



Climate and Ocean Support Program in the Pacific (COSPPac)

Regional Early Action Rainfall Watch December 2022

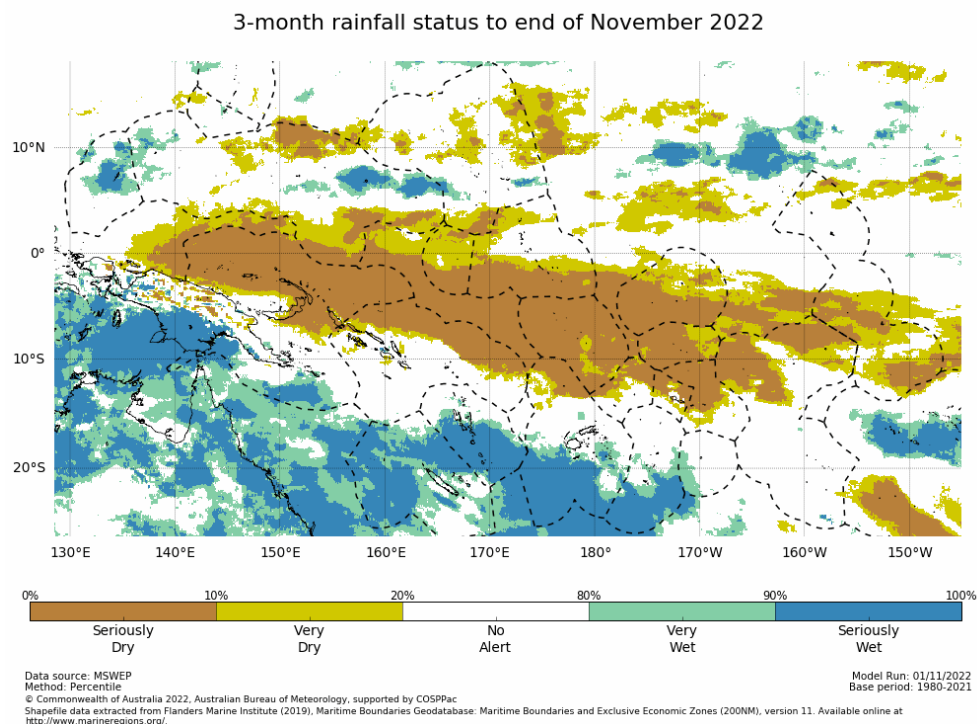
El Niño-Southern Oscillation Status: as of 30 November 2022

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

For Pacific Island countries in the western and central Pacific region, there is a large region where below normal rainfall is very likely stretching east and southeast from northwest PNG in the west, to French Polynesia and Pitcairn Island in the east. The centre of the dry-signal region is situated further west than normal for a classic La Niña.

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 30 November 2022



The 3-month rainfall status for September to November was Very Dry or Seriously Dry in the New Guinea Islands, western and northern Solomon Islands, in patches of northern and southern FSM and RMI, Nauru, Kiribati (especially south of the equator), Tuvalu, Tokelau, Samoa, American Samoa and northern Cook Islands.

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

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

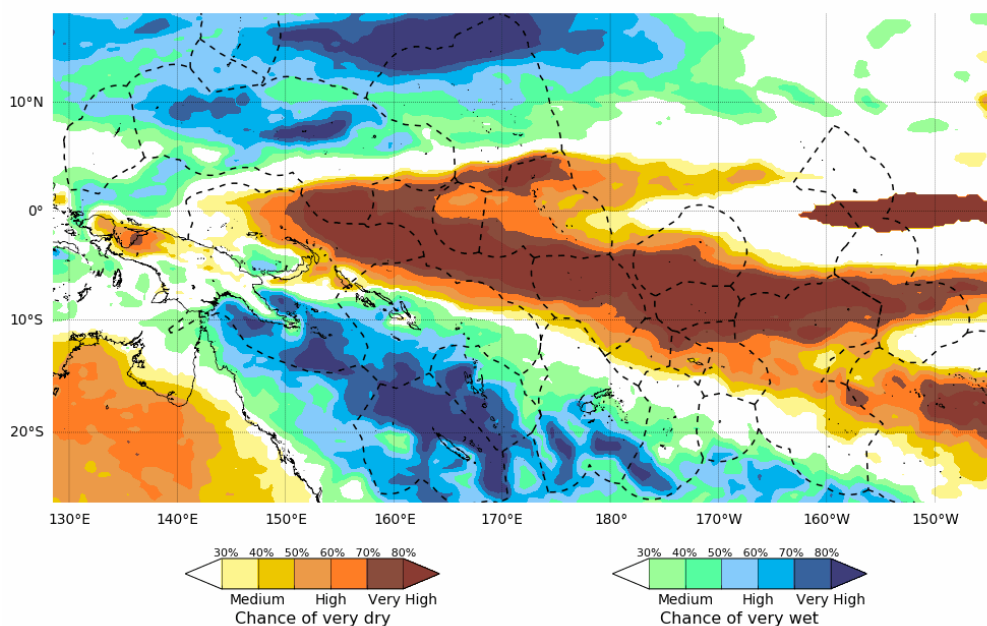
Three-month total rainfall is typically used for monitoring grasslands, shallow rooted plants and small water body (e.g. small water tanks, streams) moisture deficits. Allow for uncertainty associated with island size, topography, geology and soil type.

