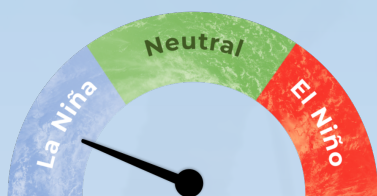


### Recent



Current ENSO

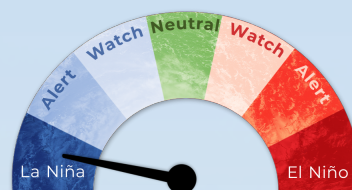
La Niña conditions were observed in the equatorial Pacific during December.

Sea surface temperatures were near the La Niña threshold in the central equatorial Pacific during December, on  $-0.68^{\circ}\text{C}$ .

The Southern Oscillation Index (SOI) was  $+1.3$  during December, in the La Niña range.

# 80%

chance for **La Niña** conditions during **January – March 2022.**



Chance for **ENSO neutral** conditions during **April - June 2022.**

# 70%

**La Niña event**

### Forecast

### ENSO situation summary

The NINO3.4 Index anomaly (in the central equatorial Pacific) over the last month was  $-0.68^{\circ}\text{C}$ , near the La Niña threshold. The monthly Southern Oscillation Index (SOI) was  $+1.3$  and the three-month average SOI was  $+1.0$ , both in the La Niña range.

Upper-oceanic heat content continued to be below normal in the central and eastern equatorial Pacific, associated with the peak of a La Niña event. In the subsurface, anomalies of  $-1^{\circ}\text{C}$  to  $-2^{\circ}\text{C}$  continued at depth in the central and east. In the west, a substantial warm pool of water ( $+3^{\circ}\text{C}$  to  $+4^{\circ}\text{C}$ ) developed between 150-200 m depth.

The Southwest Pacific Convergence Zone was again displaced southwest of its climatological position, over northern PNG to about New Caledonia or Fiji, consistent with La Niña.

La Niña conditions remain favoured during January-March (80% chance). Between April-June, there is a 70% chance for the re-emergence of ENSO neutral conditions.

During July-September, ENSO neutral is favoured at a 50% chance.

On 10 December, Tropical Cyclone Ruby formed in the Coral Sea. The system strengthened into a high-end category 2 system, with sustained winds of 110 km/h just before making landfall on northwestern New Caledonia on 14 December. Gusts as high as 162 km/h lashed parts of the Island as hundreds of homes lost power. 405 mm of rainfall was recorded over 48 hours at Kouaoua, in Northern Province in New Caledonia. In addition to Ruby, there have been three other cyclones in the basin so far this season, with 9-12 expected in total.

The MJO is currently over the western Pacific and is predicted to pulse across the Pacific again in mid-to-late January. This gives an elevated change of tropical cyclone formation in the region during this time.

The Island Climate Update bulletin is currently being produced by NIWA in association with the Pacific Island Meteorological Services and other supporting meteorological organisations.

The Island Climate Update is prepared as soon as possible following the end of the month, once the data and information are received from the Pacific Island meteorological services. Delays in data collection and communication occasionally arise. While every effort is made to verify observational data, NIWA does not guarantee the accuracy and reliability of the analysis and forecast information presented, and accepts no liability for any losses incurred through the use of this advisory and its contents.

The contents of this advisory and the Island Climate Update may be freely disseminated provided the source is acknowledged.

For more information see: <https://www.niwa.co.nz/pacific-rim/publications> <https://www.facebook.com/IslandClimateUpdate/>



**NIWA**  
Taihoro Nukurangi

## Rainfall outlook for January – March 2022

**Above normal rainfall** for Palau, FSM, Guam, Marshall Islands, Vanuatu (North & South), New Caledonia, Fiji, Tonga, Niue, Southern Cook Islands, and Austral Islands.

**Near or above normal rainfall** for the Northern Marianas.

**Below normal rainfall** for Papua New Guinea, Solomon Islands, Nauru, Kiribati (Gilbert, Phoenix & Line Islands) Tuvalu, Wallis & Futuna, Tokelau, Samoa, American Samoa, Northern Cook Islands, Society Islands, Tuamotu/Gambier Islands, Marquesas, and Pitcairn Islands.

