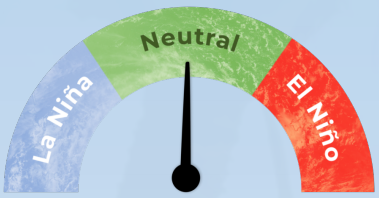
The Island Climate Update

ENSO Watch
August 2021

Recent



Current ENSO

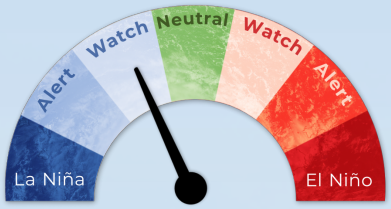
During July 2021, the tropical Pacific remained in ENSO neutral conditions, though some trends back toward La Niña were observed.

Sea surface temperatures (SSTs) in the equatorial Pacific were in the ENSO neutral range.

The Southern Oscillation Index (SOI) was +1.7 (La Niña range). The three-month average SOI was +0.8 (neutral range).

Forecast

55% chance for the continuation of **ENSO neutral** conditions during **August - October 2021.**



Chance for **La Niña** conditions during **November 2021 - January 2022.** **45%**

La Niña Watch

ENSO situation summary

The NINO3.4 Index anomaly (in the central Pacific) during July was 0.08°C. The Southern Oscillation Index was +1.7, firmly in La Niña territory.

During July, upper-oceanic heat content continued to decrease across the equatorial Pacific, a trend that started in June. Cooler waters at depth progressed toward the surface and warmer conditions close to the surface contracted and became less anomalous. Trade winds were enhanced around the equatorial Pacific, consistent with an atmosphere that was trending in a La Niña-like direction. This is expected to continue, with enhanced trade winds expected from mid-August. In terms of rainfall, island groups nearest to the equator will likely experience drier than normal conditions.

A negative Indian Ocean Dipole (IOD) event was classified by the Australian Bureau of Meteorology during July, referring to well above average SSTs in the tropical eastern Indian Ocean. An Atlantic Niño, characterised by warmer than average ocean temperatures in the central and eastern equatorial Atlantic, persisted also throughout the month. These teleconnections, or climate patterns related to one another across long distances, also support an ocean-atmosphere system that is likely to continue to trend in a La Niña-like direction.

On the balance of evidence, the re-emergence of La Niña or continuation of ENSO "cool" neutral conditions are about equally likely (45-55% chance each) over the coming three to six months. NIWA has therefore activated a La Niña watch. Regardless of ENSO status, the climate system will likely lean in a La Niña-like direction through the end of the year.

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The Island Climate Update

Rain Watch
August 2021

Forecast

Rainfall outlook for August – October 2021

Above normal rainfall for Palau, Papua New Guinea, Solomon Islands, Vanuatu North, Vanuatu South, New Caledonia, Fiji and Tonga.

Above or near normal rainfall for Niue and Southern Cook Islands.

Near or below normal rainfall for American Samoa and Marquesas

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

Rainfall outlook table for August - October 2021

ISLAND	PROBABILITY (%)			OUTLOOK	CONFIDENCE
	Below	Normal	Above		
Papua New Guinea	3	12	85	ABOVE	High
Vanuatu South	15	27	58	ABOVE	High
Fiji	21	21	58	ABOVE	High
Vanuatu North	21	25	54	ABOVE	High
Tonga	24	28	48	ABOVE	High
New Caledonia	23	31	46	ABOVE	High
Palau	29	32	39	ABOVE	Moderate
Solomon Islands	32	32	36	ABOVE	Moderate
Niue	29	31	40	AVG - ABOVE	High
Southern Cook Islands	25	37	38	AVG - ABOVE	High
Austral Islands	32	33	35	CLIMATOLOGY	High
Wallis & Futuna	32	34	34	CLIMATOLOGY	Moderate-High
American Samoa	33	37	30	AVG-BELOW	Moderate-High
Marquesas	45	51	4	AVG-BELOW	High
Samoa	42	29	29	BELOW	Moderate-High
Society Islands	42	31	27	BELOW	High
Pitcairn Islands	47	30	23	BELOW	High
Marshall Islands	50	30	20	BELOW	High
Tuamotu Islands	55	27	18	BELOW	High
Kiribati: Line Islands	60	26	14	BELOW	High
FSM	66	23	11	BELOW	High
Guam	73	16	11	BELOW	Moderate-High
Northern Marianas	73	16	11	BELOW	High
Northern Cook Islands	85	8	7	BELOW	High
Tokelau	87	8	5	BELOW	Moderate-High
Kiribati: Phoenix Islands	90	6	4	BELOW	High
Tuvalu	91	5	4	BELOW	High
Kiribati: Gilbert Islands	98	2	0	BELOW	High
Nauru	99	1	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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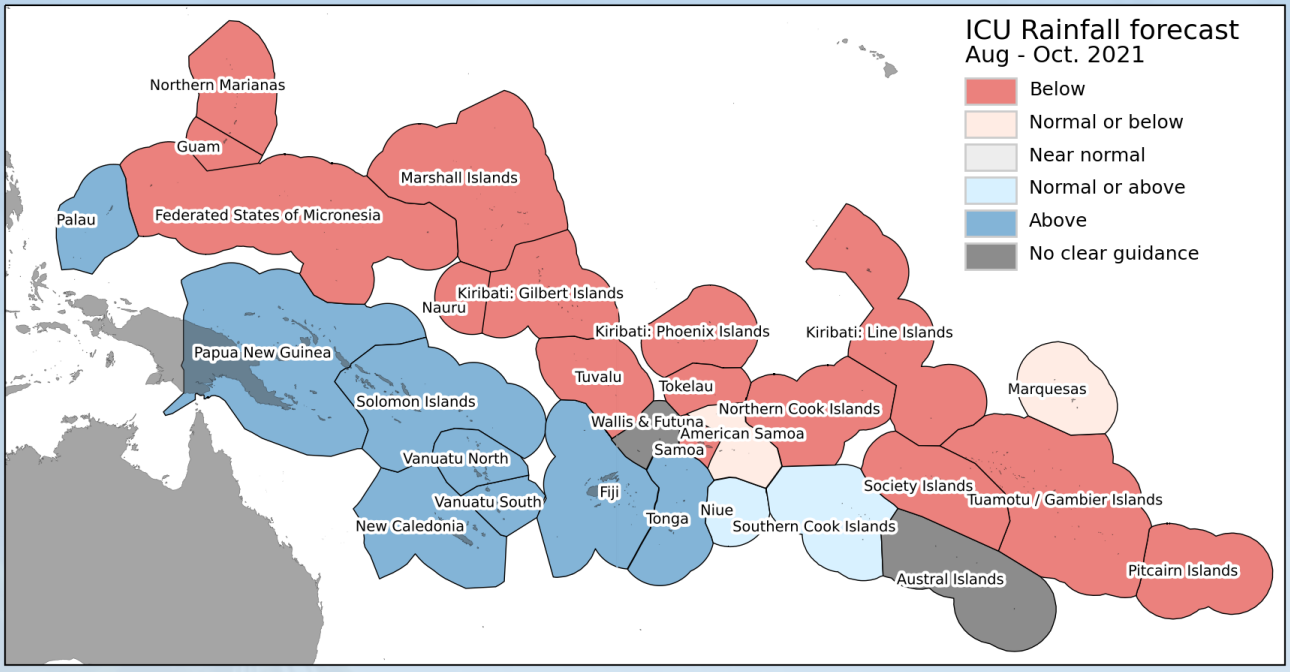
Drought Watch
August 2021

