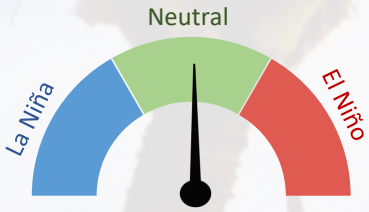
The Island Climate Update

ENSO Watch
March 2020

Recent



Current ENSO

ENSO-neutral conditions continued during February 2020.

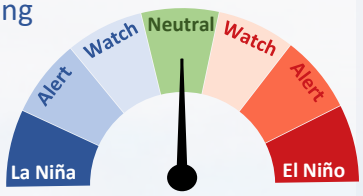
Sea surface temperatures (SSTs) were above average in the central Pacific during February but still in the ENSO-neutral range.

The Southern Oscillation Index (SOI) was -0.2 in February (in ENSO-neutral territory). The 3-month average SOI was -0.2.

Forecast

70% chance for **ENSO-neutral** conditions persisting during **March – May 2020.**

Chance for **ENSO-neutral** conditions during **June – August 2020.** **57%**



Neutral

ENSO situation summary

El Niño-Southern Oscillation (ENSO) neutral conditions continued during February 2020. The Southern Oscillation Index (SOI) was -0.2.

The NINO3.4 Index anomaly (in the central Pacific) for February was +0.30˚C, slightly cooler than January. The warmest ocean waters with respect to average continued to be located in the west-central Pacific. Upper-oceanic heat content remained above average near the Dateline, as it has for much of the past year. While the current ENSO status remains neutral, the system leans slightly in the direction of El Niño.

Rainfall and convection was well above normal in the vicinity of the Dateline and across the Southwest Pacific, caused by four tropical cyclones (Uesi, Vicky, Wasi, Esther). Over the next several months, a warm pool of water in the west-central Pacific is expected to regularly be a focal point for rain, thunderstorms, and tropical cyclone development; this may encompass the Coral Sea at times as well.

Trade winds were weaker than normal near and west of the Dateline during February, allowing the west-central Pacific warm pool of ocean water to persist. During March, weaker than normal trade winds are expected to persist in the west-central Pacific while enhanced trade winds are possible in the east-central part of the basin. This should lead to persistence of the current SST pattern (warmer west, cooler east).

According to the consensus from international models, ENSO-neutral conditions are most likely (70% chance) for the March – May period. For the June – August period, the probability for ENSO-neutral conditions is 57%. The probability of El Niño increases to 37% in September – November although ENSO-neutral remains the most likely outcome (39% chance).

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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Rain Watch
March 2020

Forecast

Rainfall outlook for March – May 2020

Below normal rainfall for Palau, Northern Marianas Islands, Guam, Southern Vanuatu, Tuvalu, Kiribati (Phoenix Islands), Tokelau, Wallis and Futuna, Samoa, American Samoa, Niue, Northern and Southern Cook Islands, Society Islands, Austral Islands, Tuamotu Islands and the Marquesas.

Near or below normal rainfall for Tonga and New Caledonia.

Near or above normal rainfall for the Federated States of Micronesia, Papua New Guinea, Kiribati (Gilbert Islands), Solomon Islands, and Fiji.

Above normal rainfall for the Marshall Islands, Nauru, Kiribati (Line Islands), Northern Vanuatu, and Pitcairn Islands.

