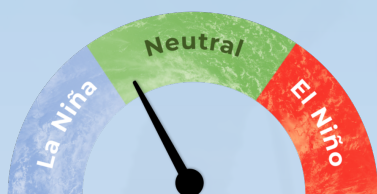


Recent



Current ENSO

The tropical Pacific remained ENSO neutral, although indicators continued to trend toward La Niña.

Sea surface temperatures remained in the neutral range during September but decreased compared to August.

The Southern Oscillation Index (SOI) was +0.8 during September (on the La Niña side of neutral). The three-month average SOI was +1.0 (in the La Niña range).

65%

chance for **La Niña** conditions during **October - December 2021.**

Chance for **La Niña** conditions during **January - March 2022**

50%

La Niña Watch



Forecast

ENSO situation summary

The NINO3.4 Index anomaly (in the central Pacific) during September was -0.23°C . Compared to this time last year, conditions are about 0.5°C warmer. The Southern Oscillation Index (SOI) was +0.8 during September, on the La Niña side of neutral. Notably, the three-month average SOI was +1.0, in La Niña territory.

During September, upper-oceanic heat content again decreased across the equatorial Pacific. Importantly, the cooler conditions relative to average remain displaced toward the west-central part of the basin, aligned with a non-traditional type of La Niña.

Trade winds were enhanced in a widespread fashion across the tropical Pacific during September, which contributed to additional cooling at the ocean's surface. Enhanced trade winds are expected to continue during the next three months as the ocean continues to progress toward La Niña thresholds.

In a La Niña-like fashion, patterns of reduced rainfall that established earlier this year have persisted for several island groups near and extending southeastward of the equator during September. Some areas around Nauru, Kiribati (Gilbert, Phoenix & Line Islands), Cook Islands, Tuamotu/Gambier Islands, Marquesas, Pitcairn Islands and New Caledonia saw over 25 dry days during September.

On the balance of evidence, La Niña conditions are favoured to develop during October to December period (60% chance), peaking at a 65% chance between November and January.

Rainfall outlook for October – December 2021

Above normal rainfall for Palau, Federated States of Micronesia, Papua New Guinea, Solomon Islands, New Caledonia, Vanuatu, Fiji, Wallis & Futuna, Samoa, American Samoa, Tonga, Niue, Southern Cook Islands, Society Islands, and Austral Islands.

Near or below normal rainfall for the Northern Marianas and Marshall Islands.

Below normal rainfall for Guam, Nauru, Kiribati (Gilbert, Phoenix & Line Islands), Tuvalu, Tokelau, Northern Cook Islands, Tuamotu/Gambier Islands, Marquesas, and Pitcairn Islands.

Rainfall outlook table for October - December 2021

ISLAND	PROBABILITY (%)			OUTLOOK	CONFIDENCE
	Below	Normal	Above		
Southern Cook Islands	9	13	78	ABOVE	Moderate-High
New Caledonia	7	22	71	ABOVE	High
Austral Islands	13	17	70	ABOVE	High
Papua New Guinea	7	24	69	ABOVE	High
Palau	16	17	67	ABOVE	Moderate
Vanuatu South	17	18	65	ABOVE	High
Vanuatu North	18	20	62	ABOVE	Moderate-High
Niue	19	19	62	ABOVE	Moderate-High
Tonga	17	22	61	ABOVE	Moderate-High
Fiji	20	20	60	ABOVE	Moderate-High
Solomon Islands	20	24	56	ABOVE	Moderate-High
FSM	17	29	54	ABOVE	High
American Samoa	23	30	47	ABOVE	Moderate
Samoa	26	31	43	ABOVE	Moderate
Wallis & Futuna	29	32	39	ABOVE	Moderate-High
Society Islands	31	31	38	ABOVE	Moderate-High
Marshall Islands	33	37	30	AVG-BELOW	High
Northern Marianas	37	33	30	AVG-BELOW	High
Guam	40	30	30	BELOW	Moderate-High
Pitcairn Islands	47	28	25	BELOW	Moderate-High
Tuamotu Islands	66	17	17	BELOW	High
Northern Cook Islands	75	13	12	BELOW	Moderate-High
Tokelau	76	13	11	BELOW	Moderate-High
Tuvalu	82	9	9	BELOW	Moderate-High
Marquesas	81	17	2	BELOW	High
Kiribati: Gilbert Islands	97	2	1	BELOW	High
Nauru	97	2	1	BELOW	High
Kiribati: Phoenix Islands	98	1	1	BELOW	High
Kiribati: Line Islands	95	5	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.

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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.

