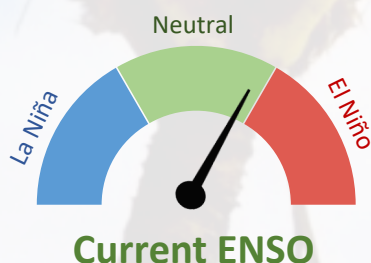


Recent



The Pacific Ocean has warmed up to exceed the conventional El Niño thresholds.

However, the atmosphere has yet not caught up with the ocean.

The Southern Oscillation Index (SOI) remained in the neutral range (-0.1) in November 2018.

94% chance for El Niño conditions during December 2018 – February 2018.

Chance for El Niño conditions during March – May 2019 **85%**



Forecast

ENSO situation summary

Sea surface temperatures (SSTs) across the east-central tropical Pacific **have reached weak El Niño conditions**. Over the past month, SSTs in the central Pacific (NINO3.4 Index) have continued to warm, increasing to an anomaly of +0.9°C. This marks the third consecutive month SST anomalies in the central Pacific have exceeded 0.7°C, which meets an **oceanic** definition for El Niño.

However, **the atmosphere has yet to respond to this additional warmth and become truly coupled with the ocean** in a manner typically associated with an El Niño event, and the atmospheric indicators so far fail to signal El Niño conditions. One reflection of this is the **Southern Oscillation Index (SOI)**, which was at **-0.1** for November, *i.e.* still in the **neutral range**.

Trade winds, until recently, have been generally near or weaker than average for the month of November. However, a significant Westerly Wind Burst (WWB) between the Date Line and 120°W is expected through to the first week of December. This WWB will likely result in an additional downwelling Kelvin wave, which will may tip the atmosphere toward El Niño over the coming weeks in what would become an **unusually late onset**.

The **consensus from international models** is for the tropical Pacific to transition towards El Niño over the **next three-month period (94% chance over December 2018 – February 2019)**. The probability for El Niño remains **high through autumn 2019**, with an 85% chance for occurrence in the March – May 2019 period. The probability of El Niño remains unusually elevated (66% chance) through to the next Southern Hemisphere winter season (signalling the **possibility of a protracted El Niño event extending over two years**).

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Rainfall outlook for December 2018 – February 2019

Below normal rainfall for New Caledonia, Tokelau, the northern Cook Islands, the Tuamotu archipelago and the Marquesas.

Normal or below normal rainfall for the northern Marianas Islands, Guam, Palau, the Federated States of Micronesia, Papua New Guinea, Vanuatu, Niue, Fiji and the Society Islands.

Near normal rainfall for Wallis and Futuna, Tonga, Samoa, the southern Cook Islands and Pitcairn Island.

Normal or above normal rainfall for Nauru, central Kiribati (Phoenix Islands), Tuvalu, American Samoa, eastern Kiribati (Line Islands) and the Austral Islands.

Above normal rainfall for the Solomon Islands, the Marshall Islands and Western Kiribati (Gilbert Islands).

Forecast

Rainfall outlook table for December 2018 – February 2019

ISLAND	PROBABILITY (%)			OUTLOOK	CONFIDENCE
	Below	Normal	Above		
Solomon Islands	10	30	55	ABOVE	High
Marshall Islands	20	35	45	ABOVE	High
Kiribati (Western)	20	35	45	ABOVE	High
Nauru	15	40	45	AVG - ABOVE	High
Central Kiribati (Phoenix)	15	40	45	AVG - ABOVE	Moderate-High
Austral Islands	25	35	40	AVG - ABOVE	Moderate
Kiribati (Eastern)	25	35	40	AVG - ABOVE	High
Tuvalu	25	35	40	AVG - ABOVE	Moderate
American Samoa	25	40	35	AVG - ABOVE	Moderate
Cook Islands (Southern)	25	45	30	NEAR NORMAL	Moderate-High
Wallis & Futuna	30	40	30	NEAR NORMAL	Moderate
Samoa	30	40	30	NEAR NORMAL	Moderate-High
Tonga	30	45	25	NEAR NORMAL	Moderate
Pitcairn Island	30	45	25	NEAR NORMAL	Moderate
Niue	35	40	25	AVG - BELOW	Moderate
Vanuatu (North)	35	40	25	AVG - BELOW	Moderate-High
Fiji	40	35	25	AVG - BELOW	Moderate
Guam	40	35	25	AVG - BELOW	Moderate
Papua New Guinea	40	35	25	AVG - BELOW	Moderate-High
N. Marianas	40	35	25	AVG - BELOW	Moderate-High
FSM	45	40	15	AVG - BELOW	Moderate-High
Palau	45	40	15	AVG - BELOW	Moderate-High
Society Islands	45	40	15	AVG - BELOW	Moderate-High
Vanuatu (South)	45	40	15	AVG - BELOW	Moderate-High
Tuamotu Islands	45	35	20	BELOW	Moderate-High
Tokelau	45	35	20	BELOW	Moderate-High
Cook Islands (Northern)	45	35	20	BELOW	Moderate-High
New Caledonia	50	30	20	BELOW	High
Marquesas	50	30	20	BELOW	Moderate-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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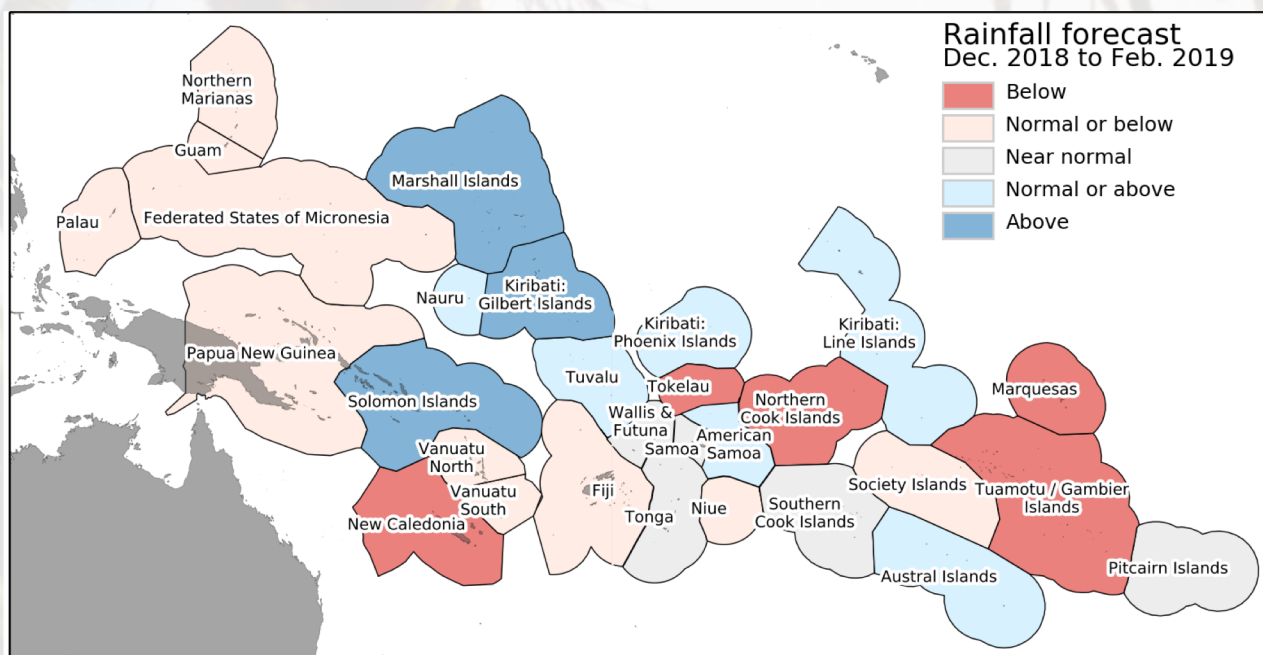
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The Island Climate Update