Rainfall outlook table for March – May 2020

ISLAND	PROBABILITY (%)			OUTLOOK	CONFIDENCE
	Below	Normal	Above		
Marshall Islands	6	17	77	ABOVE	Moderate-High
Kiribati: Line Islands	8	17	75	ABOVE	High
Nauru	28	29	43	ABOVE	Moderate
Pitcairn Islands	30	31	39	ABOVE	Moderate-High
Vanuatu North	31	31	38	ABOVE	Moderate
FSM	29	31	40	AVG-ABOVE	Moderate-High
Papua New Guinea	26	36	38	AVG-ABOVE	High
Kiribati: Gilbert Islands	31	34	35	AVG-ABOVE	Moderate
Solomon Islands	31	36	33	AVG-ABOVE	High
Fiji	31	36	33	AVG-ABOVE	Moderate-High
Tonga	36	33	31	AVG-BELOW	Moderate-High
New Caledonia	37	35	28	AVG-BELOW	Moderate-High
Niue	40	30	30	BELOW	Moderate-High
Wallis & Futuna	41	31	28	BELOW	Moderate-High
Austral Islands	42	30	28	BELOW	High
Vanuatu South	44	28	28	BELOW	Moderate-High
American Samoa	42	31	27	BELOW	Moderate-High
Tuamotu Islands	45	28	27	BELOW	High
Society Islands	44	30	26	BELOW	Moderate-High
Palau	47	27	26	BELOW	Moderate-High
Tuvalu	46	29	25	BELOW	Moderate-High
Samoa	47	28	25	BELOW	Moderate-High
Southern Cook Islands	53	24	23	BELOW	High
Kiribati: Phoenix Islands	57	22	21	BELOW	Moderate-High
Guam	63	22	15	BELOW	High
Tokelau	74	14	12	BELOW	High
Northern Marianas	67	22	11	BELOW	High
Northern Cook Islands	76	16	8	BELOW	High
Marquesas	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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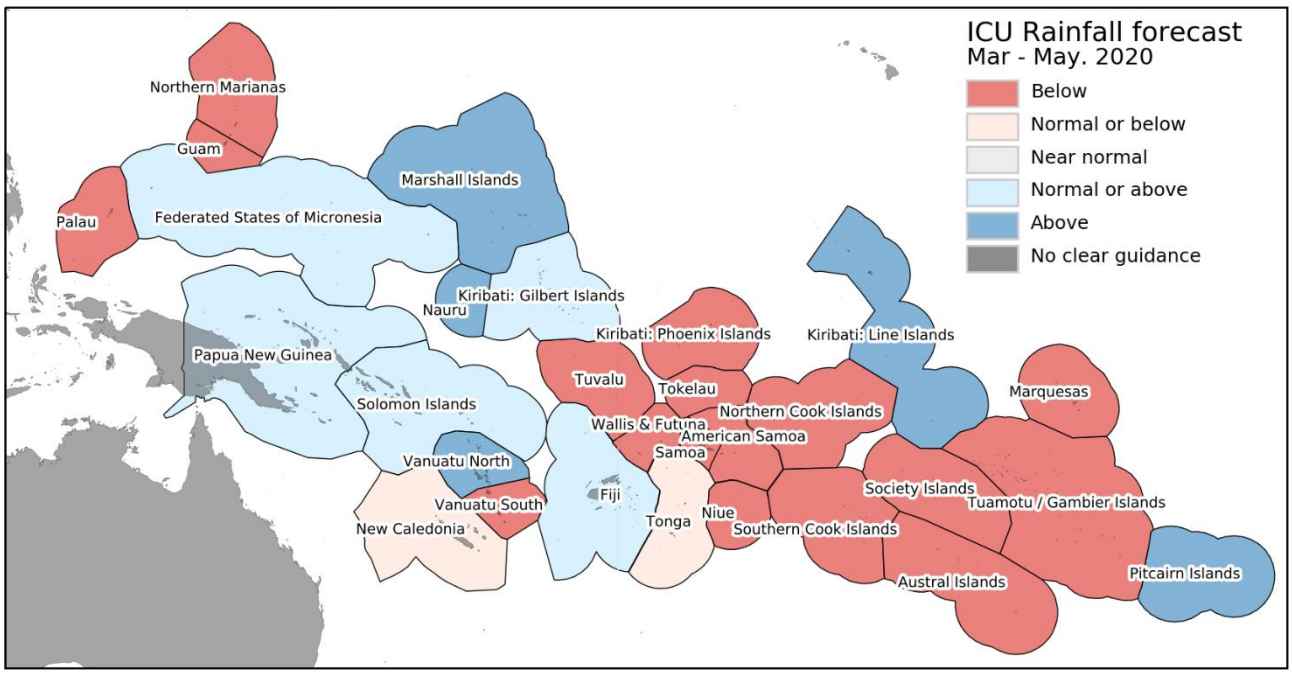
The Island Climate Update

