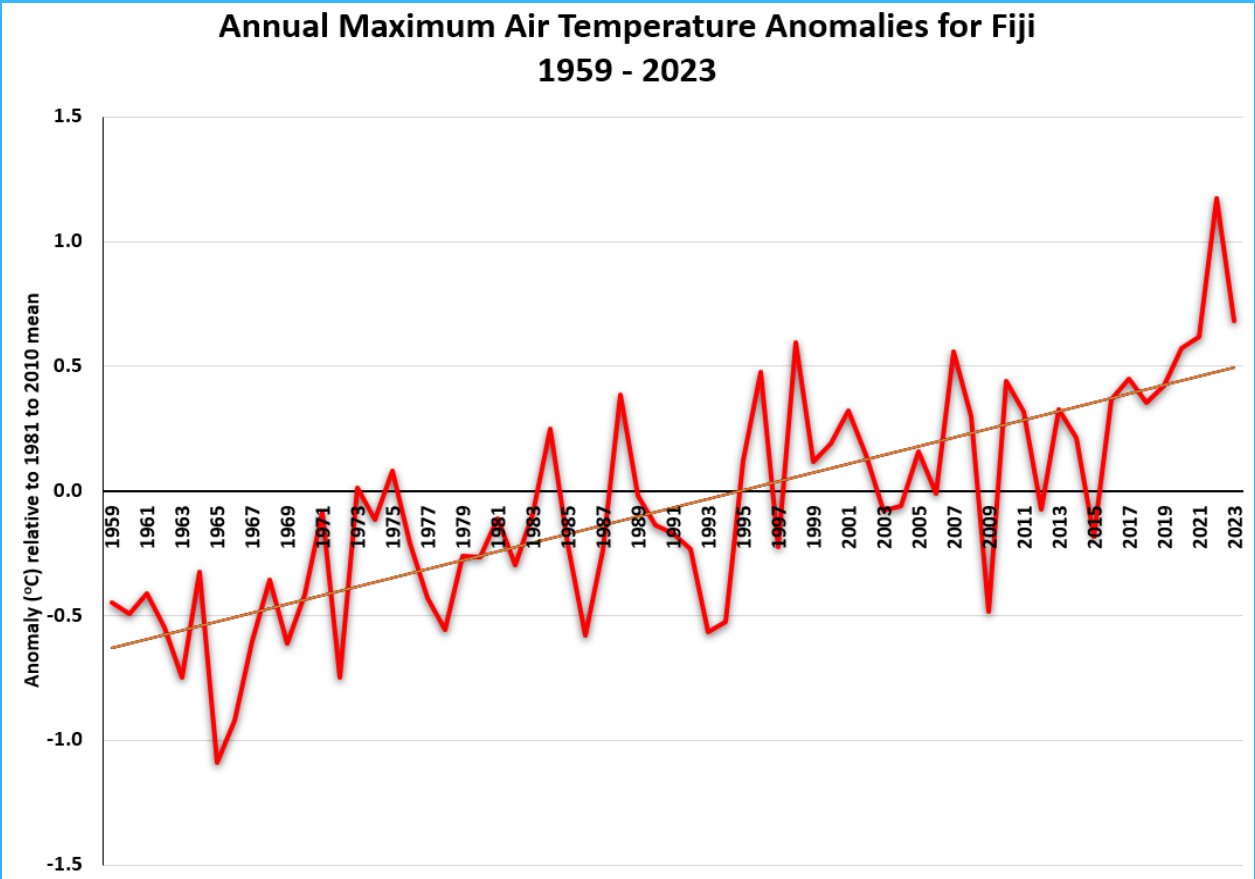


Figure 2: Time series of national average annual maximum air temperature anomaly

Minimum Air Temperature

The national average annual minimum air temperature during 2023 was 22.2°C, which was 0.2°C warmer than the normal. This ranks as the 21st warmest annual minimum air temperature on record since 1959. The national average minimum air temperature has increased by 0.9°C between 1959 and 2023 (Figure 3).

