

# Agenda 4: Looking Back Long-Term: Status of key variables

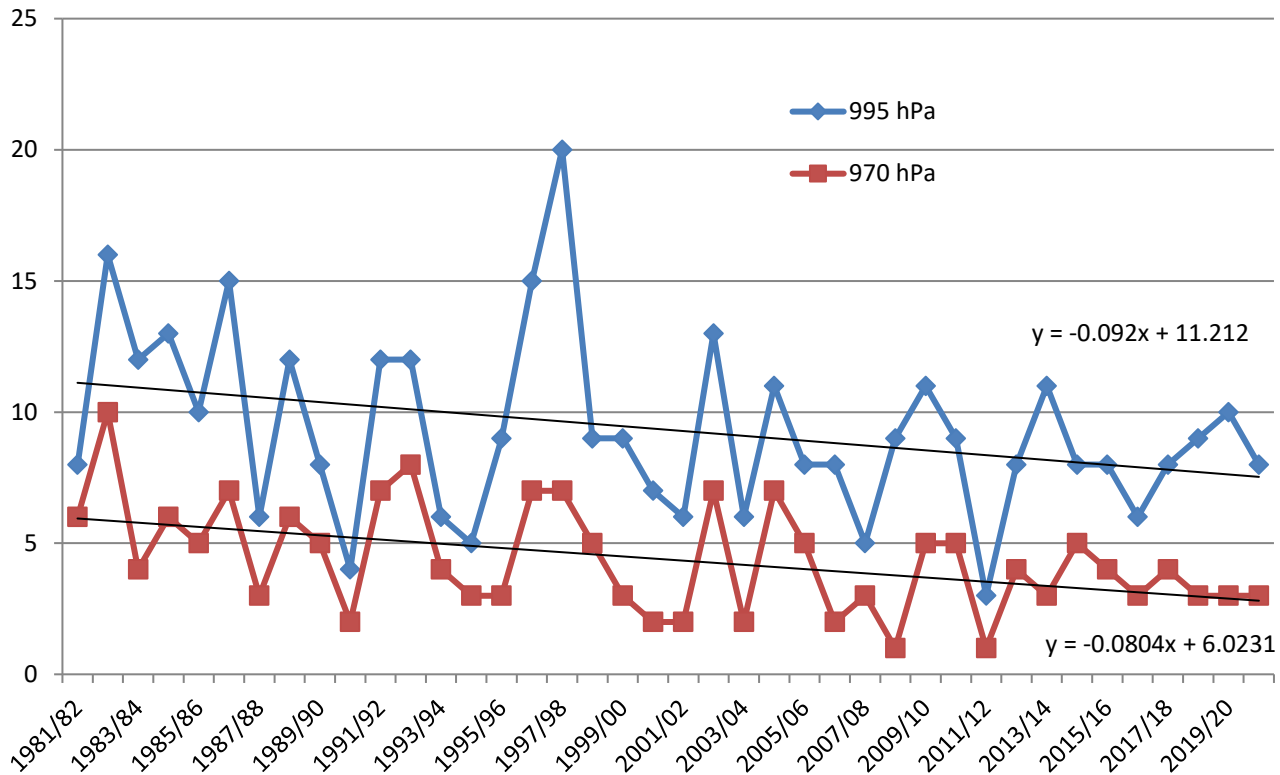
A brief examination of long-term  
trends for tropical cyclones

# TC Trend: SPO

Trends in total numbers of tropical cyclones (<995hPa) and severe tropical cyclones (<970hPa) are presented for the period 1981/82 to 2020/21 for the greater Southwest Pacific region (135°E – 120°W; 0° – 50°S).

