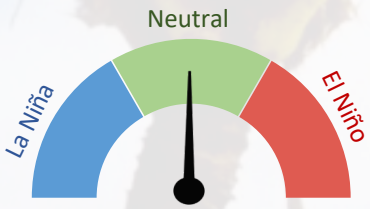
The Island Climate Update

ENSO Watch
May 2018

Recent



Current ENSO

La Niña transitioned to neutral conditions in the tropical Pacific during April 2018.

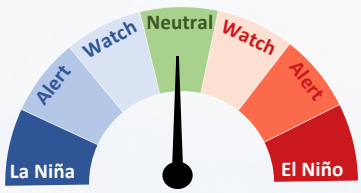
Sea surface temperatures remain below average in the central and eastern equatorial Pacific, but have weakened compared to March 2018.

Neutral conditions are expected to persist over the next 3 month period.

Forecast

75% chance for **ENSO-neutral** conditions to continue during **May – July 2018.**

Chance for **El Niño** conditions to emerge during **September – November 2018** **53%**



Neutral

ENSO situation summary

Weak La Niña conditions transitioned to ENSO-neutral in the tropical Pacific during April 2018. Sea surface temperatures (SSTs) in the central and eastern equatorial Pacific Ocean remained below normal during April 2018, but continued to weaken relative to March values. **The NINO3.4 index remains weakly negative** at -0.33°C (was -0.61°C last month) .

In the subsurface ocean (within the first 150 metres of the ocean), positive temperature anomalies shifted east of 140°W during the month of April and now extend across most of the equatorial Pacific. Significant positive anomalies (> +3°C) have now persisted in the central Pacific basin (170-160°W), centred at about 150m depth, for the second consecutive month. The only subsurface region exhibiting cooler than average temperatures was confined to areas around and east of 100°W.

The **Southern Oscillation Index (SOI) has shown considerable variability** since the beginning of the year, and is **currently on the La Niña side of neutral**, with a value of **+0.5 for April 2018**. April 2018 rainfall and convection anomalies in the tropical Pacific changed significantly, especially in the western Equatorial Pacific, where anomalously wet conditions in March gave way to anomalously dry conditions in April.

In summary, with the significant shift in rainfall patterns over the western equatorial Pacific and Maritime Continent, combined with the warming of equatorial waters, particularly in the subsurface and east of the Date Line, **ENSO-neutral is expected to continue over the next few months**: the international consensus is for ENSO-neutral conditions over the next 3 month period (**75% chance over May – July 2018**). **The forecast models favor El Niño conditions emerging during spring (53% chance in September – November 2018).**

NIWA
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The Island Climate Update

Rain Watch
May 2018

Forecast

Rainfall outlook for May – July 2018

Below normal rainfall for the northern Cook Islands, Tokelau, Tuvalu, Nauru, the Kiribati groups, and the Marquesas Islands.

Normal or below normal rainfall for Vanuatu, American Samoa, the Solomon Islands, Wallis & Futuna, New Caledonia, Samoa, the Tuamotu archipelago and the Society Islands.

Normal or above normal rainfall for Tonga, the Marshall Islands, Niue, the Austral Islands, the southern Cook Islands, Fiji, the Federated States of Micronesia, Palau, Papua New Guinea and Pitcairn Island.

Above normal rainfall for Guam and the northern Marianas Islands.

Rainfall outlook table for May – July 2018

ISLAND	PROBABILITY (%)			OUTLOOK	CONFIDENCE
	Below	Normal	Above		
Guam	20	30	50	ABOVE	High
N. Marianas	20	35	45	ABOVE	High
Tonga	15	40	45	AVG - ABOVE	Moderate-High
Marshall Islands	15	40	45	AVG - ABOVE	Moderate
Niue	25	35	40	AVG - ABOVE	Moderate-High
Austral Islands	25	35	40	AVG - ABOVE	Moderate-High
Cook Islands (Southern)	25	35	40	AVG - ABOVE	Moderate-High
Fiji	25	40	35	AVG - ABOVE	High
FSM	25	40	35	AVG - ABOVE	Moderate
Palau	25	40	35	AVG - ABOVE	Moderate
Papua New Guinea	25	40	35	AVG - ABOVE	Moderate
Pitcairn Island	25	40	35	AVG - ABOVE	Moderate-High
Vanuatu (South)	35	40	25	AVG - BELOW	Moderate
American Samoa	35	40	25	AVG - BELOW	Moderate
Solomon Islands	35	40	25	AVG - BELOW	Moderate
Vanuatu (North)	35	40	25	AVG - BELOW	Moderate-High
Wallis & Futuna	35	40	25	AVG - BELOW	Moderate
New Caledonia	40	35	25	AVG - BELOW	Moderate-High
Samoa	40	35	25	AVG - BELOW	Moderate-High
Tuamotu Islands	40	35	25	AVG - BELOW	Moderate
Society Islands	40	35	25	AVG - BELOW	Moderate
Cook Islands (Northern)	45	35	20	BELOW	High
Tokelau	45	35	20	BELOW	Moderate
Tuvalu	45	35	20	BELOW	Moderate-High
Nauru	45	35	20	BELOW	High
Kiribati (Western)	50	30	20	BELOW	High
Kiribati (Eastern)	55	30	15	BELOW	High
Marquesas	60	30	10	BELOW	High
Central Kiribati (Phoenix)	60	30	10	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.