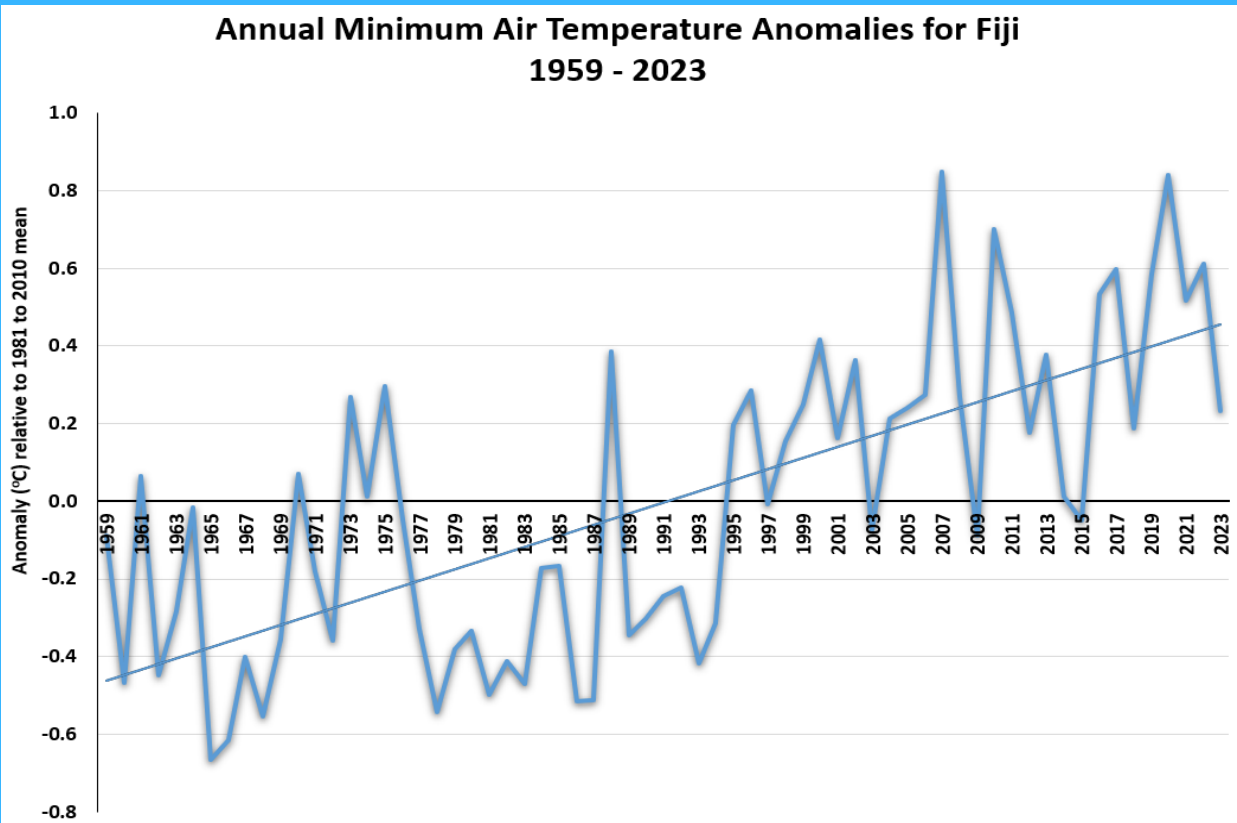


Figure 3: Time series of national average annual minimum air temperature anomaly

RAINFALL

Fiji’s national average rainfall for 2023 was 2190mm, which was 97% of the long-term average. This ranks 2022 as the 17th driest year in 66 years of record. Fiji’s national annual average rainfall is not showing any significant increasing or decreasing trend between 1958 to 2023, with a large year-to-year variability associated with the El Niño and La Niña events (Figure 1).

