



Seasonal Rainfall Outlook: July to September 2018

Samoa Meteorology Division (SMD)

Ministry of Natural Resources and Environment

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Summary Statements

- ◆ Generally average to below average rainfall is expected in the upcoming 3 months .
- ◆ 'Average to below average' rainfall is anticipated for the six monthly rainfall outlook for October to December (Table 2) Pg 2.
- ◆ El Nino event likely to occur in the next few months as suggested by climate models. Pg 2.
- ◆ Highest precipitation recorded from the last 3 monthly accumulated rainfall (March to May) was registered at Afiamalu station (1615.4mm), and lowest at Tuasivi station (702.0mm) . The forecast was generally 'Consistent'. (Pg 3)

Table 1: Three (3) months rainfall outlook : July to September 2018 period

*These outlooks are generated from the statistical model—SCOPIIC. International guidance from climate models such as IRI, METPI, ECMWF, APCC, POAMA, and others were also incorporated in these forecasts. Note : stations with * used POAMA to generate their rainfall predictions.*

Generally, 'average to below average' rainfall is to be expected in the upcoming season.

Region	Rainfall Prediction	Below Average	Average	Above Average
Afiamalu	Average to Below Average	<490mm	490mm-670mm	>670mm
Afulilo*	Below Average	<267mm	267mm-430mm	>430mm
Alafua	Average to Below Average	<151mm	151mm-475mm	>475mm
Aopo*	Below Average	<267mm	267mm-430mm	>430mm
Apia	Average to Below Average	<251mm	251mm-423mm	>423mm
Faleolo	Below Average	<267mm	267mm-430mm	>430mm
Fasitoo*	Below Average	<267mm	267mm-430mm	>430mm
Fiaga*	Below Average	<267mm	267mm-430mm	>430mm
Lauli	Below Average	<267mm	267mm-430mm	>430mm
Leauvaa*	Below Average	<267mm	267mm-430mm	>430mm
Letui*	Below Average	<267mm	267mm-430mm	>430mm
Lepa*	Below Average	<267mm	267mm-430mm	>430mm
Lotofaga	Average to below Average	<704mm	704mm-1034mm	>1034mm
Maota*	Below Average	<267mm	267mm-430mm	>430mm
Nafanua	Average to Below Average	<324mm	324mm-487mm	>487mm
Neiafu*	Below Average	<267mm	267mm-430mm	>430mm
Nuusuatia*	Below Average	<267mm	267mm-430mm	>430mm
Salailua*	Below Average	<267mm	267mm-430mm	>430mm
Salani*	Below Average	<267mm	267mm-430mm	>430mm
Saleilua*	Below Average	<267mm	267mm-430mm	>430mm
Saoluafata*	Below Average	<267mm	267mm-430mm	>430mm
Savalalo*	Below Average	<267mm	267mm-430mm	>430mm
Tiavea	Average to Below Average	<710mm	710mm-990mm	>990mm
Togitogiga	Average to Below Average	<876	876mm-1277mm	>1277mm
Tuasivi*	Below Average	<267mm	267mm-430mm	>430mm
Vaiaata*	Below Average	<267mm	267mm-430mm	>430mm

Table 2: 6 months Rainfall Outlook— October to December 2018 period

These outlooks are based upon the period April to May 2018 (Southern Oscillation Index (SOI) values)

Average to below average is anticipated for the next six (6) months.

Region	Rainfall Prediction	Below Average	Average	Above Average
Afiamalu	Average to Below Average	<1161mm	1161mm-1463mm	>1463mm
Alafua	Average to Below Average	<511mm	511mm-982mm	>982mm
Apia	Average to Below Average	<718mm	718mm-914mm	>914mm
Faleolo	Average to Below Average	<553mm	553mm-717mm	>717mm
Nafanua	Average to Below Average	<786mm	786mm-1060mm	>1060mm
Tiavea	Average to Below Average	<996mm	996mm-1201mm	>1201mm

El Nino Southern Oscillation (ENSO) Outlook

CURRENT SITUATION OF ENSO

The ENSO status as of present remains in neutral levels. For the month of May, generally warmer than normal anomalies concentrated in the South pacific Ocean. Cooler anomalies observed in previous months have weakened over the Eastern equatorial region. Moreover, the May value for NINO3 was 0.0° C, NINO3.4 was 0.0° C and NINO4 was +0.2° C.

ENSO OUTLOOK

The chances of an El Nino event occurring is becoming most likely, with 5 of the 8 climate models suggesting it so. Predictions show that such an event will most likely occur begin in September, 2018.

Figure 1. Nino SST Indices



Table 3: Issued Forecast Verification for Three Monthly Rainfall (March to May 2018)

This table shows the verification of the forecast for the last 3 months. This was the rainfall forecast that was issued in February 2018 for the period of March to May 2018. These outlooks were generated using SOI values of December 2017 to January 2018.