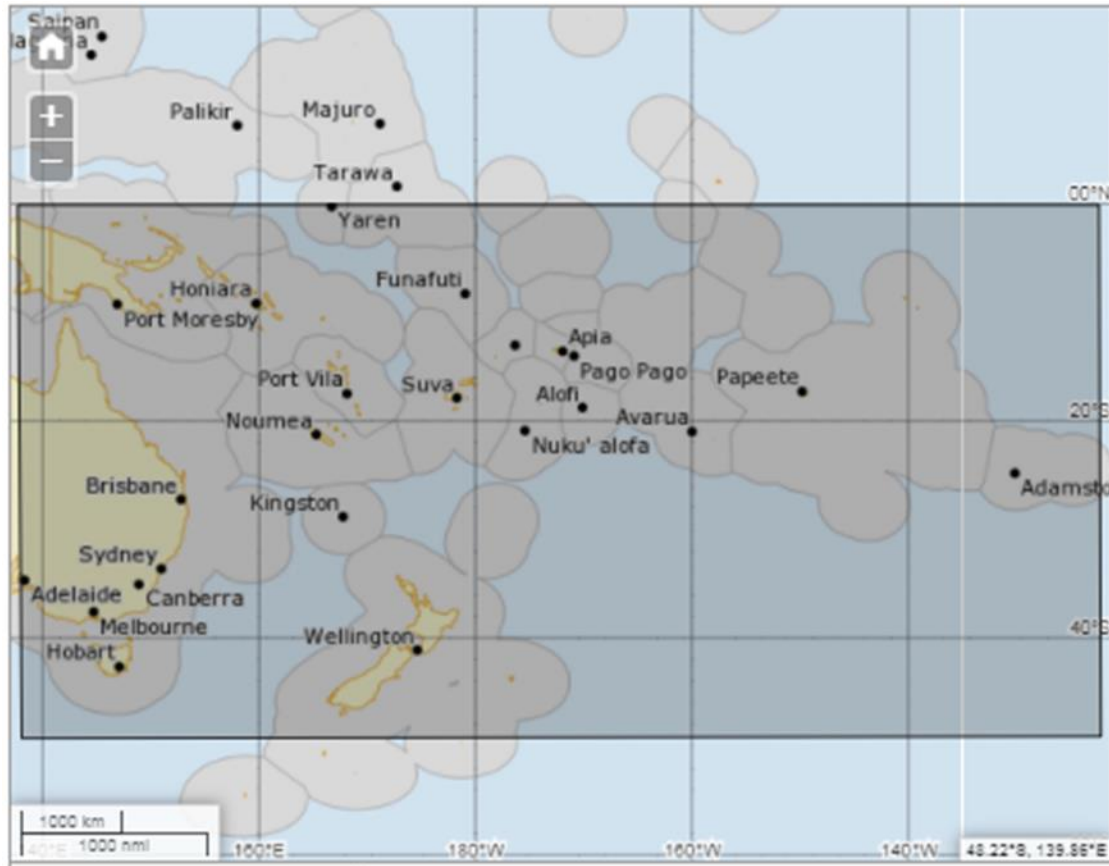
Trends are presented at a regional scale as the numbers of tropical cyclones occurring within Pacific Island EEZs are insufficient for reliable long-term trends analysis.

# TC Trend: SPO



The greater Southwest Pacific region (135°E – 120°W; 0° – 50°S).  
Average: annual TC occurrence: 9.3 (995 hPa) and 4.4 (970 hPa)

# TC Trend: SPO



The greater Southwest Pacific region (135°E – 120°W; 0° – 50°S).

# TC Trend: SPO

For the total numbers of tropical cyclones, the trend (and 95% confidence interval) is -0.9 (-2.1, 0.2) tropical cyclones/decade. In other words, there has little change in the total numbers of tropical cyclones over the last 40 seasons.

For the total numbers of severe tropical cyclones, the trend is -0.8 (-1.5, 0.0) tropical cyclones/decade. There is a negative trend in the numbers of severe tropical cyclones over the last 40 seasons.

# TC Trend: NW PO

Trends in total numbers of tropical cyclones (<995hPa) and severe tropical cyclones (<970hPa) are presented for the period 1981/82 to 2020/21 for a sub-region of the North-west Pacific Ocean (125°E – 180°W; 0° – 20°N).

