



Climate and Ocean Support Program in the Pacific (COSPPac)

Regional Early Action Rainfall Watch January 2023

El Niño-Southern Oscillation Status: as of 17 January 2023

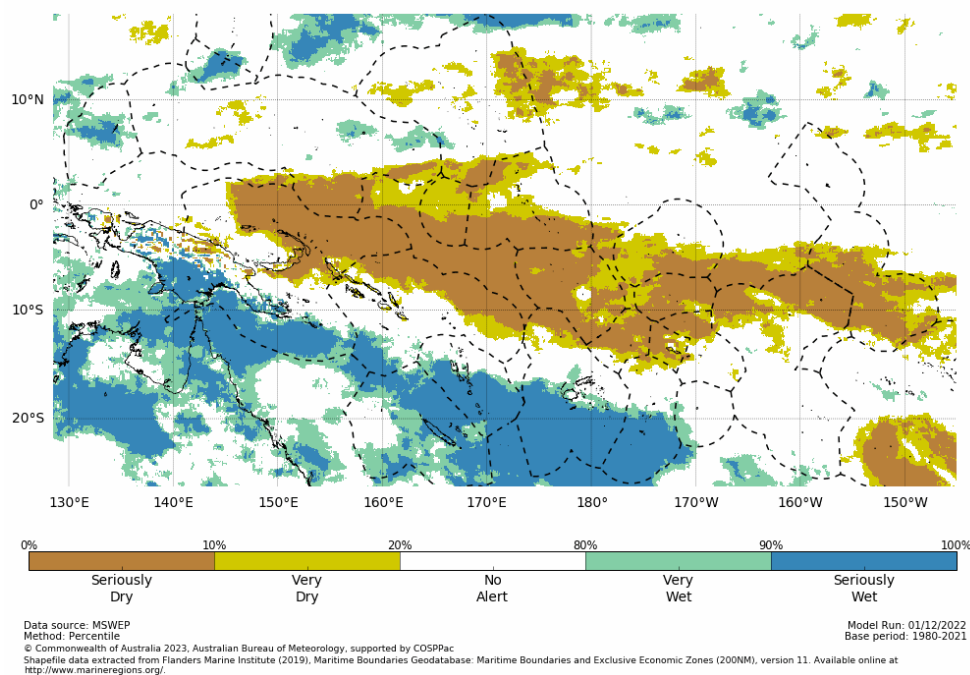
Key atmospheric and oceanic indicators of ENSO reflect a mature but weakening La Niña. Models suggest a return to ENSO-neutral in February 2023.

For Pacific Island countries in the western and central Pacific region, there is a large region where below normal rainfall is likely or very likely stretching east and southeast from northwest PNG in the west, to French Polynesia and Pitcairn Island in the east.

To the southwest of this region, the ACCESS model shows the opposite signal, that is, moderate to high chances for above average rainfall in a band stretching southeast from Indonesia across parts of the PNG mainland, the southern two-thirds of the Solomon Islands, New Caledonia, Vanuatu, most of Fiji, central and southern Tonga, southern Niue, and the southern fringes of both the Cook Islands, and French Polynesia. Above normal is also favoured across most of Palau, and all but the far southern reaches of both FSM and RMI.

Rainfall Status: as of 31 December 2022

3-month rainfall status to end of December 2022



The 3-month rainfall status for October to December was Very Dry or Seriously Dry in the New Guinea Islands, northern Solomon Islands, far southeast FSM, patches of RMI, Nauru, Kiribati (especially south of the equator), Tuvalu, far northern Fiji, far northern Tonga, Tokelau, Samoa, northern American Samoa, and the northern Cook Islands.

Conversely, the status was Very Wet or Seriously Wet over the same period in parts of Palau, patches of eastern FSM, western PNG, the far southwest of the Solomon Islands, most of Vanuatu, New Caledonia, southern Fiji, southern Tonga, and southwest Niue.