Forecast

## Rainfall outlook table for January – March 2022


ISLAND	PROBABILITY (%)			OUTLOOK	CONFIDENCE
	Below	Normal	Above		
Tonga	6	13	81	ABOVE	Moderate-High
New Caledonia	8	12	80	ABOVE	Moderate-High
FSM	9	12	79	ABOVE	Moderate-High
Vanuatu South	10	12	78	ABOVE	Moderate
Fiji	13	14	73	ABOVE	Moderate-High
Palau	13	14	73	ABOVE	Moderate
Niue	15	17	68	ABOVE	Moderate
Marshall Islands	15	21	64	ABOVE	High
Vanuatu North	16	20	64	ABOVE	Moderate
Austral Islands	20	22	58	ABOVE	Moderate-High
Southern Cook Islands	24	30	46	ABOVE	Moderate-High
Guam	23	33	44	ABOVE	Moderate-High
Northern Marianas	16	39	45	AVG - ABOVE	High
Wallis & Futuna	45	28	27	BELOW	Moderate-High
Samoa	52	24	24	BELOW	Moderate
American Samoa	52	25	23	BELOW	Moderate
Pitcairn Islands	60	21	19	BELOW	Moderate-High
Papua New Guinea	65	18	17	BELOW	High
Solomon Islands	66	17	17	BELOW	Moderate-High
Society Islands	82	9	9	BELOW	Moderate-High
Tokelau	93	4	3	BELOW	High
Tuamotu Islands	93	4	3	BELOW	High
Northern Cook Islands	95	3	2	BELOW	High
Kiribati: Line Islands	95	4	1	BELOW	High
Tuvalu	97	2	1	BELOW	High
Marquesas	99	1	0	BELOW	High
Kiribati: Phoenix Islands	100	0	0	BELOW	High
Kiribati: Gilbert Islands	100	0	0	BELOW	High
Nauru	100	0	0	BELOW	High

Note: Rainfall estimates for Pacific Islands for the next three months are given in terms of tercile probabilities (e.g. 20:30:50). These are derived from the averages of several global climate models. They correspond to the odds of the observed rainfall being in the lowest one third of the distribution, the middle one third, or the highest one third of the distribution. For the long term average, it is equally likely (33% chance) that conditions in any of the three terciles will occur. \*If conditions are climatology, we expect an equal chance of the rainfall being in any tercile.

The Island Climate Update bulletin is currently being produced by NIWA in association with the Pacific Island Meteorological Services and other supporting meteorological organisations.

The Island Climate Update is prepared as soon as possible following the end of the month, once the data and information are received from the Pacific Island meteorological services. Delays in data collection and communication occasionally arise. While every effort is made to verify observational data, NIWA does not guarantee the accuracy and reliability of the analysis and forecast information presented, and accepts no liability for any losses incurred through the use of this advisory and its contents.

The contents of this advisory and the Island Climate Update may be freely disseminated provided the source is acknowledged.

For more information see: <https://www.niwa.co.nz/pacific-rim/publications>  <https://www.facebook.com/IslandClimateUpdate/>