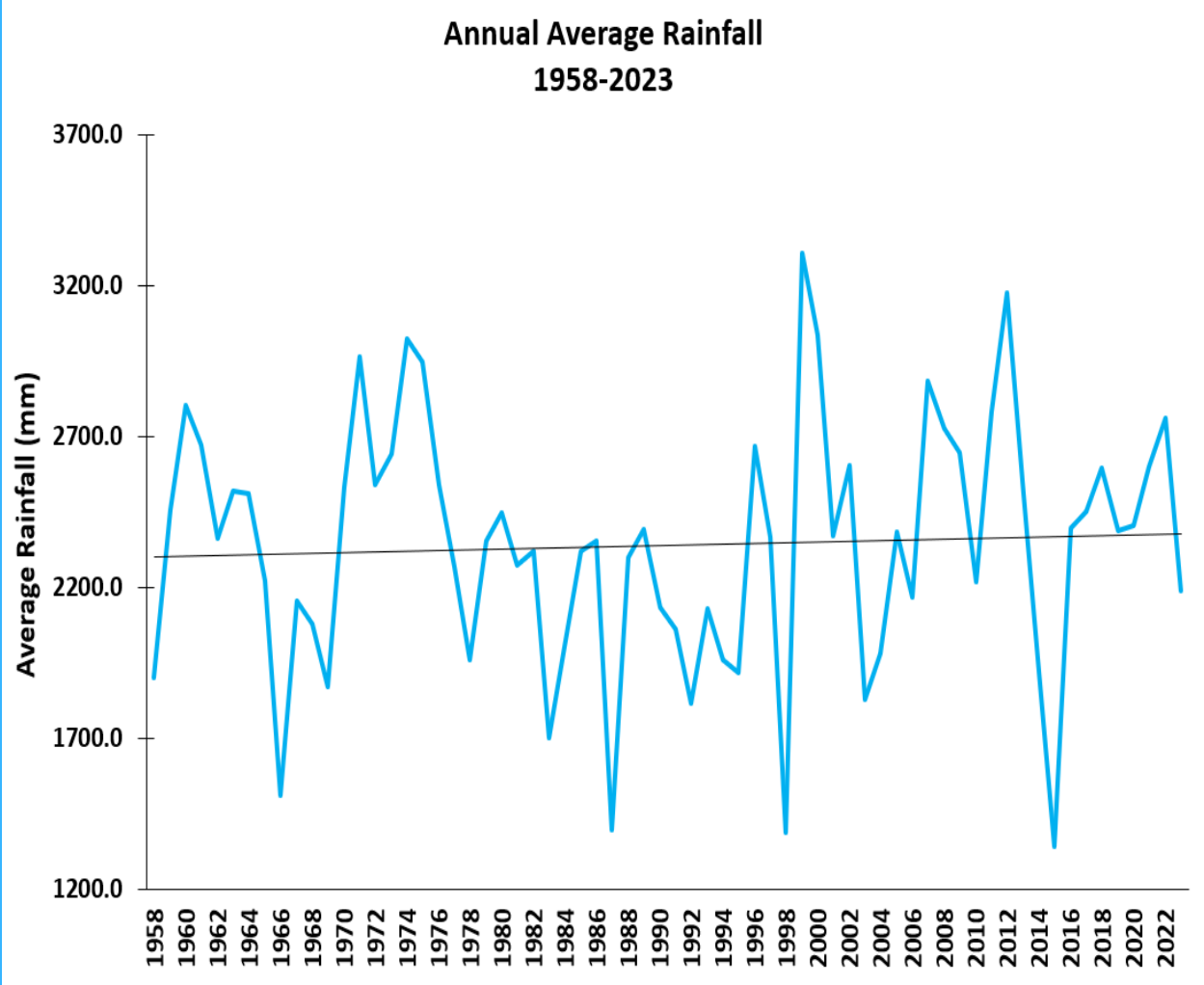


Figure 1: Time series of national average annual rainfall from 1958 to 2023

Similarly, the national average Wet (November to April) and Dry (May to October) Seasons also have no significant trends (Figure 2&3)

