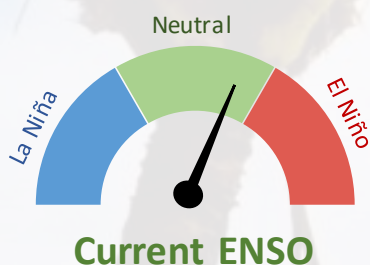


Recent



ENSO-neutral conditions continued during December 2019.

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

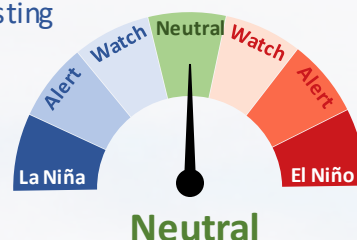
The Southern Oscillation Index (SOI) was -0.6 in December (on the El Niño side of neutral). The 3-month average SOI (October – December) was -0.7 .

53%

chance for ENSO-neutral conditions persisting during January – March 2020.

Chance for ENSO-neutral conditions during April – June 2020.

68%



Forecast

ENSO situation summary

El Niño – Southern Oscillation (ENSO) neutral conditions continued during December 2019. Both the Southern Oscillation Index (SOI) and sea surface temperatures (SSTs) remained on the El Niño side of neutral but weakened compared to previous months.

The NINO3.4 Index anomaly (in the central Pacific) for the month of December cooled to $+0.41^{\circ}\text{C}$ compared to $+0.64^{\circ}\text{C}$ the month before. The warmest surface ocean waters along the equatorial Pacific were still found in the western Pacific, with the NINO4 region (west-central Pacific) posting a monthly value of $+0.84^{\circ}\text{C}$. The SOI value for December 2019 is -0.6 (on the El Niño side of neutral).

During December 2019, upper-oceanic heat content remained above average in the equatorial Pacific and spread eastward. Anomalies exceeding $+0.5^{\circ}\text{C}$ were present from 160°E across the Dateline to $\sim 140^{\circ}\text{W}$. Rainfall was well below normal about the eastern Indian Ocean, Indonesia, and northern Australia while it was above normal across parts of the western Indian Ocean. In the tropical Pacific, rainfall was above normal just west of the International Dateline, and below normal east of it, a pattern which was El Niño Modoki-like.

According to the consensus from international models, ENSO-neutral conditions are most likely ($\sim 53\%$ chance) for the January– March period. For the April– June 2020 period, the probability for ENSO-neutral conditions increases to 68% and then decreases to 50% for the July – September 2020 period. In summary ENSO-neutral remains the most likely outcome until the end of winter 2020.

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Rainfall outlook for January - March 2020

Below normal rainfall for the Southern Cook Islands, Pitcairn Islands, southern Vanuatu, American Samoa, Samoa, New Caledonia, Wallis and Futuna, the Society Islands, Solomon Islands, the Tuamotu archipelago, Kiribati (Gilbert Islands and Phoenix Islands), Tokelau, the northern Cook Islands, Guam, the Northern Marianas Islands and the Marquesas.

Near or below normal rainfall for Tuvalu and the Austral Islands.

Near normal rainfall for Fiji

Near or above normal rainfall for Nauru.

Above normal rainfall for the Marshall Islands, the Federated States of Micronesia, Kiribati (Line Islands) and Papua New Guinea.

No clear guidance for northern Vanuatu, Palau, Tonga and Niue.

