



nClimate and Ocean Support Program in the Pacific (COSPPac)

Regional Early Action Rainfall Watch May 2023

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

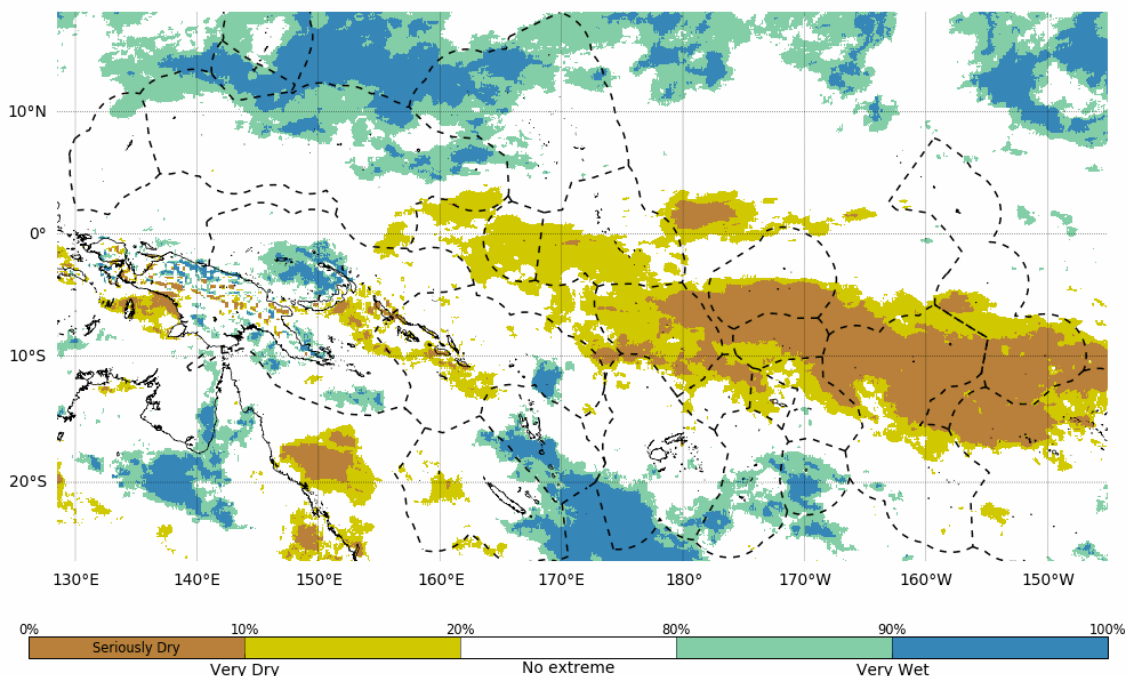
The Pacific Ocean is currently ENSO - neutral (neither La Niña nor El Niño), with anomalous warmth in both the east and west of the basin. While oceanic ENSO indicators have continued to warm and are forecast to reach El Niño thresholds during winter, there has been little to no shift towards El Niño in atmospheric ENSO indicators. As a result, the ENSO Outlook remains at El Niño WATCH. This means there is approximately a 50% chance of El Niño developing in 2023.

For Pacific Island countries in the western to eastern Pacific region, there is a region where below normal rainfall is likely or very likely stretching from northeast PNG, western and central Solomon Islands and further to northern French Polynesia in the southeast. Patches of below normal were observed in Coral Sea region, Nauru, and Kiribati in April 2023.

The ACCESS model shows the opposite signal, that is, moderate to high chances for above average rainfall in a band stretching east of northeast Palau to western RMI. Above normal rainfall also favoured for parts of PNG Islands, western region of PNG, patches in northern Line Islands, southern New Caledonia, southern Fiji, American Samoa and Cook Islands.

Rainfall Status: as of 30 April 2023

3-month rainfall status to end of April 2023



Data source: MSWEP

Method: Percentile

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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.marinerregions.org/>

Model Run: 01/04/2023

Base period: 1980-2021

The 3-month rainfall status for February to April 2023 was Very Dry or Seriously Dry stretching eastwards from eastern FSM across Nauru, Kiribati (patches of western plus the southern halves of

central and eastern), Tuvalu, Wallis and Futuna, Tokelau, parts of Samoa and American Samoa, northern and central Cook Islands, and northern French Polynesia. In addition, a smaller area of Very Dry and Seriously Dry affected the eastern PNG EEZ plus the western and central Solomon Islands,

Conversely, the status was Very Wet or Seriously Wet over the same period over PNG's northern Islands and the far south of its EEZ, eastern New Caledonia EEZ, Vanuatu, southern Fiji, southern and central Tonga, and Niue. The same status was also observed in the northern Palau EEZ, northern FSM, and western Marshall Islands.