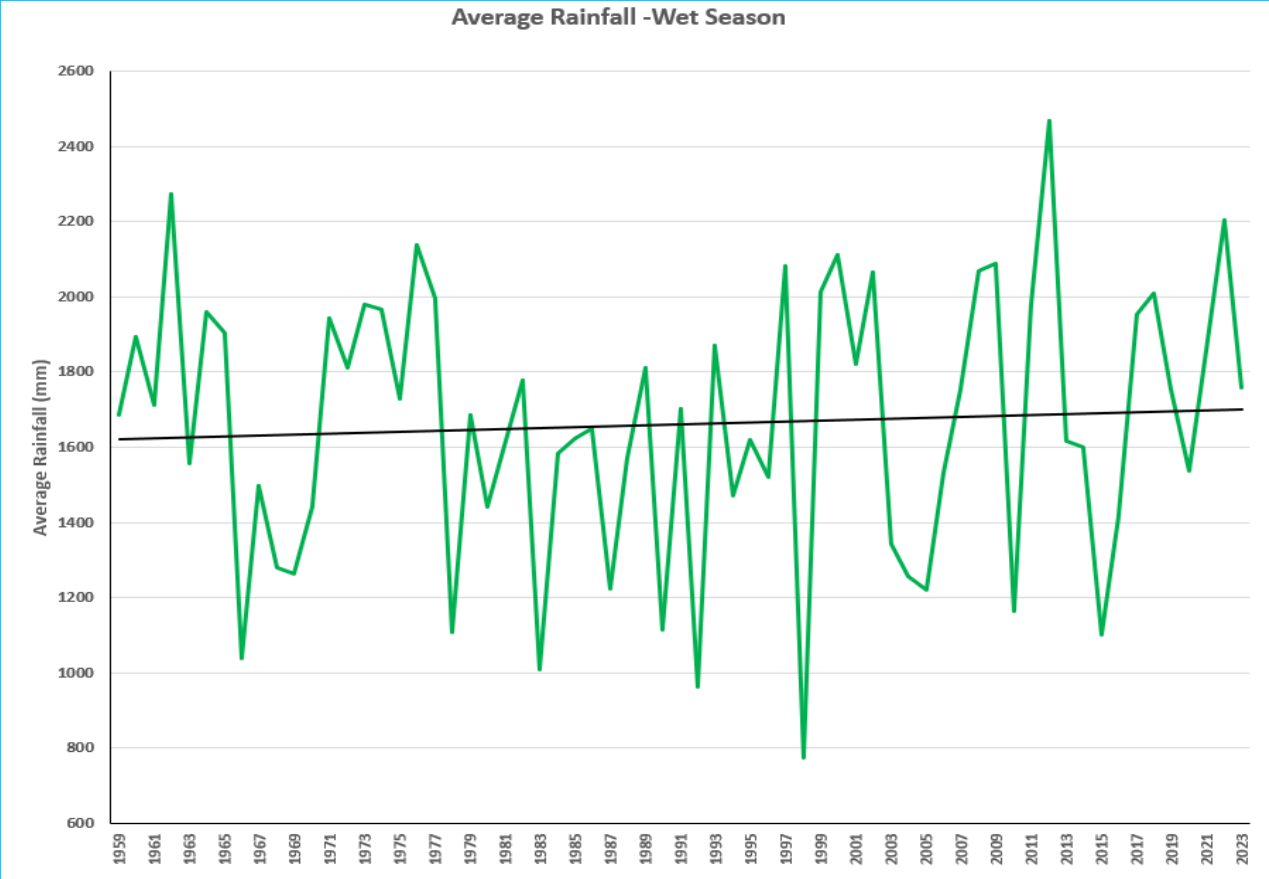


Figure 2: Time series of national average wet season rainfall from 1958 to 2023

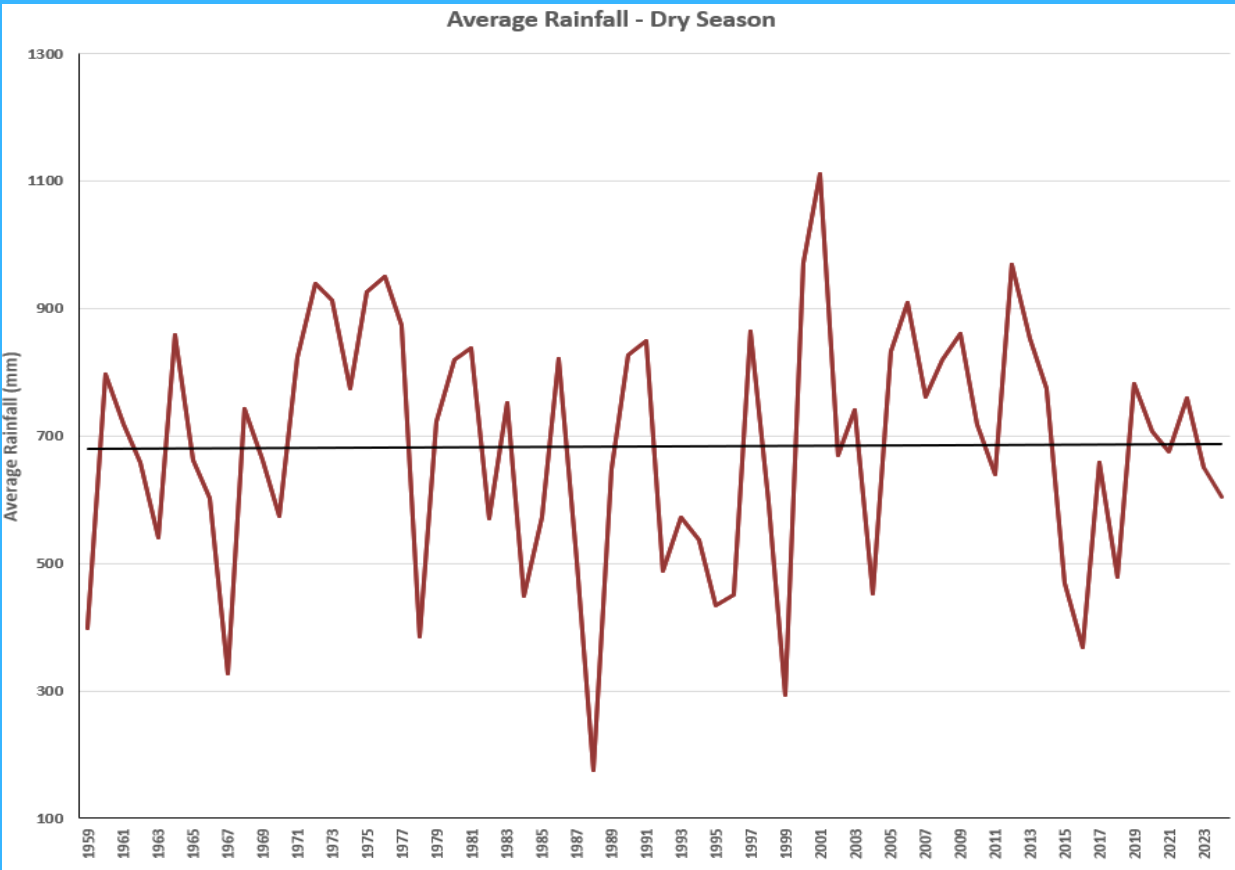


Figure 3: Time series of national average dry season rainfall from 1958 to 2023

SEA LEVEL

Sea level monitoring station at the Lautoka Wharf had a relative sea level trend with 4.3mm/year between 1993 to 2023 (Figure 1).

