



This statement was produced by the <u>WMO RA-V Pacific Regional Climate Centre Network</u> following the 16th Pacific Islands Climate Outlook Forum (PICOF-16) held on April 23 2025, for use by National Meteorological and Hydrological Services (NMHSs) in the Pacific Islands. For more information, please see the <u>background section</u> and/or contact your local meteorological office.

Key messages

- Over the last six months a La Niña-like developed and back to neutral by April 2025. There is an above 80% chance of neutral ENSO conditions to July 2025.
- The 2024/25 Southwest Pacific tropical cyclone season has been remarkably inactive to date with five named storms. Lower than normal activity tends to be associated with La Niña conditions.
- Current Western North Pacific and Central North Pacific tropical cyclone outlooks favour a near-average tropical cyclone season. Official US NOAA tropical cyclone outlooks will be issued next month.
- Outlooks for the coming three months are influenced by the easing La Niña-like patterns. The rainfall outlook for May to July 2025, favours below-normal rainfall in the Central Equatorial Pacific in the Nauru, Phoenix Islands (Kiribati), eastern FSM and RMI region. Above-normal rainfall is expected over Palau, PNG, Solomon Islands, Vanuatu, Fiji and Samoa.
- Above normal air and ocean surface temperatures are favoured in the tropical Western Pacific except in the Central to Eastern Equatorial Pacific.
- Sea level is likely to be higher than normal in the Western North Pacific. Below normal sea level is favoured in the Central Equatorial Pacific region and in the vicinity of Tokelau, Cook Islands and French Polynesia.
- Pacific National Meteorological and Hydrological Services (NMHSs) are requested to note regions where abnormally higher tides are predicted, especially those regions where higher than normal sea level is also favoured. The combined higher tides, winds, air pressure, ocean swells and above-normal sea levels may elevate their risk of coastal inundation.
- Coral bleaching alerts are in effect for Palau, southern FSM, PNG, Nauru, Western Kiribati, Solomon Islands and Vanuatu from April to July 2025.

Climate in review – November 2024 to May 2025

- As of October 2024, the <u>Pacific Regional Climate Centre ENSO tracker</u> (click here) provided information on La Niña-like, but were weak and short-lived and a La Niña status was only reported by half of the RCC-N members. As of April 2025, the Pacific transitioned to an ENSO-neutral state.
- Sea levels are generally higher than normal for most Pacific Island countries below average anomalies were observed in parts of Kiribati.
- While not all RCC-N agencies declared "La Nina", atmospheric patterns aligned well with what is typically observed during previous La Ninas. On the other hand, the ocean temperatures at and below the surface west of the Dateline is warm, and cool to the east".



- Despite generally weak La Niña conditions, rainfall anomalies observed over November 2024 to April 2025 is consistent with rainfall patterns experienced during past La Niña events.
- Atmospheric predictions such as rainfall and air temperature from PICOF-15 for October to April 2025 were verified well when compared to observations over the same period.
- The coral bleaching/marine heatwave risk was also well-advised.
- Coral bleaching Alert observed as forecast over PNG from November 2024



to March 2025, November to December over Palau and FSM, Nauru, RMI. Solomon Islands, Vanuatu, Fiji and Tonga.

- Sea levels was generally higher than normal for most Pacific Island Countries. Below average anomalies were observed across parts of Kiribati.
- Western North Pacific 2024 TC activity was near-normal for the basin, with TC metrics and overall distribution following a La Nina-like pattern. This resulted in below-normal activity for the USAPI in the WNP. Ten TCs originated near the USAPI in 2024, only 2 with significant impacts. There has been no TC activity in the Western North Pacific so far in 2025 (Joint Typhoon Warning Center data as of April 21, 2025).
- Significant weather and climate impacts experienced over the last six months include flooding in Solomon Islands, New Caledonia, Vanuatu, Fiji, Tonga, Samoa, Niue, and Cook Islands, and drought in northern RMI, CNMI, FSM, Nauru, Kiribati and southwest New Caledonia. Stronger than normal trade winds were experienced in Palau, FSM, RMI, New Caledonia, Vanuatu, Fiji, Tuvalu, Kiribati, Samoa, Niue, and Cook Islands. Coastal inundation occurred in RMI, Fiji, Tuvalu, Tonga, and Cook Islands. Coral bleaching was experienced in FSM (Pohnpei and Chuck). Sectors impacted by the drier and wetter than normal and windier conditions included infrastructure, agriculture, fisheries, water, transportation, education, health, energy, and tourism.





