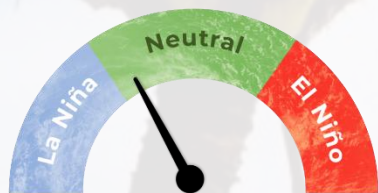


### Recent



Current ENSO

ENSO-neutral conditions continued during September, however patterns in the ocean and atmosphere are becoming more La Niña-like.

Sea surface temperatures (SSTs) were cooler than average in the central and eastern equatorial Pacific Ocean.

The Southern Oscillation Index (SOI) was +1.0 in September (on the La Niña threshold). The 3-month average SOI was +0.8 (on the La Niña side of neutral).

**77%** chance for **La Niña** conditions continuing to develop during **October-December 2020**.

Chance for **La Niña** conditions during **January-March 2021**.

**51%**



La Niña Alert

### Forecast

## ENSO situation summary

During September, the NINO3.4 Index anomaly (central Pacific) was  $-0.71^{\circ}\text{C}$ . The NINO 1+2 Index (eastern Pacific) was  $-0.76^{\circ}\text{C}$ . Upper-oceanic heat content remained lower than normal with continued decreases observed in the east-central part of the Pacific basin since August. Heat content continued to be higher than normal in the western Pacific. Overall, the pattern is consistent with La Niña conditions.

Trade winds during September continued to be stronger than normal across the equatorial Pacific, particularly near and west of the International Dateline. This contributed to additional upwelling, which led to continued cooling sea surface temperatures. This pattern is expected to continue into October and November, with enhanced trade winds focusing on the central Pacific (e.g. Kiribati, Nauru) – this may mean that the coolest ocean temperatures, with respect to average, migrate westward in time.

Rainfall and convection continued to be below normal in the central equatorial Pacific (Nauru, Kiribati, Tuvalu) during September. This was surrounded by isolated areas of above normal rainfall to the north, south and west, including a more active than normal South Pacific Convergence Zone, particularly to the west of the International Dateline. The pattern was La Niña-like in nature, although the atmosphere has yet to fully couple to the ocean with some variability continuing.

Based on the consensus from international models, the probability for La Niña conditions is 77% for the October-December period, a large increase of 20% from last month. For the January-March 2021 period, the probability for La Niña is 51% and 46% for ENSO-neutral conditions.

**Based on the observations and forecast guidance, a La Niña Alert continues this month.**

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## Rainfall outlook for October – December 2020

**Below normal rainfall** for Nauru, Kiribati (Gilbert, Phoenix and Line Islands), Tuvalu, Tokelau, Northern Cook Islands, Marquesas, Tuamotu Archipelago, and Pitcairn Islands.

**Near or above normal rainfall** for Northern Marianas, Guam, and Marshall Islands.

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

## Rainfall outlook table for October – December 2020

ISLAND	PROBABILITY (%)			OUTLOOK	CONFIDENCE
	Below	Normal	Above		
Fiji	7	7	86	ABOVE	Moderate-High
Palau	10	12	78	ABOVE	Moderate-High
FSM	7	18	75	ABOVE	High
Tonga	13	15	72	ABOVE	Moderate-High
Solomon Islands	12	17	71	ABOVE	High
Wallis & Futuna	13	16	71	ABOVE	Moderate-High
Vanuatu South	12	18	70	ABOVE	Moderate-High
American Samoa	15	15	70	ABOVE	Moderate
Samoa	12	19	69	ABOVE	Moderate-High
Vanuatu North	15	17	68	ABOVE	Moderate-High
Southern Cook Islands	17	18	65	ABOVE	Moderate-High
Papua New Guinea	15	26	59	ABOVE	High
Society Islands	21	23	56	ABOVE	Moderate-High
Niue	22	22	56	ABOVE	Moderate
New Caledonia	13	33	54	ABOVE	High
Austral Islands	21	27	52	ABOVE	High
Marshall Islands	29	32	39	AVG - ABOVE	High
Northern Marianas	29	33	38	AVG - ABOVE	High
Guam	27	36	37	AVG - ABOVE	Moderate-High
Tuamotu Islands	42	30	28	BELOW	High
Pitcairn Islands	44	29	27	BELOW	High
Northern Cook Islands	60	21	19	BELOW	Moderate-High
Tokelau	67	18	15	BELOW	Moderate
Tuvalu	81	10	9	BELOW	Moderate-High
Marquesas	83	14	3	BELOW	High
Kiribati: Phoenix Islands	98	2	0	BELOW	High
Nauru	98	2	0	BELOW	High
Kiribati: Line Islands	99	1	0	BELOW	High
Kiribati: Gilbert Islands	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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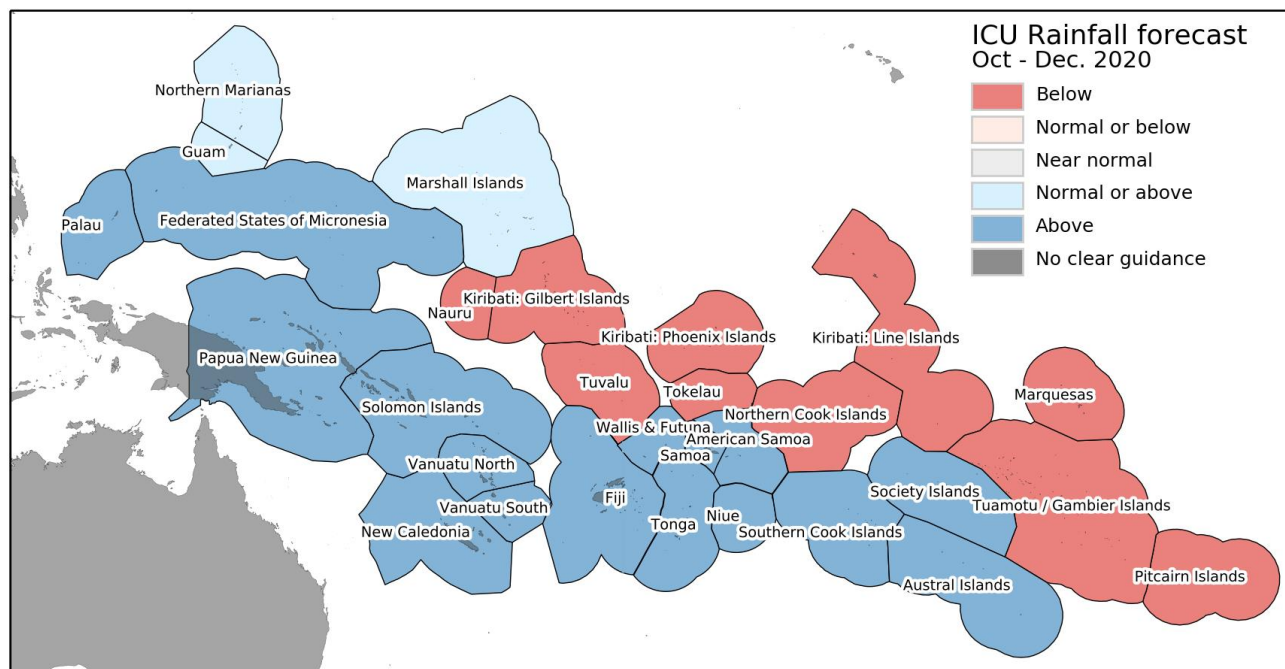