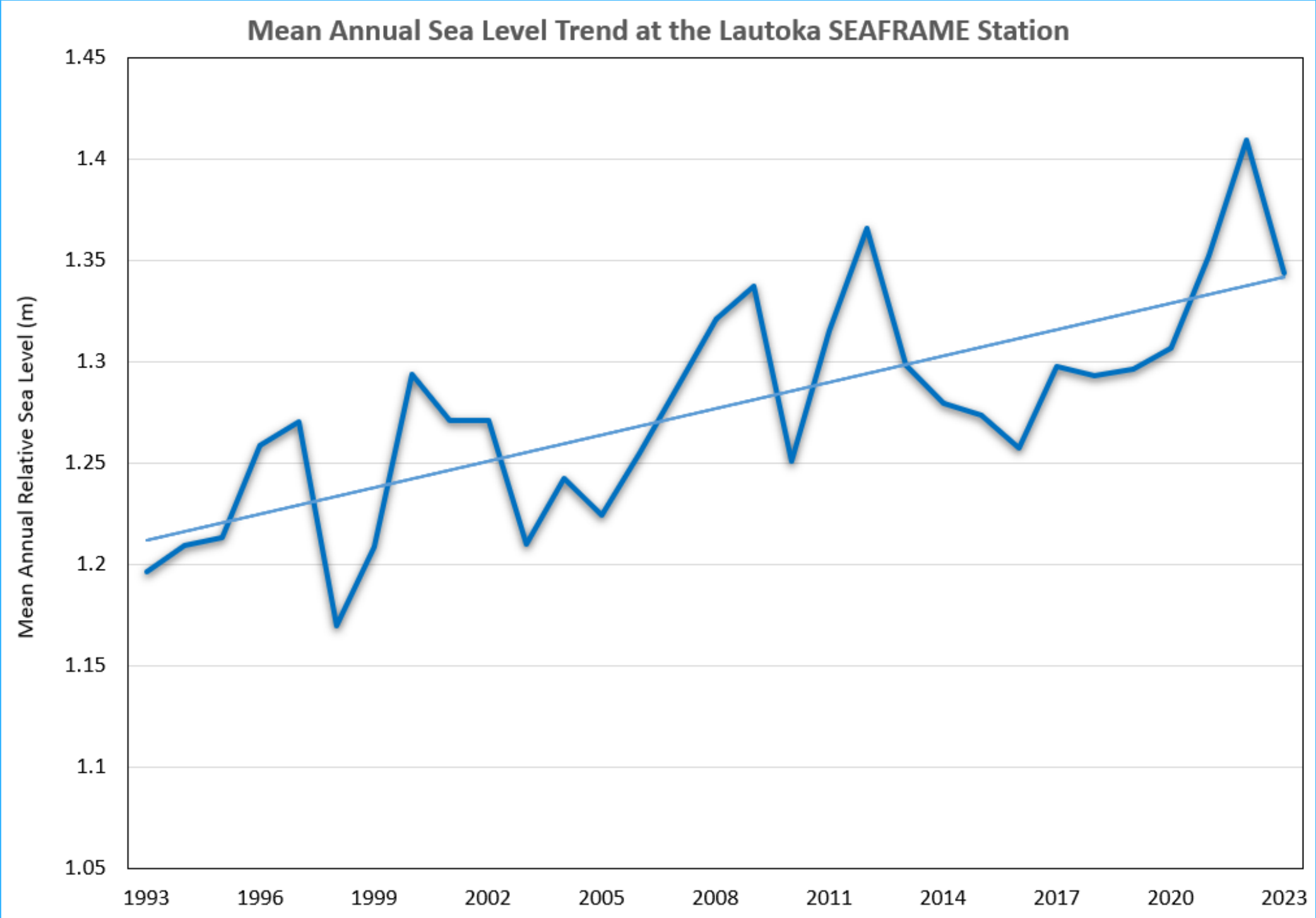


Figure 1: Mean annual relative sea level trend at the Lautoka SEAFRAME station

TROPICAL CYCLONES

In the 43-year period between the 1980 and 2023 seasons, 87 tropical cyclones developed within or passed through Fiji’s Exclusive Economic Zone (EEZ), an average of 20 per decade (Figure 1). The number of tropical cyclones varies widely from year to year, with none in some seasons and the highest of 6 tropical cyclones recorded during 1992/93 season.