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: December 2022

Chance of extreme rainfall for December 2022



Data source: ACCESS-S2

Issued: 03/12/2022

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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.maritimeresources.org/>

Model Run: 01/12/2022

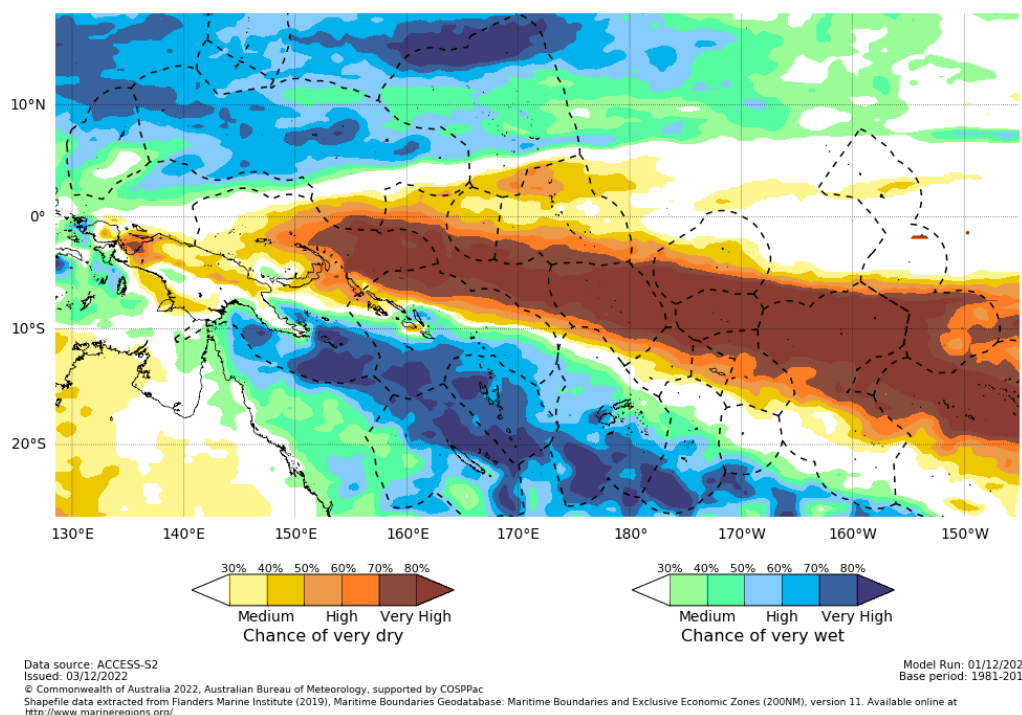
Base period: 1961-2018

For December 2022, there is a high to very high chance that rainfall will be in the Very Dry or Seriously Dry ranges in southeast FSM, southern RMI, northeast PNG, northern Solomon Islands, Nauru, Kiribati (except the northern Line Islands), Tuvalu, Tokelau, most of Samoa and American Samoa, central and northern Cook Islands, and central French Polynesia.

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

Seasonal Rainfall Watch: December 2022 – February 2023

Chance of extreme rainfall for December 2022 to February 2023



For December 2022 to February 2023, there is a high to high chance of rainfall in the Very Dry or Seriously Dry ranges in south FSM, southern RMI, the northerneast of the PNG EEZ including some of the islands, northern Solomon Islands, southern Nauru, the southern halves of each of the three Kiribati regions, 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, northern RMI and patches in central RMI, the Milne Bay islands of PNG and areas further southeast, southern Solomon Islands, Vanuatu, New Caledonia, much of Fiji (except Rotuma), southern to central Tonga and southern Niue.

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.