Drought Watch
March 2020

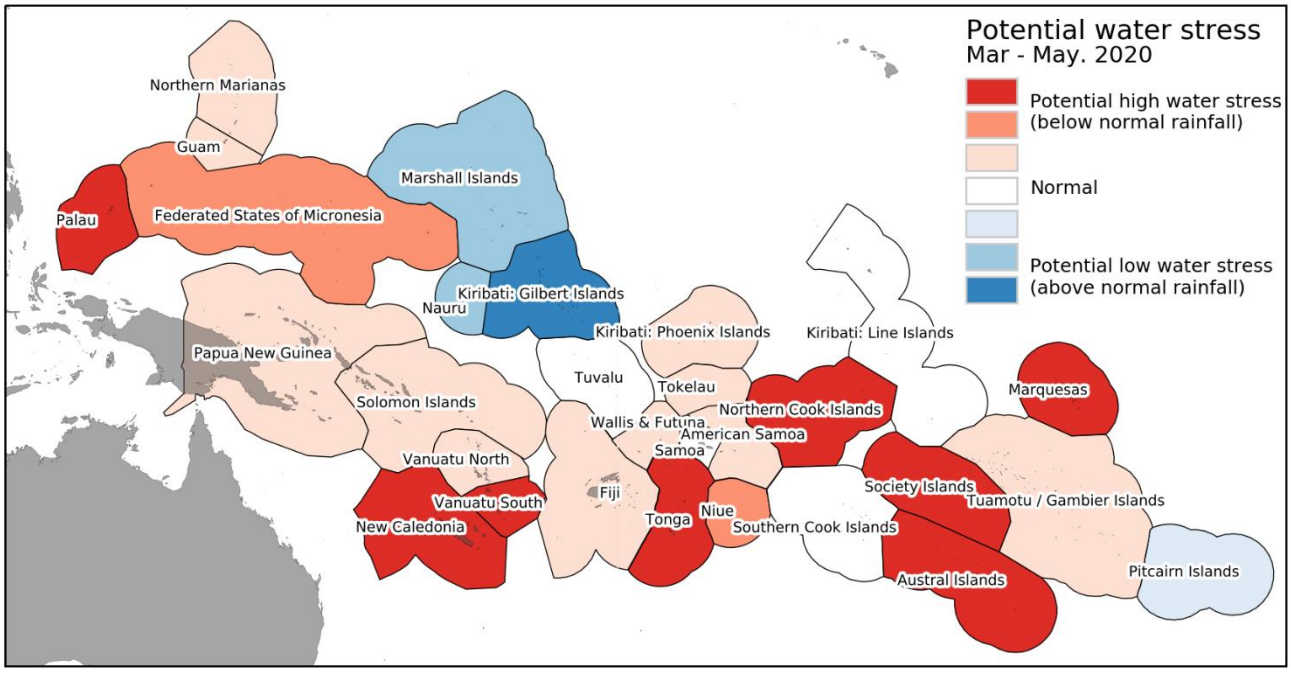
March – May 2020 rainfall forecast



Regional drought potential advisory

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

Countries to watch for potential water stress are **Palau, New Caledonia, Southern Vanuatu, Tonga, Northern Cook Islands, Society Islands, Austral Islands, and the Marquesas** as they have received low rainfall over part of the past six months, and dry conditions are forecast for the next three month period. Other countries with developing water stress conditions are **the Federated States of Micronesia and Niue.** Most other countries across the region are experiencing slight water stress.



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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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