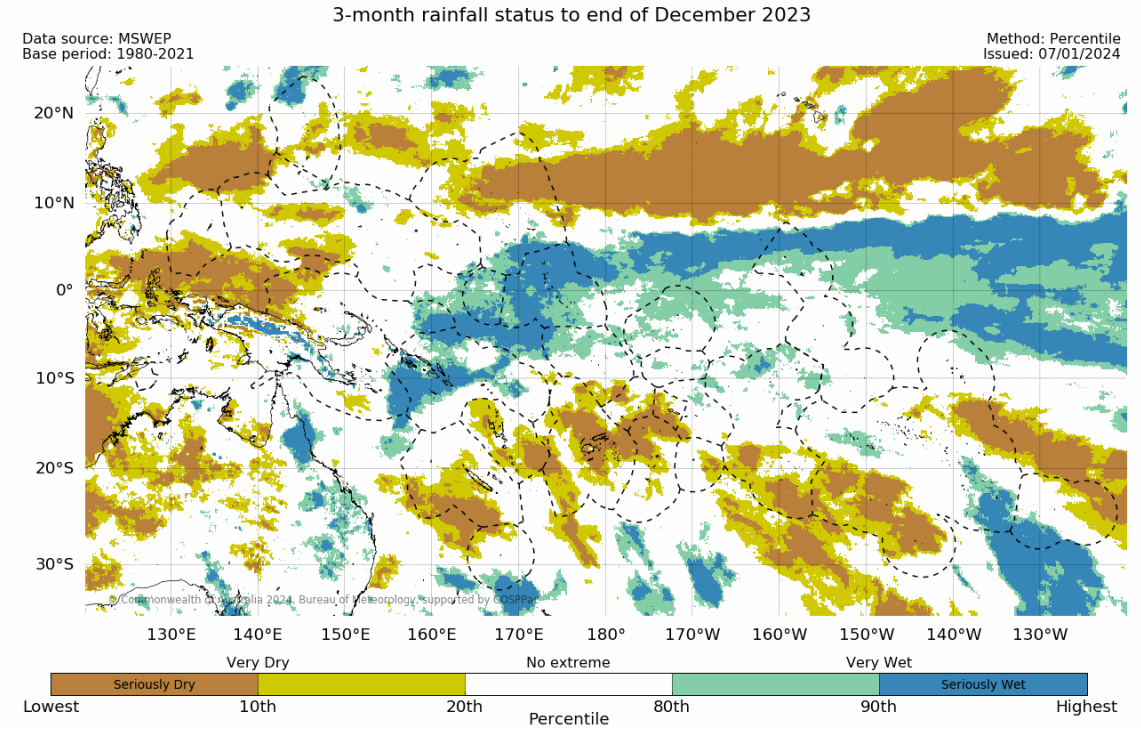
Climate and Ocean Support Program in the Pacific (COSPPac)
Regional Early Action Rainfall Watch
January 2024

El Niño-Southern Oscillation Status: as of 30 December 2023

The El Niño event continues in the tropical Pacific. Sea surface temperatures (SSTs) for December 2023 were higher than average across the central and eastern tropical Pacific Ocean. The extent and magnitude of warm anomalies across the equatorial Pacific has decreased compared with November.

Rainfall Status: as of 30 December 2023



The 3-month rainfall status for October to December 2023 was Very Wet or Seriously Wet in a near-equatorial region covering PNG's eastern EEZ, the Solomon Islands, southern RMI, Nauru, Kiribati (Gilbert, northern Phoenix and far northern Line Islands), and northern Tuvalu. Patches of Very Wet or Seriously Wet were observed in the northern Cook Islands, French Polynesia, and western Pitcairn Islands.

The rainfall status was Very Dry or Seriously Dry over the same period over southern Palau, central FSM, northwest PNG, and in a broad zone from northern RMI extending eastwards towards Hawaii. The same status was also observed over New Caledonia, Vanuatu, Fiji, northern Tonga, Wallis and Futuna, eastern Niue, Samoa, southern Cook Islands, plus southern and parts of northeastern French Polynesia.