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# The Island Climate Update

## October – December 2020 rainfall forecast

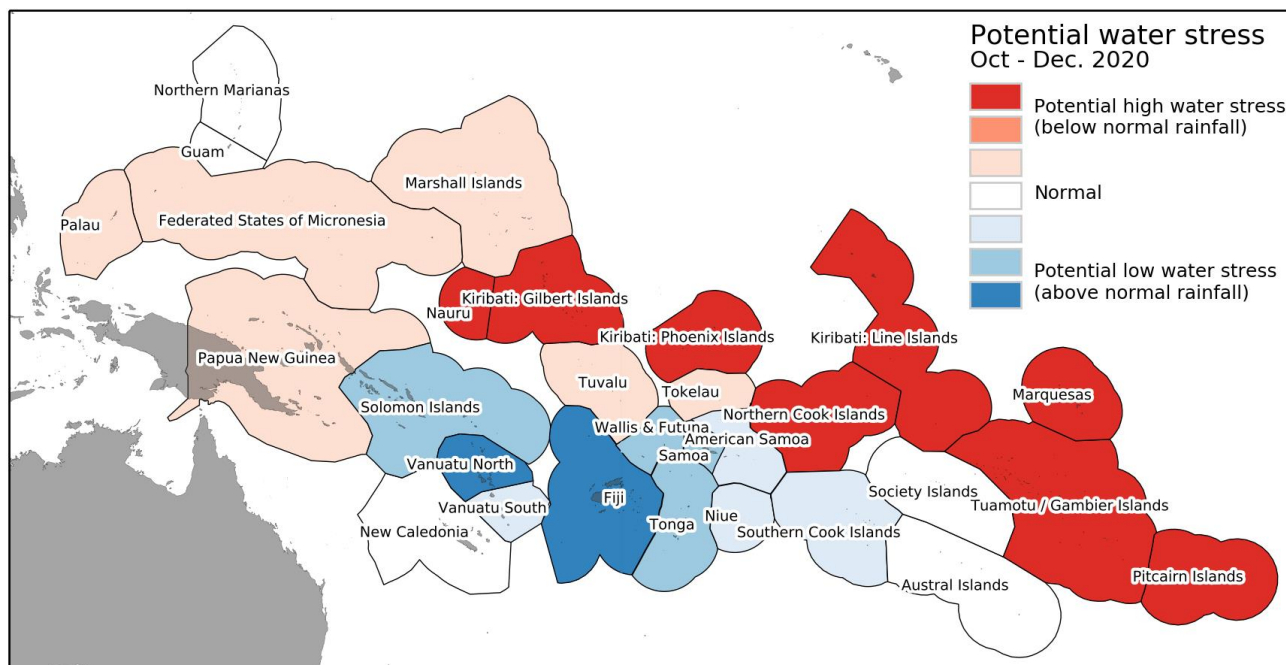
Drought Watch  
October 2020



## Regional drought potential advisory

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

Water stress has receded for some countries in the southern part of the Pacific Region, but many of the countries in the northern and eastern part of the Pacific Region may still expect high water stress over the next three months, including **Nauru, Kiribati (Gilbert, Phoenix and Line Islands), Northern Cook Islands, Marquesas, Tuamotu/Gambier Islands and Pitcairn Islands**. These countries have received low rainfall over part of the past six months, and dry conditions are forecast for the next three-month period.



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