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

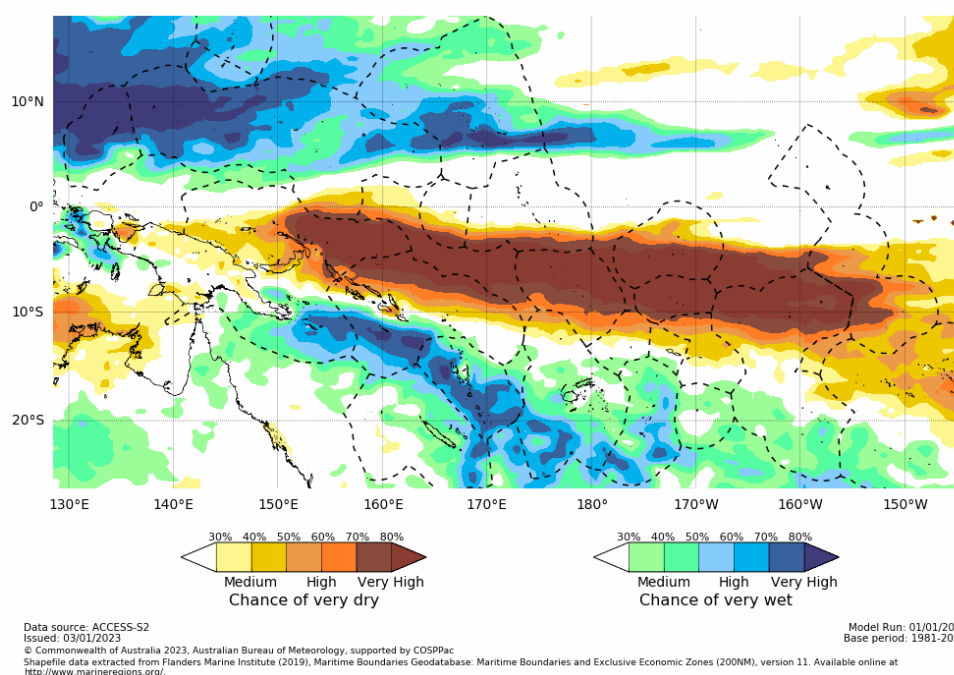
Three-month total rainfall is typically used for monitoring grasslands, shallow rooted plants and small water body (e.g. small water tanks, streams) moisture deficits. Allow for uncertainty associated with island size, topography, geology and soil type.

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 2023

Chance of extreme rainfall for January 2023

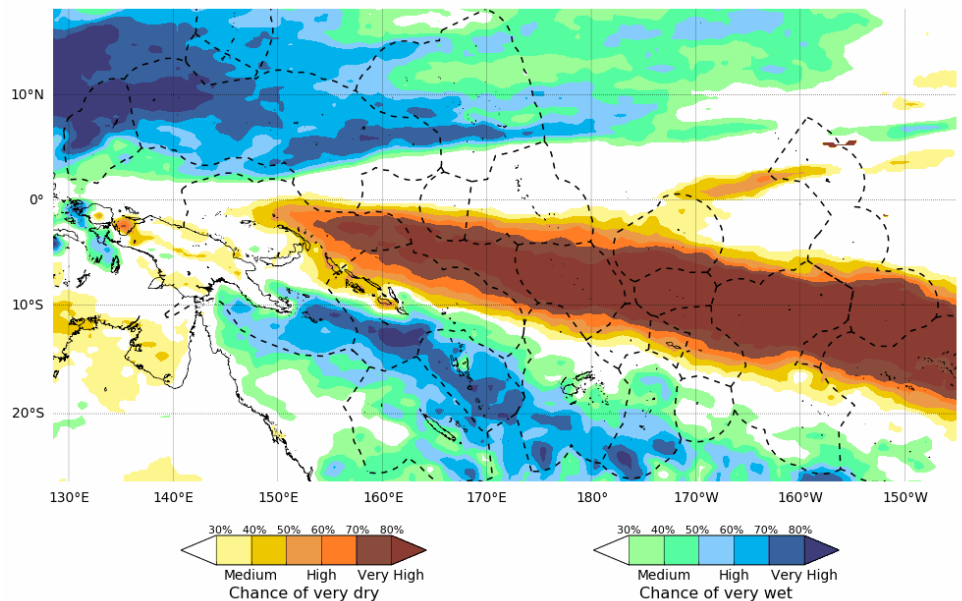


For January 2023, there is a high to very high chance that rainfall will be in the Very Dry or Seriously Dry ranges in southeast FSM, northeast PNG, northern and parts of western Solomon Islands, southern Nauru, Kiribati (southern Gilbert, most of Phoenix and southern Line Islands), Tuvalu, Tokelau, northern American Samoa, and the northern Cook Islands.

There is a high to very high chance that rainfall will be in the Very Wet or Seriously Wet ranges across much of FSM, northwest and central RMI, the southeastern PNG island and ocean areas, southern Solomon Islands, much of Vanuatu, the south of Fiji's EEZ, and parts of Tonga.

Seasonal Rainfall Watch: January– March 2023

Chance of extreme rainfall for January to March 2023



Data source: ACCESS-S2
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Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <http://www.marineregions.org/>
Model Run: 01/01/2023
Base period: 1961-2018

For January to March 2023, there is a high to high chance of rainfall in the Very Dry or Seriously Dry ranges in the northeast of the PNG EEZ including some of the islands, northern Solomon Islands, southern Nauru, the far south of western Kiribati plus the southern halves of each of central and eastern Kiribati, Tuvalu, Tokelau, much of Samoa and American Samoa, central to northern Cook Islands, and central to northern French Polynesia.

There is a high to very high chance of rainfall in the Very Wet or Seriously Wet ranges in northern Palau, much of FSM, northwest and central RMI, the Milne Bay islands of PNG and areas further southeast, southern Solomon Islands, Vanuatu, northeast New Caledonia, the southern half of Fiji's EEZ, and southern to central Tonga.

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.