The regional maps are available via http://access-s.clide.cloud/files/project/EAR_watch/pacificx/

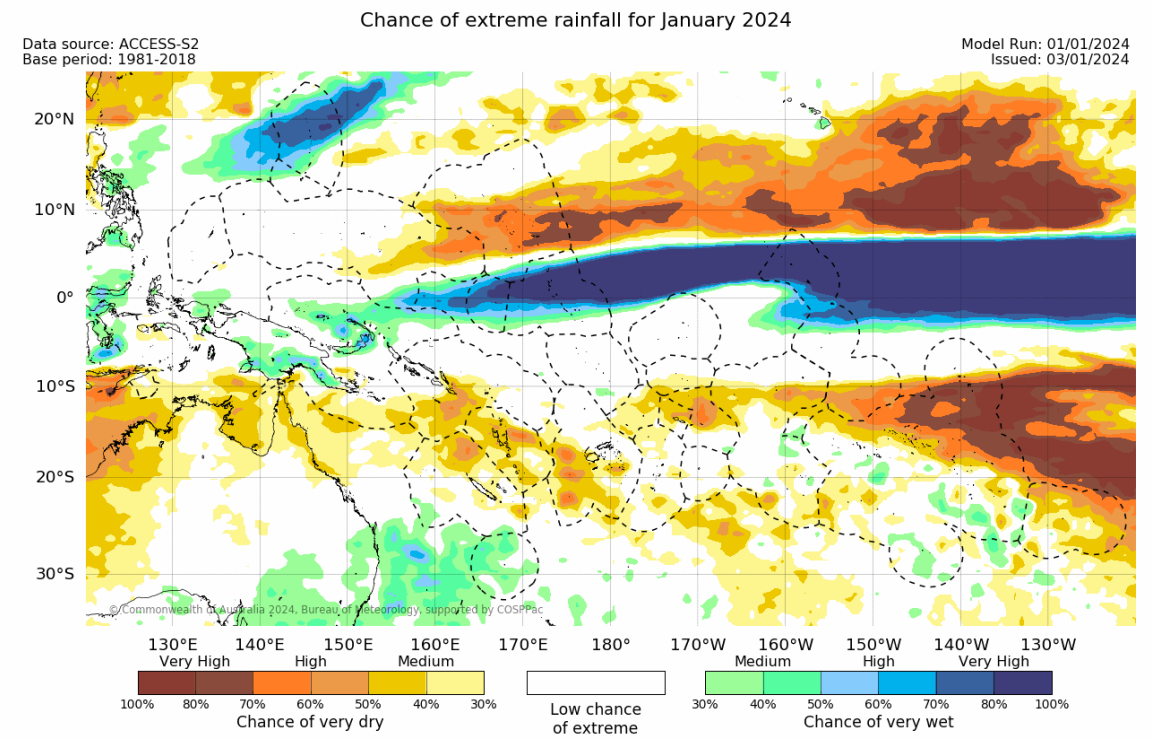
Three-month total rainfall is typically used for monitoring grasslands, shallow rooted plants and small water body (e.g. small water tanks, streams) mositure deficits. Allow for uncertainty associated with island size, topography, geology and soil type.

Rainfall Status

- Estimates of moisture/water stress are based on recent rainfall compared with historical observations using the Percentile (Decile) Index.

- Definitions: “Very Dry" = rainfall in the lowest 20% of the historical record for that location and season, “Very Wet” = rainfall in the highest 20% for that location and season, “Seriously Dry" = rainfall in the lowest 10% of the historical record for that location and season, “Seriously Wet” = rainfall in the highest 10% for that location and season.