Forecast

Rainfall outlook table for January-March 2020


ISLAND	PROBABILITY (%)			OUTLOOK	CONFIDENCE
	Below	Normal	Above		
Marshall Islands	3	17	80	ABOVE	Moderate-High
FSM	20	22	58	ABOVE	Moderate
Kiribati: Line Islands	21	33	46	ABOVE	High
Papua New Guinea	25	30	45	ABOVE	High
Nauru	29	33	38	AVG-ABOVE	Moderate
Vanuatu North	32	34	34	CLIMATOLOGY	Moderate-High
Palau	32	35	33	CLIMATOLOGY	Moderate
Tonga	32	36	32	CLIMATOLOGY	Moderate-High
Niue	34	34	32	CLIMATOLOGY	Moderate
Fiji	31	38	31	NEAR NORMAL	Moderate-High
Austral Islands	38	32	30	AVG - BELOW	High
Tuvalu	40	31	29	AVG - BELOW	Moderate
Southern Cook Islands	41	30	29	BELOW	Moderate-High
Pitcairn Islands	43	29	28	BELOW	Moderate-High
Vanuatu South	45	28	27	BELOW	Moderate-High
American Samoa	48	26	26	BELOW	Moderate-High
Samoa	49	27	24	BELOW	Moderate-High
New Caledonia	51	25	24	BELOW	Moderate-High
Wallis & Futuna	52	25	23	BELOW	Moderate-High
Society Islands	51	27	22	BELOW	Moderate-High
Solomon Islands	52	26	22	BELOW	High
Tuamotu Islands	55	23	22	BELOW	High
Kiribati: Gilbert Islands	55	24	21	BELOW	Moderate
Tokelau	60	21	19	BELOW	Moderate
Northern Cook Islands	76	13	11	BELOW	Moderate-High
Guam	66	24	10	BELOW	High
Kiribati: Phoenix Islands	80	10	10	BELOW	High
Northern Marianas	65	28	7	BELOW	High
Marquesas	95	4	1	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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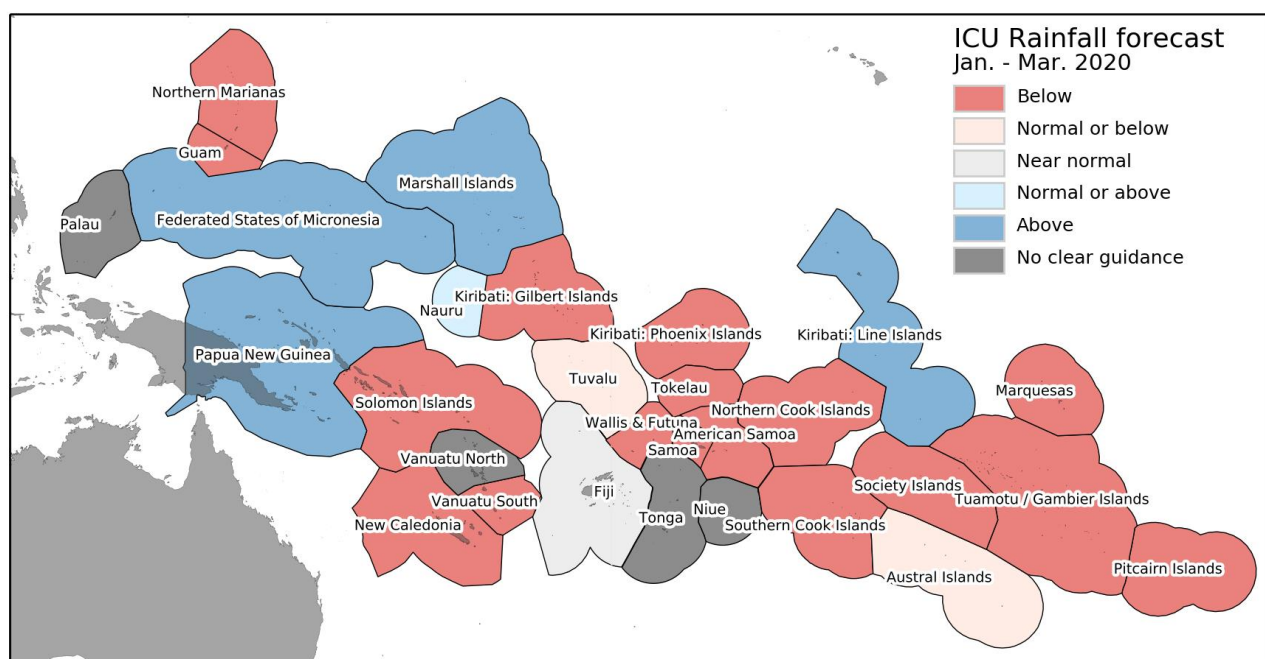
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The Island Climate Update

January - March 2020 rainfall forecast

Drought Watch

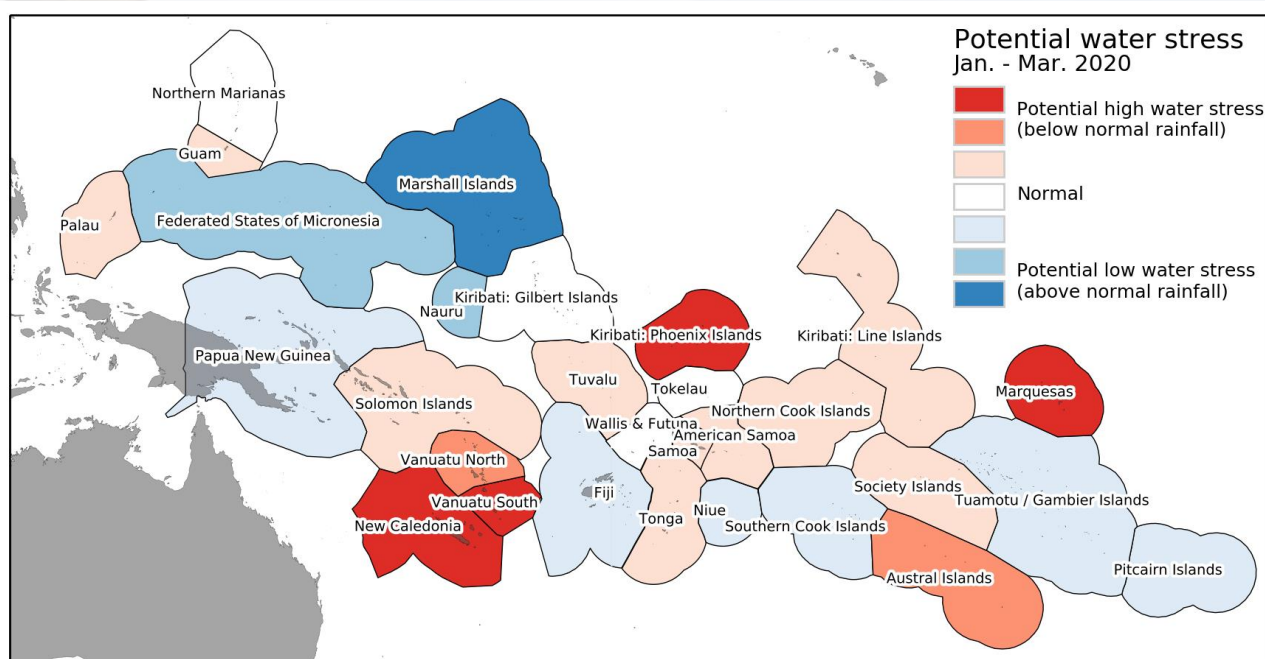
January 2020



Regional drought potential advisory

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

Countries to watch for potential water stress are **New Caledonia, Southern Vanuatu, Kiribati (Phoenix Islands) and the Marquesas Islands** as they have received low rainfall over part of the past six months, and dry conditions are forecast for the next three month period (January to March 2020).



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