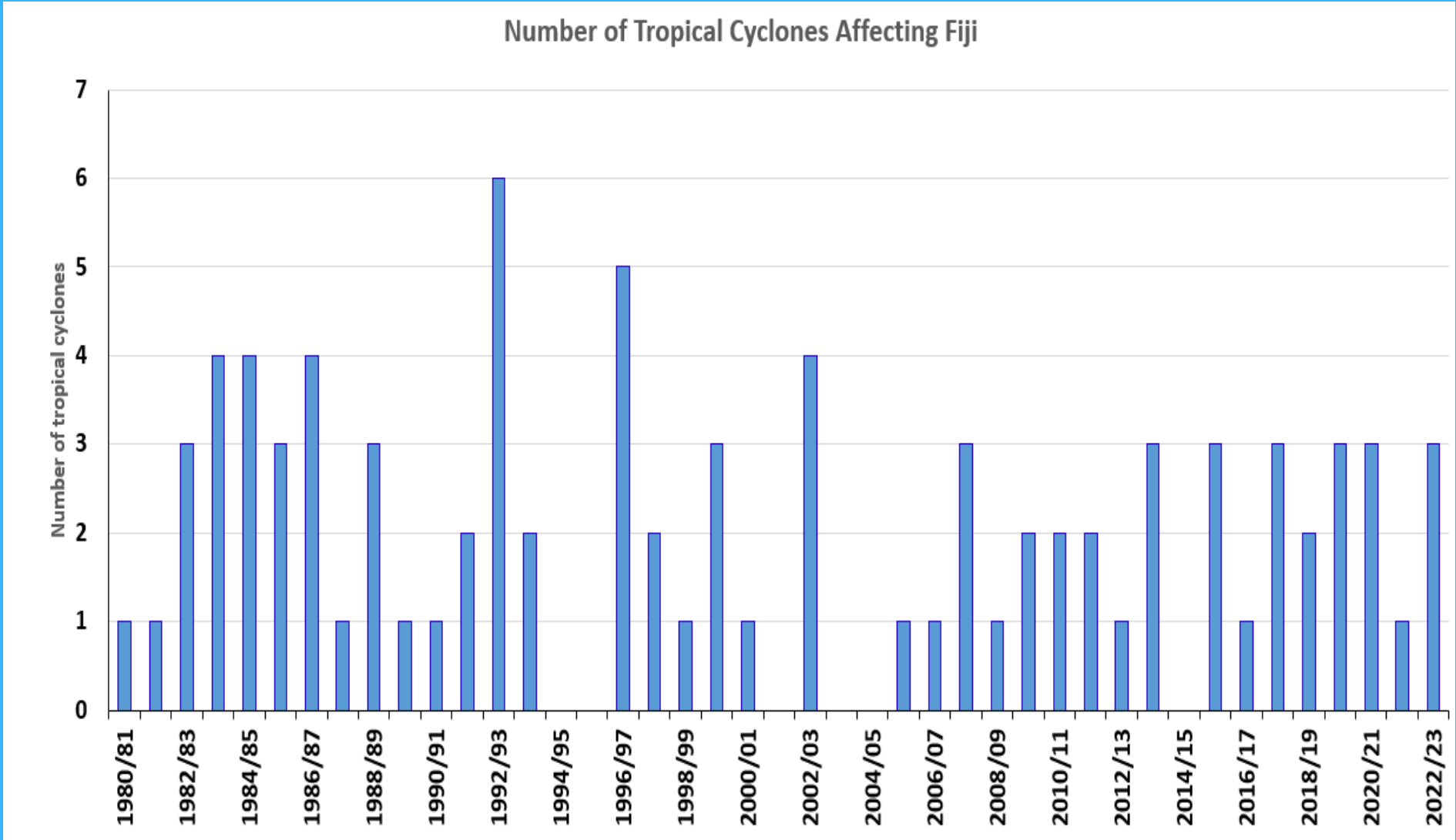


Figure 1: Number of tropical cyclones developing within and crossing the Fiji EEZ per season.