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

For more information see: http://www.niwa.co.nz/climate/icu https://www.facebook.com/IslandClimateUpdate/

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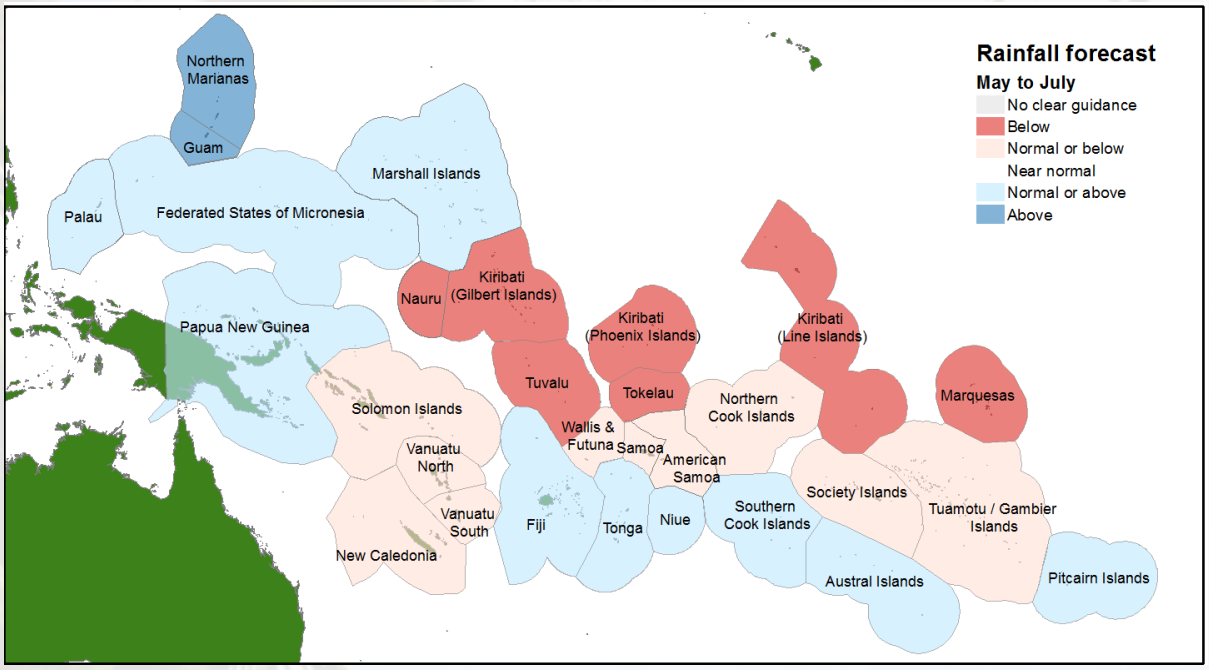
The Island Climate Update

Drought Watch
May 2018

May to July 2018 rainfall forecast

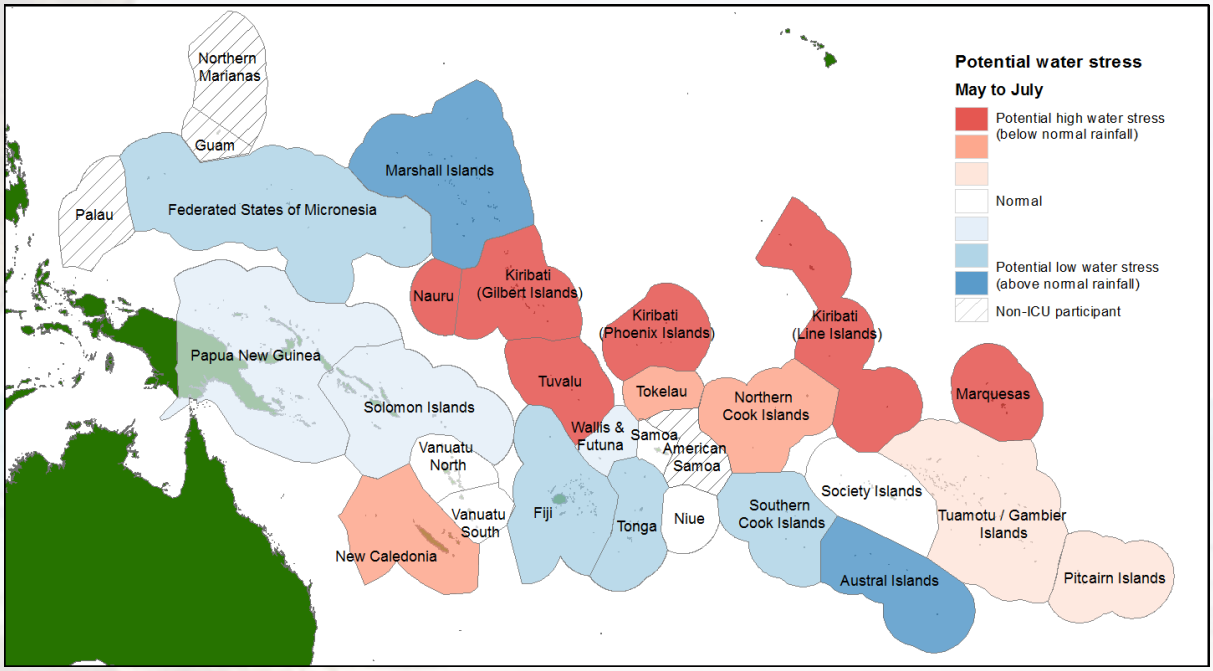


Regional drought potential advisory

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

Nauru, Tuvalu, Kiribati (Gilbert, Phoenix, Line Islands), Marquesas: Below to well below normal rainfall experienced over the last several months. Below normal rainfall is forecast for these island groups over the next three months.

New Caledonia, Tokelau, Northern Cook Islands: Below or well below normal rainfall experienced over some of the last several months. Normal or below normal rainfall is forecast over the next three months.



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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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