Climate Stations	Three Monthly Total Rainfall (mm)	Long Term Average (mm)	Three Monthly Rainfall Status	Rainfall Prediction for March to May 2018 period	Verification of Forecast
Afiamalu	1615.4	1136	Above Average	Average to Below Average	Near Consistent
Alafua	1052.0	599	Well Above Average	Average to Below Average	Near Consistent
Apia	907.9	758	Average	Average to Below Average	Consistent
Aopo	957.0	756	Above Average	Average to Below Average	Near Consistent
Falelima	712.2	895	Average	Average to Below Average	Consistent
Faleolo	731.3	556	Above Average	Average to Below Average	Near Consistent
Laulii	961.2	887	Average	Average to Below Average	Consistent
Lotofaga	1384.6	890	Well Above Average	Average to Below Average	Near Consistent
Nafanua	1053.2	1126	Average	Average to Below Average	Consistent
Salailua	926.2	531	Well Above Average	Average to Below Average	Near Consistent
Saoluafata	991.2	1095	Average	Average to Below Average	Consistent
Savalalo	864.2	758	Average	Average to Below Average	Consistent
Ti'avea Uta	1349.6	875	Above Average	Average to Below Average	Near Consistent
Togitogiga	1273.6	1050	Above Average	Average to Below Average	Near Consistent
Tuasivi	702.0	1003	Below Average	Average to Below Average	Consistent
Vaiaata	1030.0	1057	Average	Average to Below Average	Consistent
Vailoa A	1082.0	875	Average	Average to Below Average	Consistent

The three month accumulated rainfall for the period March to May showed Afiamalu as the wettest station receiving 1615.4mm, with Lotofaga registering as the second wettest station with 1384.6mm. The driest station however was recorded at Tuasivi station, with 702.0mm amount of rainfall. Statistics also showed that 2 stations received *Well Above Average*, 5 stations with *Above Average*, 8 stations with *Average* and only one station with *Below Average* rainfall. Overall, the prediction for the three monthly period march to May was verified to be generally Consistent.

APPENDIX

Figure 1: Accumulated Total Rainfall from March to May 2018 period.

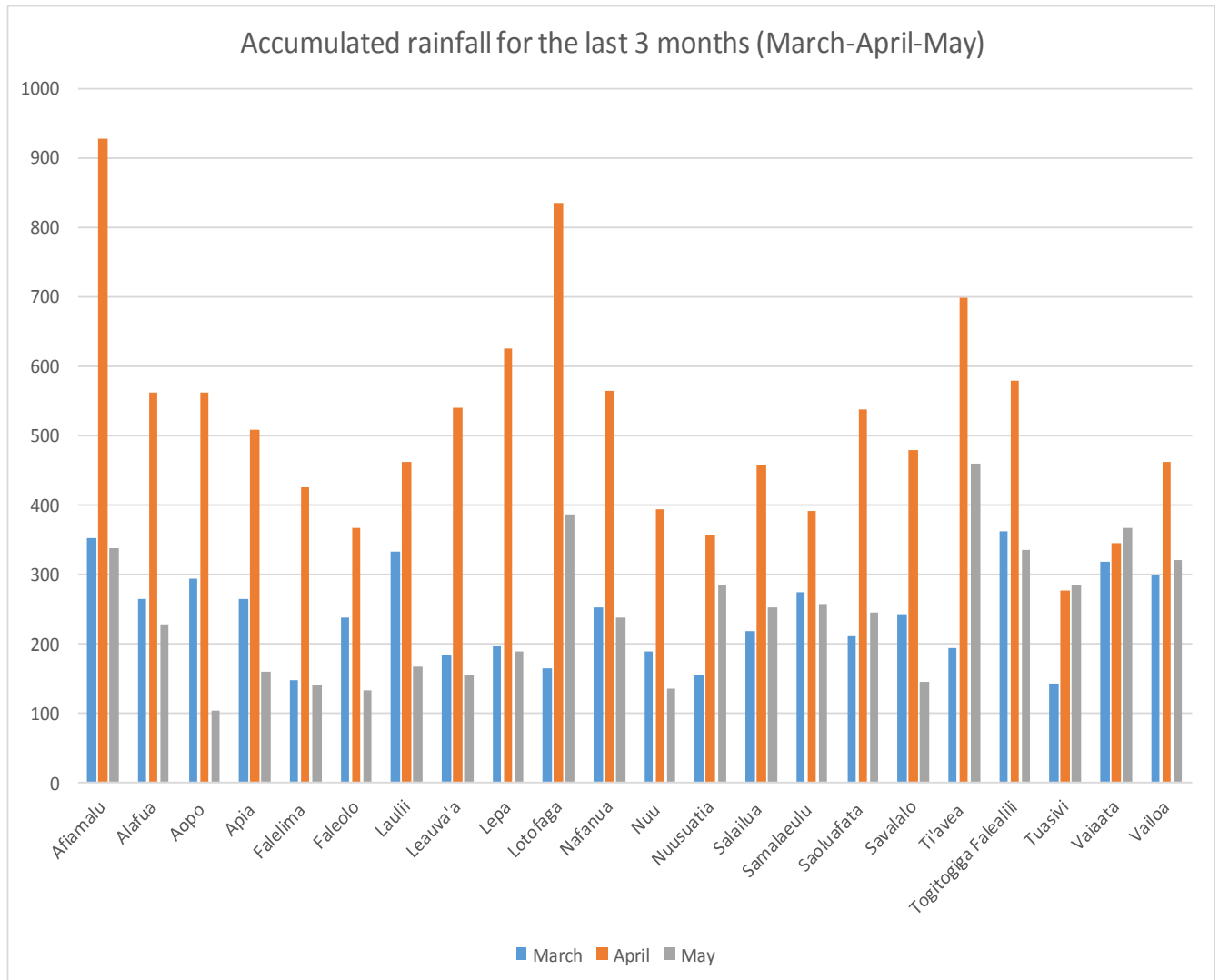


Figure 1 shows the graphical representation of the accumulated rainfall in the last 3 months. Of the three, April was observed to be the wettest month, with precipitation ranging from 277.2mm to 926.9mm, as seen in Figure 1.