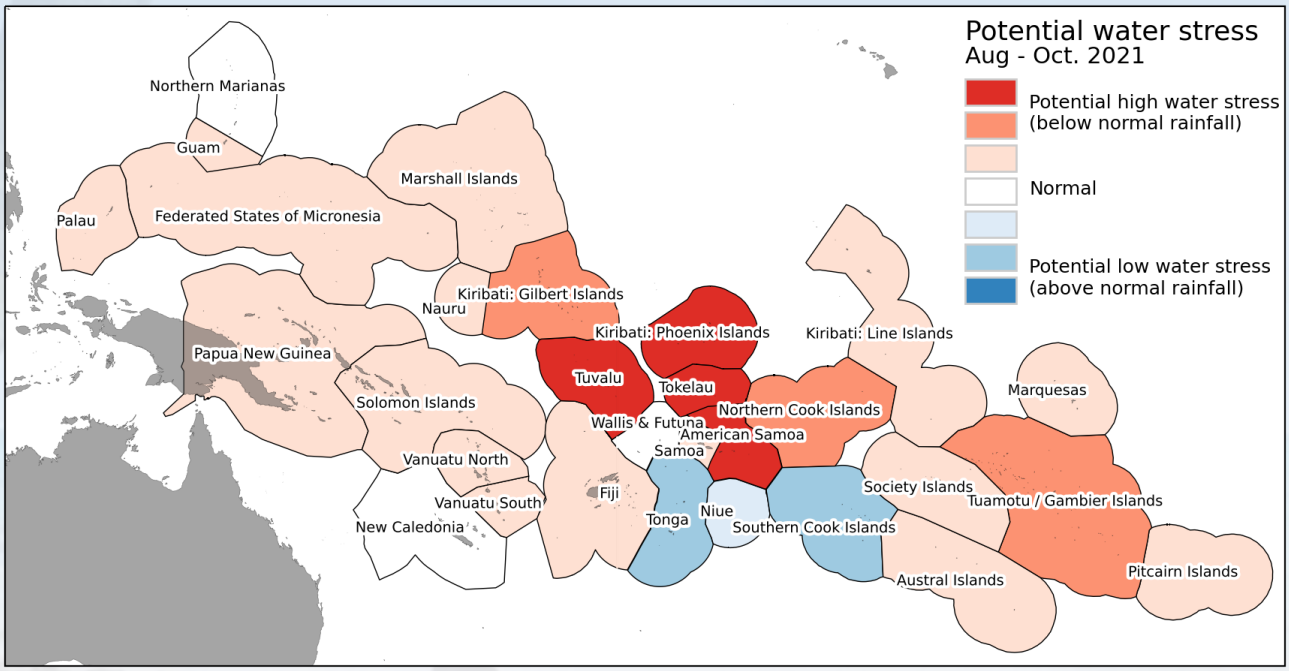
August - October 2021 rainfall forecast



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 **Kiribati (Phoenix Islands), Tokelau, Tuvalu and American Samoa.** Additionally, **Kiribati (Gilbert Islands), Northern Cook Islands and Tuamotu/Gambier 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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