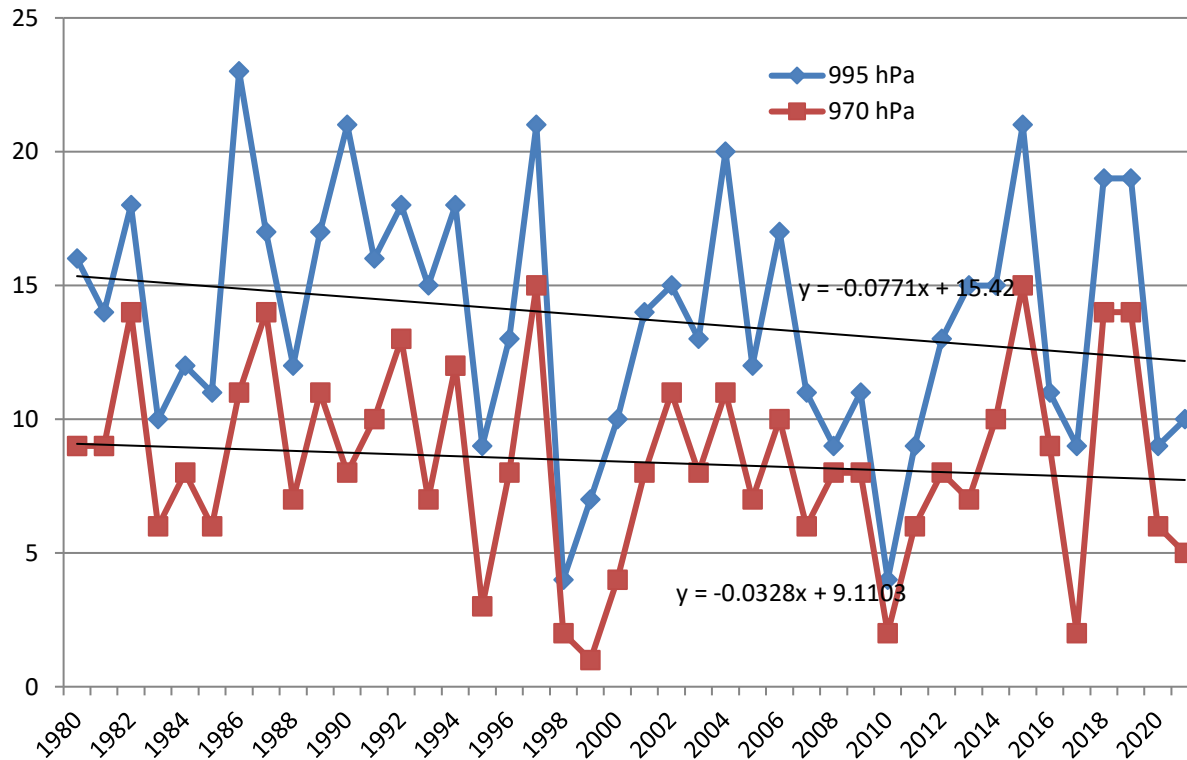
Trends are presented at a sub-regional scale as the numbers of tropical cyclones occurring within Pacific Island EEZs are insufficient for reliable long-term trends analysis.

# TC Trend: NW PO



Sub-region of the North-west Pacific Ocean ( $125^{\circ}\text{E} - 180^{\circ}\text{W}$ ;  $0^{\circ} - 20^{\circ}\text{N}$ ).

# TC Trend: NW PO



Sub-region of the North-west Pacific Ocean (125°E – 180°W; 0° – 20°N).  
Average: annual TC occurrence: 13.7 (995 hPa) and 8.4 (970 hPa)