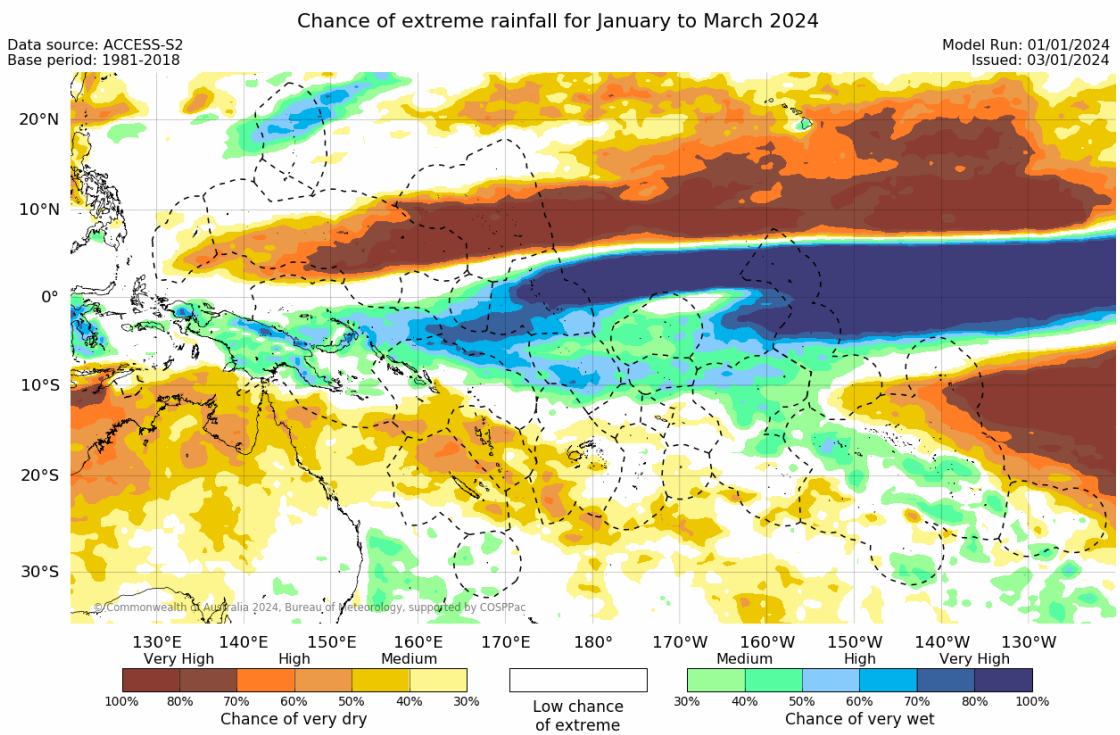
Monthly Rainfall Watch: January 2024



For January 2024, there is a medium to very high chance of rainfall in the Very Wet category (highest quintile, which includes the Seriously Wet category) in far southern RMI, Nauru, far eastern PNG, southern PNG mainland, Kiribati (Gilbert and northern Line Islands), and patches over southern French Polynesia.

There is a medium to very high chance that rainfall will be in the Very Dry category (lowest quintile, which includes the Seriously Dry category) in eastern FSM, central RMI, southern PNG EEZ, southern Solomon Islands, New Caledonia, Vanuatu, Fiji, small parts of Tonga, Wallis and Futuna, Samoa, American Samoa, small parts of northern and southern Cook Islands, northern French Polynesia, and Pitcairn Islands.

Seasonal Rainfall Watch: January – March 2024



For January to March 2024, there is a medium to very high chance of rainfall in the Very Wet category (highest quintile, which includes the Seriously Wet category) stretching eastward from PNG (mainland, Islands, far eastern EEZ) to northern Solomon Is, Nauru, Tuvalu, Tokelau, Kiribati (Gilbert, Phoenix, Line Islands), northern half of the Cook Islands, and patches of central French Polynesia.

In contrast, there is a medium to very high chance of rainfall in the Very Dry category (lowest quintile, which includes the Seriously Dry category) in most of southern PNG EEZ, Palau, FSM, much of RMI, Australia, southern Solomon Islands, New Caledonia, Vanuatu, Fiji, Niue, and northeast French Polynesia (except far north), plus Pitcairn Islands. Patches of Very Dry are also forecast in Tonga, American Samoa, and southern Cook Islands.

Monthly and Seasonal Rainfall Watch

- Information provided has been interpreted on a divisional scale where possible as Pacific Island Countries can experience a high range of rainfall variability within country. It is possible to have forecasts which simultaneously favour above and below normal rainfall in different parts of the one country.

- Definitions: “Chance of Very Dry" = percent chance of rainfall in the lowest 20% of the historical record for that location and season, “Chance of Very Wet” = percent chance of rainfall in the highest 20% for that location and season. Medium, High and Very High refer to the percent probability level where Very High has the highest confidence and represents the range 70% and above.

- Local Met Services should be contacted for detailed information and outlooks. This product is not to be distributed to the public or other organisations.