



## TONGA METEOROLOGICAL SERVICE

# Monthly Climate Summary



December 2018 Climate Summary:

Issued: 22 January 2019

## December 2018 Climate in brief.

Above average rainfall recorded across the country. Extremely high rainfall recorded in Vava'u and Ha'apai (Refer to Graph below), which also set Ha'apai's highest December rainfall recorded. This rainfall have eased much of the drought conditions experienced across the country in the past few months. The mean temperature was 26.6°C which was 0.3°C higher than average. Highest maximum temperature was 33.8°C on the 5<sup>th</sup> in Niuafou'u and the lowest minimum temperature was 17.4°C in Fua'amotu on the 13<sup>th</sup>. (Refer to tables 1—4 below) for details.

**Table 1. Near-record or record high or low annual average temperature departures for December 2018.**

Station	Mean air Temperature °C	Departure from normal °C	Year records began	Rank & Comments
<b>Mean temperature</b>				
Niuafou'u	26.4	-0.8	1971	4/42, 4th lowest
Niutopotapu	27.9	+0.4	1958	8th highest
Vava'u	26.1	-0.2	1949	Below average
Ha'apai	26.4	+0.7	1961	Above average
Fua'amotu	26.1	+0.8	1980	Above average
Nuku'alofa	26.4	+0.4	1949	Above average
<b>Mean maximum temperature</b>				
Niuafou'u	29.1	-1.2	1971	Lowest
Niutopotapu	30.7	0.0	1949	Average
Vava'u	29	-0.4	1956	Below average
Ha'apai	28.6	-0.4	1962	Below average
Fua'amotu	29.5	+0.9	1980	9 <sup>th</sup> highest
Nuku'alofa	30.2	+1.2	1949	5 <sup>th</sup> highest
<b>Mean minimum temperature</b>				
Niuafou'u	23.7	-0.1	1971	Below average
Niutopotapu	25.1	+0.8	1950	Above average
Vava'u	23.2	-0.1	1953	Below average
Ha'apai	24.1	+0.3	1961	Above average
Fua'amotu	22.7	+0.7	1980	10 <sup>th</sup> highest
Nuku'alofa	22.6	-0.2	1945	Below average

**Table 2. Near-record or record high or low annual temperature extremes for December 2018**

Stations	Temperature °C	Date of occurrence	Year records began	Comments, ranks
<b>Highest extreme maximum temperatures</b>				
Niuafoóu	33.8	5 <sup>th</sup>	1971	8 <sup>nd</sup> highest
Niuaatoputapu	31.9	19 <sup>th</sup>	1958	20/49
Vava'u	31	24 <sup>th</sup>	1957	18/62
Ha'apai	30.7	2 <sup>nd</sup>	1961	35/54
Fua'amotu	31.6	18 <sup>th</sup>	1980	6 <sup>th</sup> highest
Nuku'alofa	32.3	1 <sup>st</sup>	1949	3 <sup>rd</sup> highest
<b>Lowest extreme minimum temperatures</b>				
Niuafoóu	21.6	10 <sup>th</sup>	1971	18/43
Niuaatoputapu	21.4	28 <sup>th</sup>	1958	32/51
Vava'u	16	11 <sup>th</sup>	1957	2 <sup>nd</sup> lowest
Ha'apai	21	1 <sup>st</sup>	1961	26/55
Fua'amotu	17.4	13 <sup>th</sup>	1980	18/39
Nuku'alofa	17.5	13 <sup>th</sup>	1949	20/70

**Table 3: Record of rainfall totals for December 2018**

Stations	Rainfall total (mm)	Percentage of normal %	Year records began	Rank & Comments
<b>High records or near-records</b>				
Niuafoóu	401.3	129	1971	12 <sup>th</sup> highest
Niuaatoputapu	325.6	123	1947	17 <sup>th</sup> highest
Vava'u	537.7	220	1947	5 <sup>th</sup> highest
Ha'apai	707.1	531	1947	Highest
Fua'amotu	276.8	174	1980	5 <sup>th</sup> Highest
Nuku'alofa	196.2	133	1945	20/74

**Table 4: Record or near-record high extreme 1-day rainfall totals that occurred in December 2018.**

Stations	1-day extreme rainfall (mm)	Date	Year records began	Ranks and Comments
<b>High records or near-records</b>				
Niuafoóu	60.6	8 <sup>th</sup>	1971	22/41
Niuaatoputapu	56.2	13 <sup>th</sup>	1950	25/26
Vava'u	125.3	31 <sup>st</sup>	1995	3rd highest
Ha'apai	225.3	29 <sup>th</sup>	1953	Highest
Fua'amotu	65.2	29 <sup>th</sup>	1981	23/36
Nuku'alofa	38.8	29 <sup>th</sup>	1982	16/37