Climate outlook – May to October 2025

El Niño Southern Oscillation (ENSO)

- Above 80% chance of neutral ENSO conditions up to July 2025. The is low confidence in the prediction because of the spring predictability barrier.
- There is broad model agreement for near normal SSTs in the Central and Eastern Equatorial Pacific region over this period with warmer than normal SST anomalies expected to remain in the Western Equatorial Pacific.

Probabilistic Multi-Model Ensemble Forecast

Rainfall and Air Temperature

- For May to July 2025, belownormal rainfall is expected in the Central Equatorial Pacific over Nauru, Phoenix Islands (Kiribati), as well as Eastern FSM and RMI. Above normal rainfall is expected over Palau, PNG, Solomon Islands. Above normal rainfall is also predicted over Vanuatu, Fiji and Samoa.
- From August to October 2025, below-normal rainfall is expected around the southern off-equatorial central Pacific region near Tuvalu, Kiribati, Northern Cook Islands. Above normal rainfall is favoured in the Western North Pacific over Palau and parts of the FSM.
- From May to October 2025, above normal temperature is expected over the whole Pacific except for the Central to Eastern Equatorial Pacific.

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16th Pacific Islands Climate Outlook Forum Statement Ocean surface temperature, sea level & coral bleaching

- Above-normal ocean surface temperatures are favoured across most of tropical Western Pacific except in the Central Equatorial Pacific, where nearnormal ocean surface temperatures are favoured from May to July 2025.
- Sea level will likely be higher than normal in the western north Pacific around Palau, western FSM, Guam and CNMI from May to July 2025. Below normal sea level is favoured in the Central Equatorial Pacific region and in the vicinity of Tokelau, Cook Islands and French Polynesia.
- Pacific NMHSs are requested to note regions where abnormally higher tides are predicted and higher than normal sea levels. The combination of higher tides and above-normal sea levels may elevate the risk of coastal inundation.
- Coral bleaching alerts are in effect for Palau, southern FSM, PNG, Nauru, western Kiribati, Solomon Islands and Vanuatu from April to July 2025. These alerts are expected to remain in effect to July.



2025 Apr 15 NOAA Coral Reef Watch Bleaching Heat Stress Probabilities (Alert 1 & 2) for Apr-Jul 2025



Tropical cyclones

- The 2024/25 Southwest Pacific tropical cyclone (TC) season has been remarkably inactive. There have been 11 disturbances overall, and five named storms to date (Alfred, Pita, Rae, Seru, Tam). Lower than normal TC activity in the central Pacific tends to be associated with La Niña conditions. Therefore, the 2024/25 TC season is consistent with this pattern.
- Outlooks currently favour a near-average TC season for the Western and Central North Pacific basins. It is important to note that ENSO-based TC patterns are typical, but not guaranteed, as evidenced by tropical cyclone activity during the 2023/2024 El Niño.
- Monitoring multi-week TC outlooks through the season is highly recommended as well as monitoring daily weather forecasts when the chance of TC occurrence is higher than normal.
- It does not take a direct hit or severe TC to cause considerable damage or lifethreatening weather. When dangerous weather is forecast, please heed the advice of your local meteorological service, civil defence, or disaster management office.