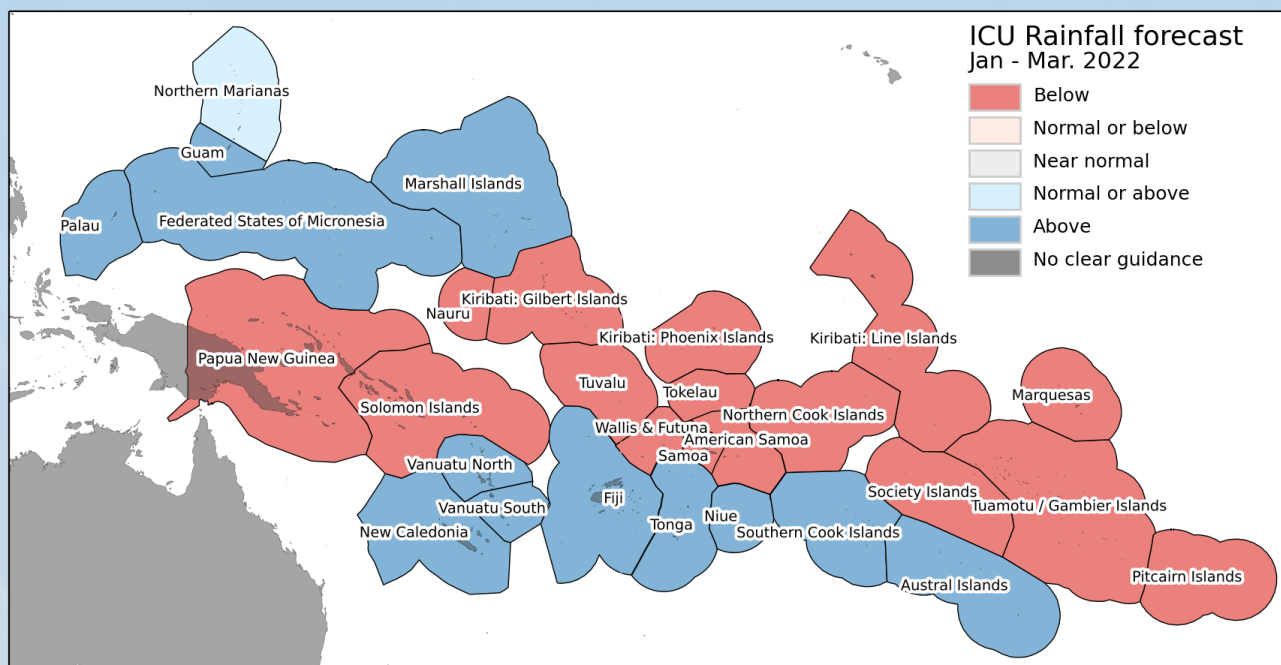
**NIWA**  
Taihoro Nukurangi

# The Island Climate Update

Drought Watch

January 2022

## December January – March 2022 rainfall forecast

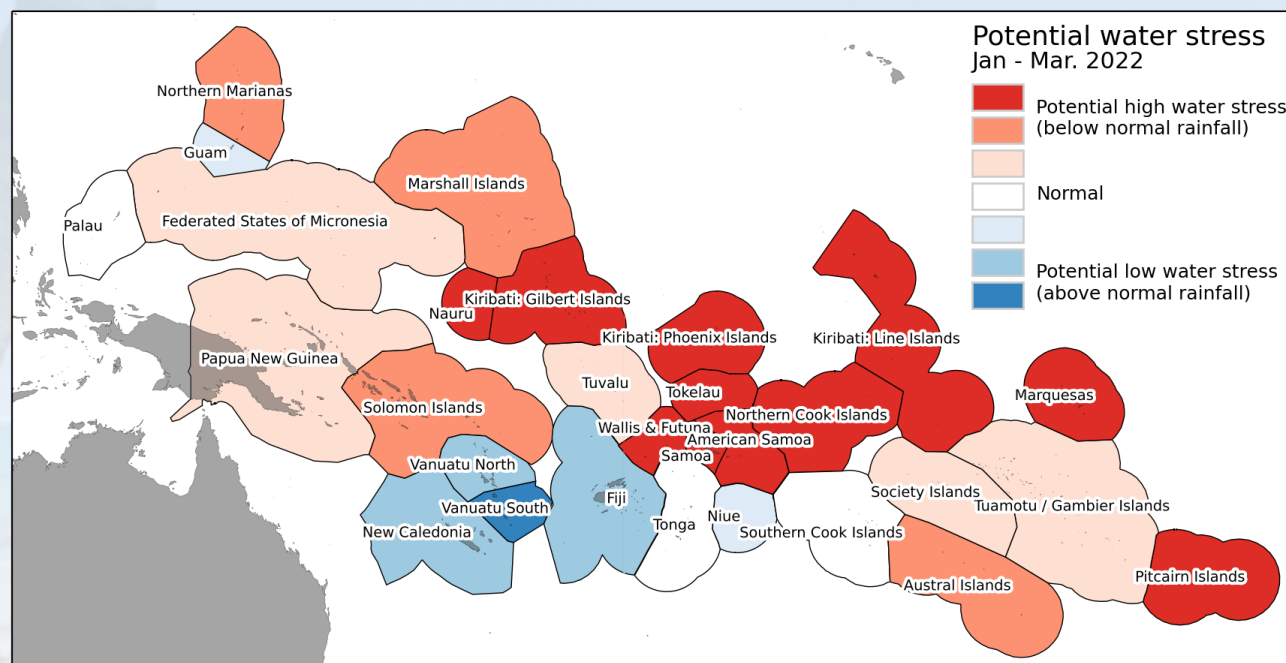


## Regional drought potential advisory

Based on rainfall anomaly classification over the past six months and forecast rainfall anomaly classification over the next 3 months

Parts of several island groups may experience high water stress over the next three months, including **Nauru, Kiribati (Gilbert, Phoenix & Line Islands), Wallis & Futuna, Tokelau, Samoa, American Samoa, Northern Cook Islands, Marquesas, and Pitcairn Islands.**

In addition, **Northern Marianas, Marshall Islands, Solomon Islands and Austral Islands** may also experience water stress. These countries have received low rainfall over part of the past six months and dry conditions are possible over the next three-month period.



The Island Climate Update bulletin is currently being produced by NIWA in association with the Pacific Island Meteorological Services and other supporting meteorological organisations.

The Island Climate Update is prepared as soon as possible following the end of the month, once the data and information are received from the Pacific Island meteorological services. Delays in data collection and communication occasionally arise. While effort is made to verify observational data, NIWA does not guarantee the accuracy and reliability of the analysis and forecast information presented, and accepts no liability for any losses incurred through the use of this advisory and its contents.

The contents of this advisory and the Island Climate Update may be freely disseminated provided the source is acknowledged.

For more information see: <https://www.niwa.co.nz/pacific-rim/publications> <https://www.facebook.com/IslandClimateUpdate/>



**NIWA**

Taihoru Nukurangi