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

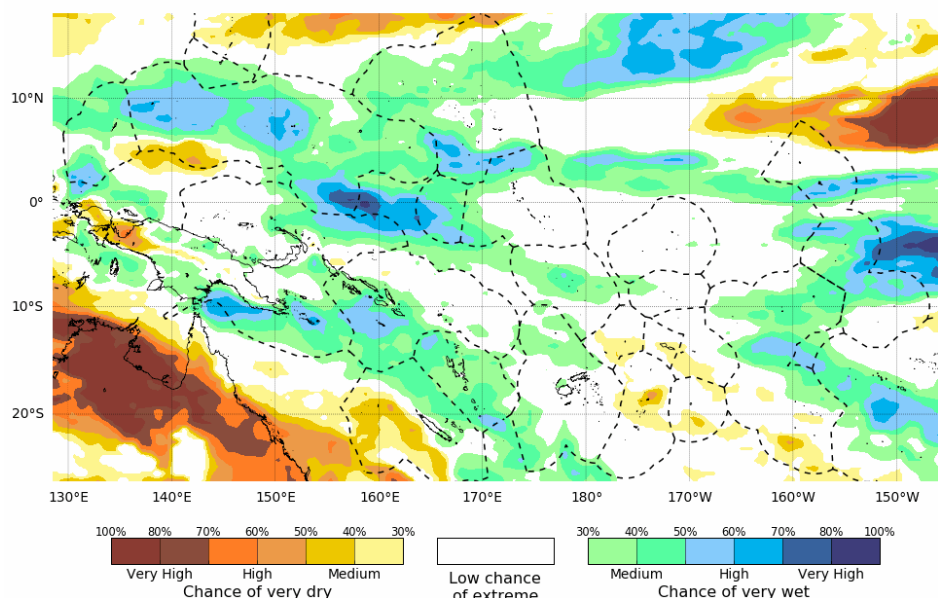
Three-month total rainfall is typically used for monitoring grasslands, shallow rooted plants and small water body (e.g. small water tanks, streams) moisture deficits. Allow for uncertainty associated with island size, topography, geology and soil type.

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: May 2023

Chance of extreme rainfall for May 2023



Data source: ACCESS-S2
Issued: 03/05/2023
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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.maritimerregions.org/>

Model Run: 01/05/2023
Base period: 1981-2018

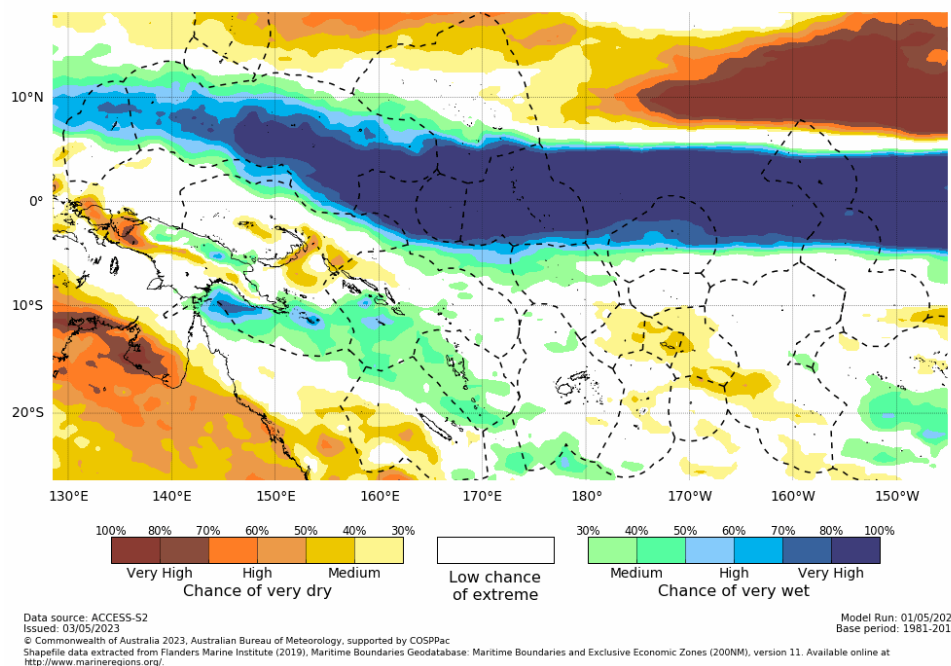
For May 2023, there is a medium to high chance that rainfall will be in the Very Dry or Seriously Dry ranges in patches of the southern FSM, Coral Sea region, western New Caledonia, northern tip of Line Islands, Wallis and Futuna, central Tonga, small parts Samoa, southern American Samoa, southern Niue, and southern Cook Islands.

There is a medium to very high chance that rainfall will be in the Very Wet or Seriously Wet ranges in Palau, FSM, most of RMI, southeast PNG mainland and northeast Islands, the main Solomon

Islands, eastern New Caledonia, Vanuatu, the north and south of Fiji's EEZ, Nauru, northern Gilbert, and Line Islands (Kiribati), Tuvalu, northern and central Cook Islands, and central French Polynesia.

Seasonal Rainfall Watch: May – July 2023

Chance of extreme rainfall for May to July 2023



For May to July 2023, there is a high to very high chance of rainfall in the Very Wet or Seriously Wet ranges from Palau eastwards across FSM, southern RMI, Nauru, and Kiribati (Gilbert, Phoenix and northern Line Islands), while the chances are medium to high in the northern PNG mainland and in a zone stretching from southern PNG across the southern Solomon Islands, eastern New Caledonia, Vanuatu, to far southern Fiji. Another patch exists in central French Polynesia.

In contrast, there is a medium to high chance of rainfall in the Very Dry or Seriously Dry ranges in parts of the PNG Highlands and Islands, western Solomon Islands, western New Caledonia, central Tonga, Wallis and Futuna, Samoa, northern Niue, 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.