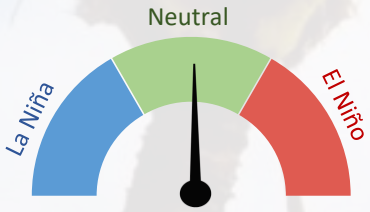
The Island Climate Update

ENSO Watch
June 2020

Recent



Current ENSO

ENSO-neutral conditions continued during May 2020.

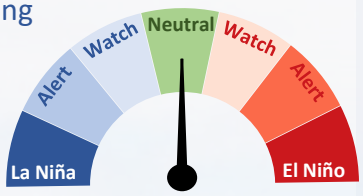
Sea surface temperatures (SSTs) were near average across the equatorial Pacific during May but showed an appreciable cooling trend compared to April.

The Southern Oscillation Index (SOI) was +0.3 in May (in ENSO-neutral territory). The 3-month average SOI was 0.0.

Forecast

71% chance for **ENSO-neutral** conditions persisting during **June – August 2020.**

Chance for **ENSO-neutral** conditions during **September – November 2020.** **44%**



Neutral

ENSO situation summary

During May the NINO3.4 Index anomaly (in the central Pacific) for May was +0.01˚C, with upper-oceanic heat content continuing to decrease across the equatorial Pacific. Anomalies were below average east of the International Dateline, suggestive of an ocean system that may be trending towards La Niña.

Rainfall and convection was above normal in the far western equatorial Pacific. This was associated with a mid-month pulse of convective activity that generated two tropical cyclones in the Indian Ocean. Otherwise, the pattern was consistent with an ENSO-neutral state.

Trade winds during May were stronger than normal across most of the equatorial Pacific, particularly in the east-central part of the basin. This pattern is expected to continue over the next 1-2 months, likely leading to continued cooling in the west-central Pacific.

In the subsurface ocean, cooler than average temperatures continued to push eastward during May. Some surfacing of these cooler waters was evident in the central and eastern part of the basin. Subsurface anomalies decreased to -3°C near 100 m depth, a decrease of 1-2°C compared to April. This continues to give validity to the idea that oceanic La Niña conditions might arrive later in 2020 as some models suggest.

According to the consensus from international models, ENSO-neutral conditions are most likely (71% chance) for the June-August period. For the September-November and December 2020-February 2021 periods, the probability for ENSO-neutral conditions is 44% for both, with the probability for La Niña increasing to 31% by spring 2020.

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

Rain Watch
June 2020

Forecast

Rainfall outlook for June – August 2020

Below normal rainfall for Palau, Northern Marianas, Guam, Federated States of Micronesia, Nauru, Kiribati (Gilbert, Phoenix, and Line Islands), New Caledonia, Southern Vanuatu, the Austral Islands, and Pitcairn Islands.

Near or below normal rainfall for Northern Vanuatu, Fiji, and Southern Cook Islands.

Near normal rainfall for Tonga and the Marquesas.

Above normal rainfall for the Solomon Islands, Tuvalu, Wallis & Futuna, Tokelau, Samoa, American Samoa, Northern Cook Islands, Society Islands, and the Tuamotu Archipelago.

Rainfall outlook table for June – August 2020

ISLAND	PROBABILITY (%)			OUTLOOK	CONFIDENCE
	Below	Normal	Above		
Wallis & Futuna	19	21	60	ABOVE	Moderate
Northern Cook Islands	17	24	59	ABOVE	Moderate-High
Tokelau	24	25	51	ABOVE	Moderate
Samoa	23	30	47	ABOVE	Moderate-High
Society Islands	26	29	45	ABOVE	High
Tuamotu Islands	26	31	43	ABOVE	High
American Samoa	26	32	42	ABOVE	Moderate-High
Solomon Islands	27	31	42	ABOVE	Moderate-High
Tuvalu	29	30	41	ABOVE	Moderate-High
Marshall Islands	15	39	46	AVG - ABOVE	High
Niue	27	33	40	AVG - ABOVE	High
Papua New Guinea	30	33	37	AVG - ABOVE	High
Tonga	32	35	33	NEAR NORMAL	Tonga
Marquesas	13	67	20	NEAR NORMAL	High
Vanuatu North	38	33	29	AVG - BELOW	High
Southern Cook Islands	38	34	28	AVG - BELOW	High
Fiji	40	33	27	AVG - BELOW	High
Austral Islands	42	29	29	BELOW	High
Palau	50	26	24	BELOW	Moderate
Pitcairn Islands	51	28	21	BELOW	High
Vanuatu South	52	27	21	BELOW	High
New Caledonia	54	26	20	BELOW	High
FSM	65	19	16	BELOW	High
Kiribati: Line Islands	74	15	11	BELOW	High
Northern Marianas	84	9	7	BELOW	High
Guam	86	9	5	BELOW	High
Kiribati: Phoenix Islands	94	5	1	BELOW	High
Nauru	96	4	0	BELOW	High
Kiribati: Gilbert Islands	97	3	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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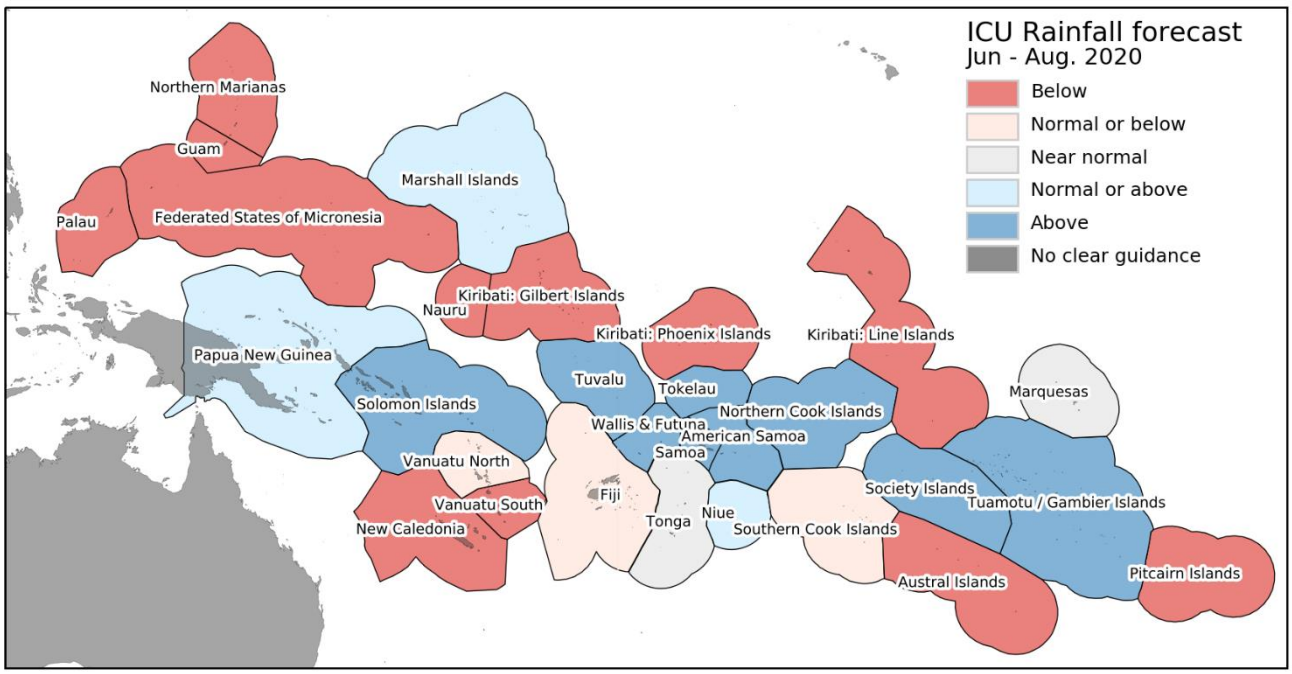
The Island Climate Update