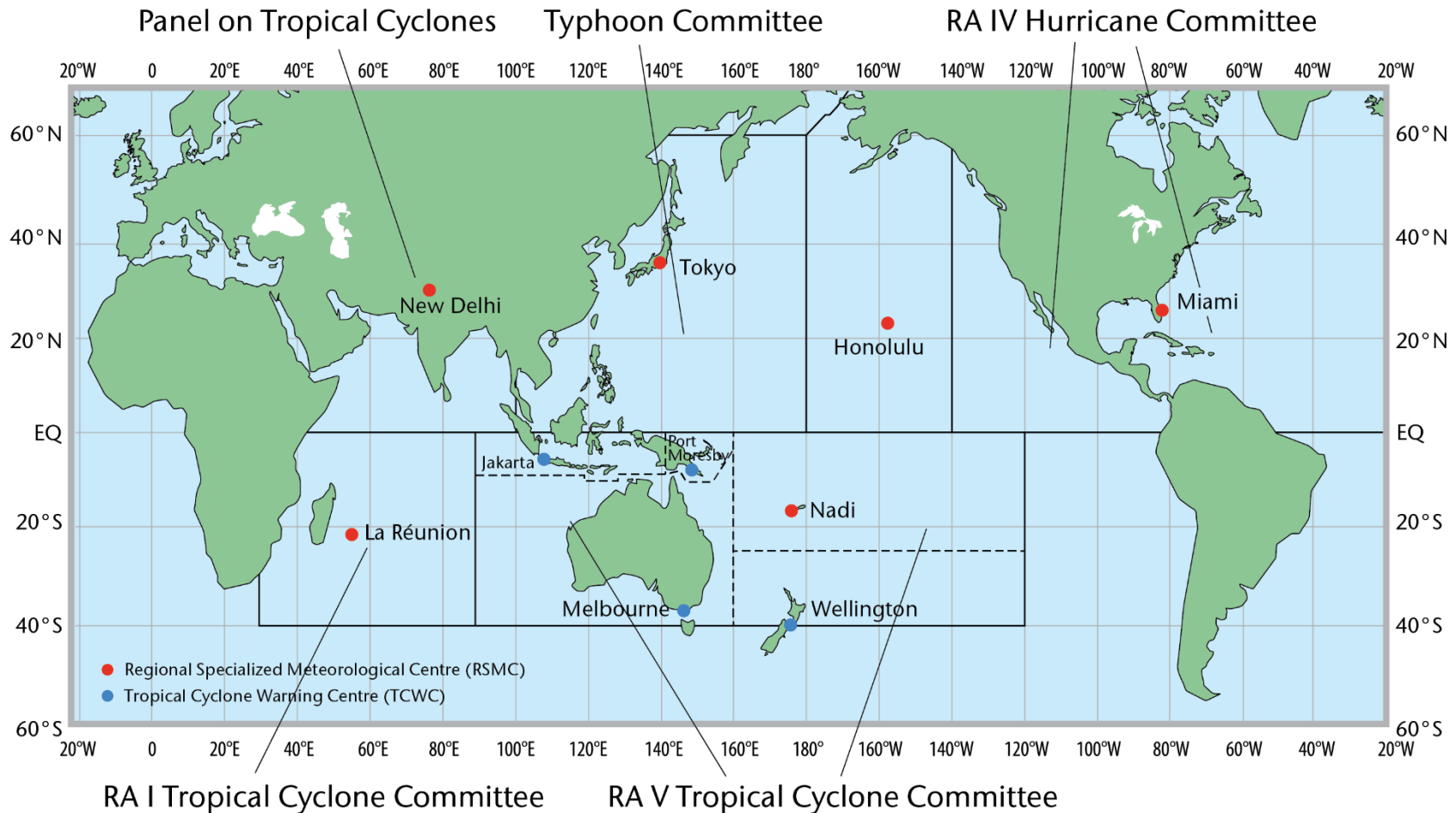


# TC Trend: NW PO

For the total numbers of tropical cyclones, the trend (and 95% confidence interval) is -0.7 (-2.4, 0.6) tropical cyclones/decade. In other words, there has little change in the total numbers of tropical cyclones over the last 41 seasons.

For the total numbers of severe tropical cyclones, the trend is -0.3 (-1.4, 0.5) tropical cyclones/decade. There has been little change in the numbers of severe tropical cyclones over the last 41 seasons.

# Tropical Cyclone - Regional Specialized Meteorological Centres



RSMC Tokyo-Typhoon Center; RSMC Nadi -Tropical Cyclone Centre; TCWC-Jakarta; TCWC-Melbourne; TCWC-Port Moresby; TCWC-Wellington

<https://community.wmo.int/tropical-cyclone-regional-bodies>

# WMO GPC LRFs

## Global and Pacific ACCESS-S outlooks and Pacific climate monitoring

Outlooks issued on Thursdays, one and two week outlooks also issued on Mondays

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Seasonal and inter-annual climate variability poses a major risk to many parts of our global society, the economy and the environment. The risks are particularly significant for Pacific Island Countries and compounded by human caused climate change which interacts with natural climate variability. The website provides dynamical model based seasonal and sub-seasonal outlooks and satellite-based climate monitoring with an emphasis on the western Pacific region.



World Meteorological Organization (WMO)

Global Producing Centre (GPC) for Long-Range Forecasts

RA-V Pacific Regional Climate Centre (RCC) Network Co-lead for Node on LRF and Consortium member for Node on Climate Monitoring



Development supported by DFAT-funded COSPPac and WMO-funded CREWS

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TC formation proba

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2

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South Pacific

## Variable

TC formation proba ▼

## Period

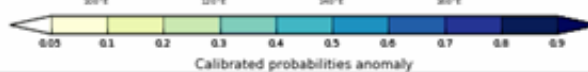
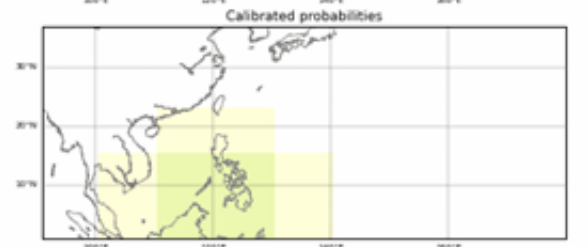
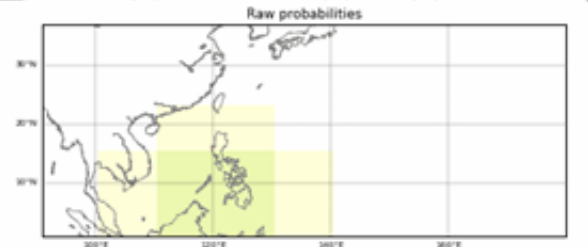
Week ▼

2 ▼

## Archive

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ed forecast tropical cyclone probabilities in the Northern Pacific domain in overlapping 15 x 20 degree regions  
Initialised date 17/04/2022 : Valid between 25/04/2022 - 01/05/2022. Lead time: 8 days



## Related links

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- [COSPPac Climate Bulletin](#)
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