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

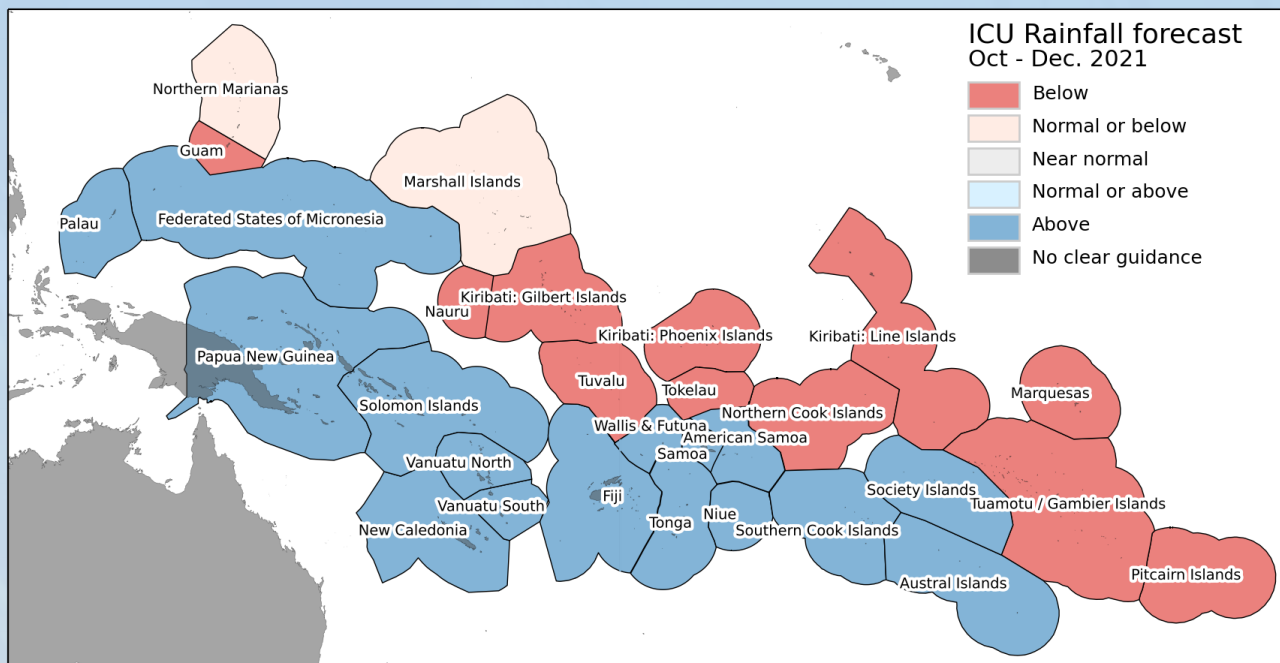


NIWA
Taihoro Nukurangi

The Island Climate Update

Drought Watch
October 2021

October - December 2021 rainfall forecast

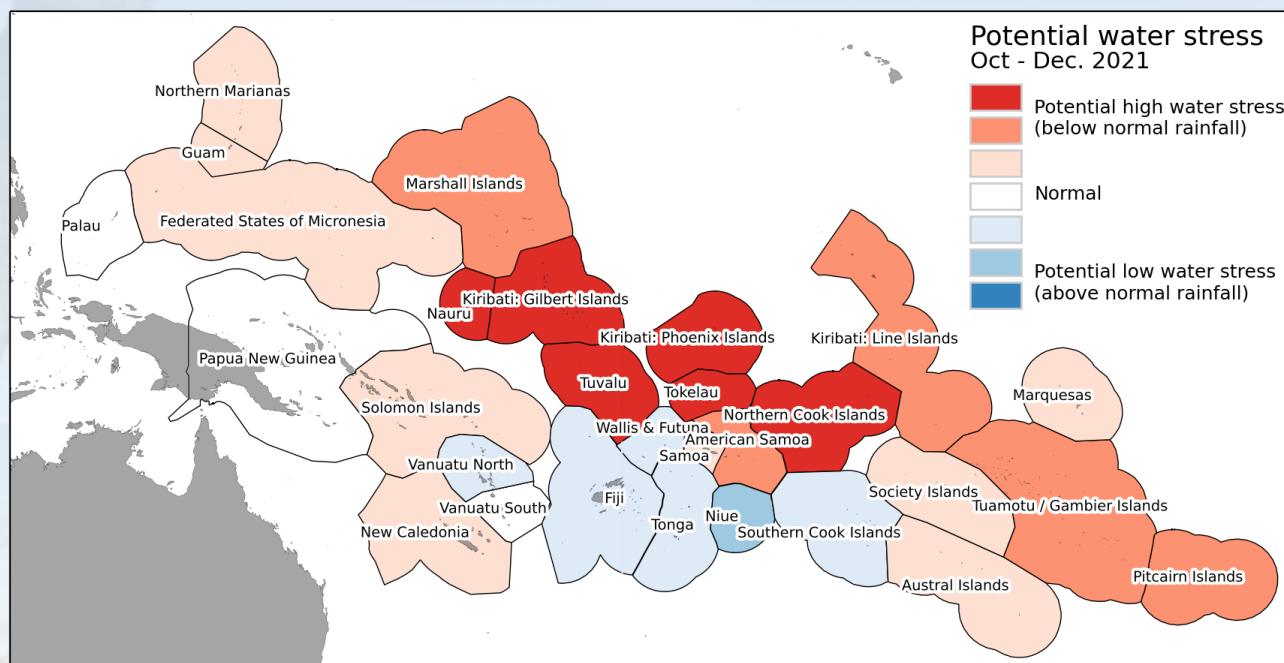


Regional drought potential advisory

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, Tuvalu, Kiribati (Gilbert & Phoenix Islands), Tokelau, and Northern Cook Islands.**

In addition, **Marshall Islands, American Samoa, Kiribati (Line Islands), Tuamotu/Gambier Islands and Pitcairn 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.



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