Drought Watch
June 2020

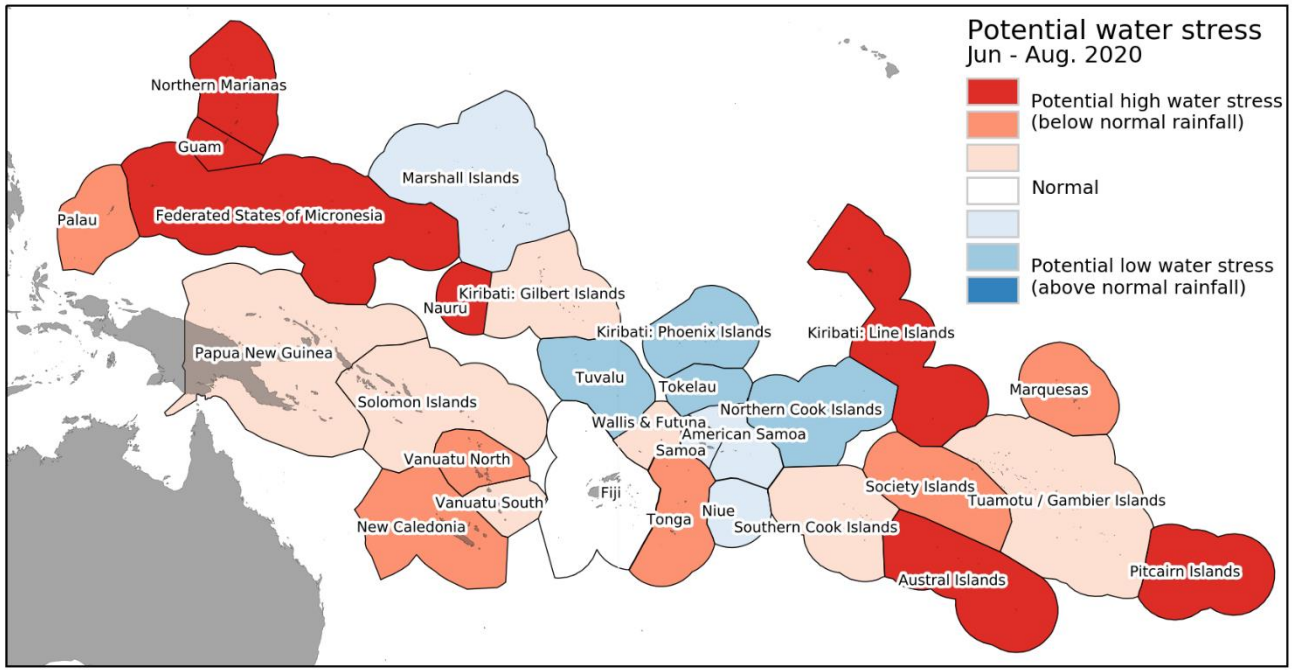
June – August 2020 rainfall forecast



Regional drought potential advisory

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

Many of the countries in the Pacific Region may expect some degree of water stress over the next three months (red and orange shades in the map below). High water stress may be experienced in **Northern Marianas, Guam, Federated States of Micronesia, Nauru, Kiribati (Line Islands), Austral 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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