Drought Watch

December 2018

December 2018 to February 2019 rainfall forecast

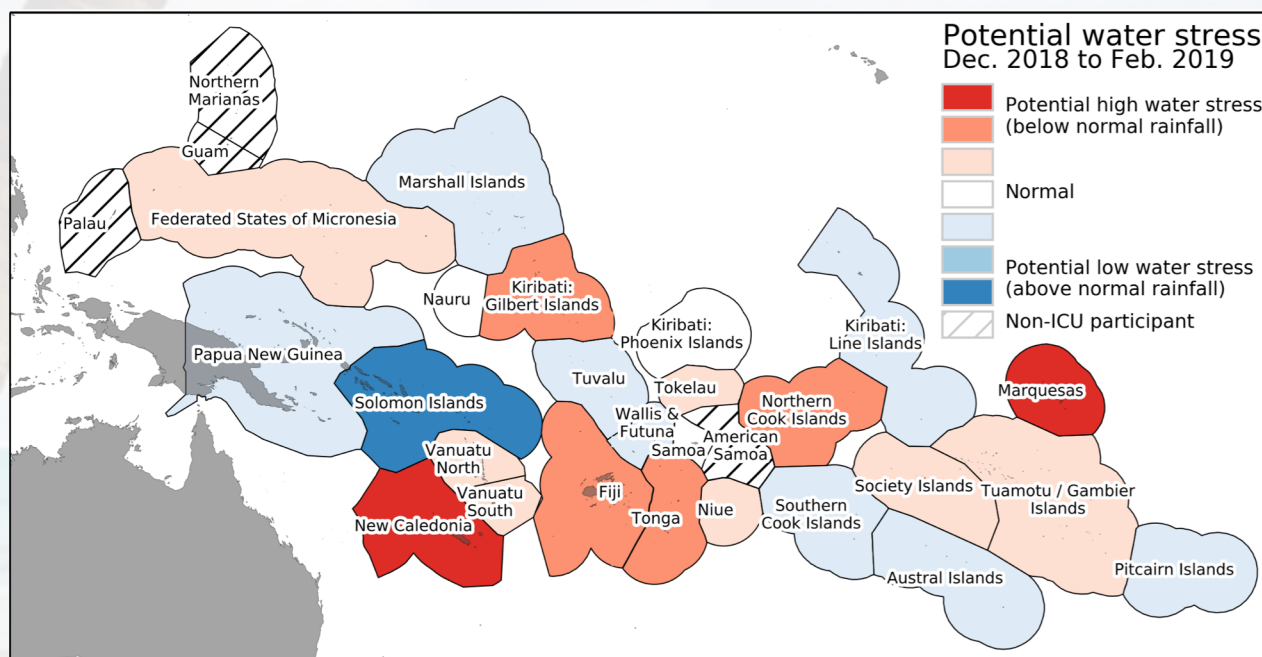


Regional drought potential advisory

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

New Caledonia and the Marquesas Islands are at risk from high water stress over the next three months, as they have received low rainfall over the past few months and dry conditions are forecast.

Other countries to watch for water stress are **Western Kiribati (Gilbert Islands), Fiji, Tonga and the northern Cook Islands.**



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