Climate Projections

Sea level rise is one of the clearest consequences of a warming climate, with huge implications for the Pacific. We understand many aspects of sea level rise and have high confidence in the range of likely change through this century that we need to adapt to. However, some extreme scenarios can't be ruled out – where the ice cliffs and ice shelves around Greenland and Antarctica become unstable and lose a lot of ice in a matter of decades, leading to high sea level rise of two meters or more by 2150. This kind of abrupt change becomes 'self-sustaining' and 'committed', and irreversible on very long timescales. This kind of change is sometimes called a 'tipping point'. There are a lot of unknowns here, but we can't ignore the possibility! We may manage risks through adaptation, but the best response is to lower the risks through limiting further global warming.

Background

This statement has been crafted using the <u>WMO Lead Centre for Long-Range Forecast Multi-</u><u>Model Ensemble</u>. Where an element forecast is not available (e.g., for TCs or coral bleaching), outlooks are obtained from the <u>Pacific RCC Network Node for LRF</u>.

These outlook statements are for use by NMHSs. They do not constitute an official outlook for any nation. For more information, please contact your local meteorological office.

The <u>Pacific Islands Climate Services Panel</u> and <u>Pacific Regional Climate Centre (RCC) Network</u> <u>Node for Long Range Forecasting</u>, in collaboration with the World Meteorological Organisation (WMO), have been coordinating PICOFs since 2015. PICOF is a platform used to discuss the seasonal outlook (ENSO, TCs, precipitation, temperature, and oceanic conditions) for the upcoming seasons, capacity build, and enable knowledge exchange between NMHSs and strengthen relationships between NMHSs and stakeholders.

PICOF is an important mechanism for sharing climate and ocean information, best practices, and lessons learnt on climate and ocean prediction and its likely implications on sectors where productivity is heavily dependent on the state of the climate. PICOFs are held twice a year: an in-person session, when possible, in October, focusing on November to April and a virtual session in April, focusing on May to October.

PICOF-16 had attendees from Australia, Fiji, French Polynesia, Kiribati, Marshall Islands, Micronesia (Chuuk and Pohnpei), New Caledonia, New Zealand, Palau, Samoa, Solomon Islands, South Korea, Tonga, Tuvalu, United States of America, and Vanuatu. Representatives from the following organisations also participated: Secretariat of the Pacific Regional Environment Programme (SPREP), World Meteorological Organisation (WMO), Pacific Community (SPC), Australian Bureau of Meteorology (BoM), United States National Oceanic and Atmospheric Administration (NOAA), Météo-France, New Zealand National Institute of Water and Atmospheric Research (NIWA), and the Asia-Pacific Economic Cooperation (APEC) Climate Centre (APCC).



CLIMATE CENTRE NETWORK

16th Pacific Islands Climate Outlook Forum Statement

Close working relationships between Pacific Rim and Pacific Island NMHSs, regional organisations, and WMO are critical to effective warning of climate hazards leading to early preparedness. Further enhancement of these relationships is essential, as well as relationships between NMHSs, their primary stakeholders, and the community. These can be frequent meetings such as one-on-one discussions, cluster group meetings, and national climate outlook forums.

In addition to the production of national seasonal climate outlooks, there is a need for simplified products and messaging especially for rural and remote communities. Sectoral impacts are most often related to prolonged drier or wetter than-normal conditions. NMHSs should continue to develop climate products tailored for national sectors, relevant to their needs, and incorporating where possible traditional knowledge elements.

This statement is consistent with the <u>Nuku'alofa</u> Ministerial Declaration and Honiara Ministerial Statement for Sustainable Weather, Water, Ocean and Climate Services for the Resilient Pacific, which recognises the importance of Meteorological and Hydrological Services in support of relevant national needs, including the protection of life and property, sustainable development and safeguarding the environment. The same noted that weather and climate services are not an option but are a responsibility and a basic human right.



Map of the Pacific Islands region, including countries and territories involved in PICOF. Source.

