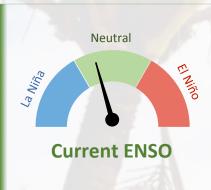
# **The Island Climate Update**

**ENSO Watch** December 2016



El Niño/Southern Oscillation (ENSO) conditions are currently near neutral, but leaning towards a weak La Niña state.

Sea Surface Temperatures are slightly below average across the central Equatorial Pacific.

The Southern Oscillation Index (SOI) is slightly negative (-0.2 for November 2016).

53% chance of La Niña conditions developing December 2016 to February 2017.

Chance of neutral conditions over the March and May 2017 season



La Niña Watch

#### **ENSO** situation summary

The tropical Pacific exhibits mainly neutral conditions. Sea surface temperatures (SSTs) in the central Equatorial Pacific Ocean are marginally below average, with a value of -0.3°C in the NINO3.4 region, and thus do not exceed the threshold used by NOAA's CPC to define La Niña events.

In the sub-surface ocean, the coolest anomaly has warmed to about -2°C near 110°W, but the previously cool temperature anomalies to the west have continued to weaken to near normal and even above normal.

The atmospheric setup is mixed as stronger easterly trade winds in the west Pacific along with enhanced convection north and east of Papua New Guinea are consistent with La Niña conditions. However, the Southern Oscillation Index (SOI) remains weakly negative (value of -0.2 for November 2016) and is consistent with ENSO-neutral conditions.

International guidance still slightly favors La Niña conditions (53% chance) over the next three month period (December 2016 - February 2017). However, neutral conditions are much more likely than La Niña by March-May 2017: 80% chance for neutral, and only 16% for La Niña.

In summary, La Niña conditions are only slightly more likely than not over the next 3-month period, and become significantly less likely as we progress into 2017.

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

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. The contents of this advisory and the Island Climate Update may be freely disseminated provided the source is acknowledged.

For more information see: http:/



# **The Island Climate Update**

### Rainfall outlook for December 2016 – February 2017

Below normal rainfall for Tokelau, Tuvalu, all of Kiribati, and Nauru

Normal or below normal rainfall for Papua New Guinea and Pitcairn Island.

Normal or above normal rainfall for the Austral Islands, Niue, Tonga, the Marshall Islands, Guam, the northern Marianas, Fiji, New Caledonia and the Society Islands.

Above normal rainfall for the Federated States of Micronesia, Samoa, Palau and American Samoa.

### Rainfall outlook table for December 2016 - February 2017

ISLAND	PROBABILITY (%)			OUTLOOK	CONFIDENCE
	Below	Normal	Above		
FSM	20	30	50	ABOVE	Moderate-High
Samoa	20	35	45	ABOVE	Moderate-High
Palau	20	35	45	ABOVE	Moderate
American Samoa	20	35	45	ABOVE	Moderate-High
Austral Islands	25	35	40	AVG - ABOVE	High
Niue	25	35	40	AVG - ABOVE	High
Tonga	25	35	40	AVG - ABOVE	Moderate-High
Marshall Islands	25	35	40	AVG - ABOVE	Moderate
Guam	25	35	40	AVG - ABOVE	Moderate
Northern Marianas	25	35	40	AVG - ABOVE	Moderate
Fiji	25	40	35	AVG - ABOVE	Moderate-High
New Caledonia	25	40	35	AVG - ABOVE	High
Society Islands	25	40	35	AVG - ABOVE	Moderate-High
Cook Islands (Northern)	30	40	30	NEAR NORMAL	Moderate-High
Marquesas	30	40	30	NEAR NORMAL	Moderate-High
Tuamotu Islands	30	40	30	NEAR NORMAL	Moderate-High
Vanuatu (North)	30	40	30	NEAR NORMAL	
Vanuatu (South)	30	40	30	NEAR NORMAL	High
Wallis & Futuna	30	35	35	CLIMATOLOGY	Moderate
Cook Islands (Southern)	33	33	33	CLIMATOLOGY	Moderate
Solomon Islands	33	33	33	CLIMATOLOGY	Moderate
Papua New Guinea	40	35	25	AVG - BELOW	Moderate-High
Pitcairn Island	40	35	25	AVG - BELOW	Moderate
Tokelau	45	35	20	BELOW	Moderate-High
Tuvalu	45	35	20	BELOW	High
Kiribati (Eastern)	50	30	20	BELOW	High
Central Kiribati (Phoenix)	50	30	20	BELOW	High
Nauru	50	30	20	BELOW	High
Kiribati (Western)	55	30	15	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://v

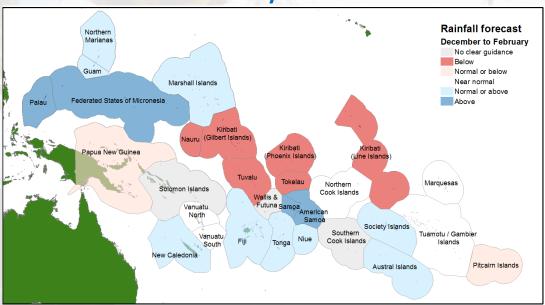
The Island Climate Update is prepared as soon as possible following the end of the month, once the data and information are received from the Pacific Island meteorological services. Delays in data collection and communication occasionally arise. While every effort is made to verify observational data, 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. The contents of this advisory and the Island Climate Update may be freely disseminated provided the source is acknowledged.

N-LW A Taihoro Nukurangi

## **The Island Climate Update**

### **Drought Watch** December 2016

### December 2016 to February 2017 rainfall forecast



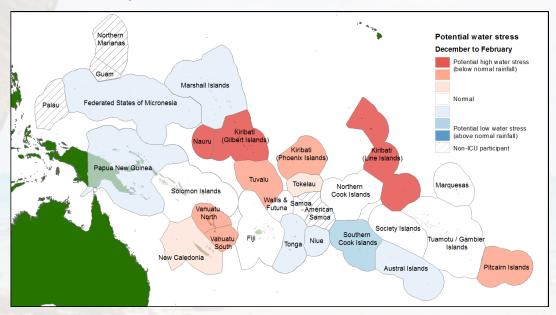
#### Regional drought potential advisory

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

Nauru, Kiribati Gilbert and Line Islands: Below or well below normal rainfall experienced over the past 6 months in the Gilbert Islands and Nauru and 5 of the past 6 months in the Line Islands. Below normal rainfall is forecast over the next 3 months.

Northern and Southern Vanuatu: Below or well below normal rainfall experienced over 4 of the past 6 months. Near normal rainfall is forecast for both northern and southern Vanuatu for the next 3 months.

Kiribati Phoenix Islands, Pitcairn, Tuvalu: Below or well below normal rainfall experienced over 3 of the past 6 months in Pitcairn and 2 of the past 6 months in Tuvalu and Kiribati's Phoenix Islands. Below normal rainfall is forecast over the next 3 months for Tuvalu and the Phoenix Islands while normal or below normal rainfall is expected in Pitcairn.



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://

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. The contents of this advisory and the Island Climate Update may be freely disseminated provided the source is acknowledged.

