Climate and Oceans Monitoring and Prediction (COMP)

Pacific Islands - Online Climate Outlook Forum No. 72
Summary Report

Date: Thursday 19 September 2013

Time: Australian Eastern Standard Time 11:00 (01:00 UTC)

Main purpose for the OCOF:

- To provide a regular forum for the ten participating PIC NMSs to discuss the current ENSO status and their seasonal climate outlooks with the COMP project team.

In addition it will serve as the online training forum on the latest SCOPIC[*] developments and will give the project team and the NMSs an opportunity to discuss other project related matters/concerns.

 Agenda:

1. Brief introduction of PIC participants and the Bureau team.

2. Brief report on current ENSO status.

3. Each NMS report on their past one and three-month's rainfall in relation to the current ENSO situation (include ranking and verification). Wherever appropriate NMS to report on their drought status.

4. Each NMS to report on their three-month outlooks (tercile and/or median).

5. Round-table discussion: addressing general concerns/queries on outlooks and SCOPIC.

6. Skill assessment of SCOPIC and POAMA.

7. Interactions with stakeholders (new or existing)

8. Next meeting (17 October) and Chair (Kiribati).

Participants:

The Forum was attended by 13 climate officers from 11 PIC NMSs.

Cook Islands: -

Fiji: Arieta Baleisolomone (Chair)

Kiribati: Ueneta Toorua, Kamaitia Rubetaake

Niue: Rossy Mitiepo, Fitiola Hekau

Papua New Guinea: -

Republic of Marshall Islands: Nover Juria

Samoa: Billy Poulima, Junior Lepale, Mark Caughey (COSPPac), Sheng Guo (COSPPac)

Solomon Islands: Lloyd Tahani

Tonga: Selusalema Vite

Tuvalu: Eli Ene

Vanuatu: Philip Malsale, Melinda Natapei

The Bureau team: Elisabeth Thompson, Grant Beard, Andrew Cottrill, Grant Smith, Adna Kazazic and Karen Bennett.

OCOF tables were received from eleven participating countries before the meeting.

---

[*] Seasonal Climate Outlooks in the Pacific Island Countries: climate prediction software developed under the PI-CPP.

Observations and Verification of April to June outlooks from OCOF #68:

Observed rainfall for the one and three month periods ending July 2013 were discussed for each PIC. This month, several countries experienced extreme rainfall as shown in the following table:

Station	Period	Rainfall Amount (mm)	Rainfall Rank	Years of Record
Navau, Fiji	Jun-Aug	922.9	63	68
Labasa, Fiji	Jun-Aug	247.0	54	57
Labasa, Fiji	Aug	131.4	56	58
Beru, Kiribati	Aug	9	2	60
Kiritimati, Kiribati	Jun-Aug	6.8	4	88
Momote, PNG	Aug	632.2	62	64
Momote, PNG	Jun-Aug	1362.4	60	64
Afiamalu, Samoa	Aug	403.8	55	59
Nafanua, Samoa	Aug	411.5	**42***	42
Faleolo, Samoa	Aug	220.2	47	52
Nafanua, Samoa	Jun-Aug	806.7	41	42
Faleolo, Samoa	Jun-Aug	475.4	45	50
Vavaú, Tonga	Aug	360.9	**67***	67
Nui, Tuvalu	Aug	52.2	2	68
Sola, Vanuatu	Aug	31.8	4	58
Lamap, Vanuatu	Aug	11.1	5	53
Port Vila, Vanuatu	Aug	19.9	5	61

* **Record rainfall** [Note: Quality control of the above data is not complete]

Validation of forecasts with observed rainfall across the region for June to August 2013 showed mostly near-consistent results (28 out of 53 stations) at the eleven countries available at the time of writing. Consistent results significantly outnumbered inconsistent results (22 versus 3 respectively). The largest inconsistency was at Bauerfield, Vanuatu, where below normal rainfall was observed (261.4mm) against outlook probabilities of 25/37/38 with low skill (LEPS=3.2%). The strongest consistent verification was at Beru, Kiribati, where normal rainfall was observed (175.1mm), with outlook probabilities of 28/54/18 and high skill (LEPS=17.8%).

A summary of results (C-consistent, NC-Near Consistent and I-Inconsistent) for each country for the June to August 2013 outlook is as follows:

Cook Islands (1C, 1NC); Fiji (5C, 6NC); Kiribati (3C, 1NC); Niue (1C); PNG (4C, 4NC); Samoa (4NC); Solomon Islands (3C, 4NC); Tonga (1C, 5NC); Tuvalu (2C, 1I); and Vanuatu (2C, 3NC, 2I). **Overall: 22C, 28NC, 3I**.

AUSAID PROJECT: Climate and Oceans Support Program in the Pacific (COSPPac)

Verification of April to June outlooks from OCOF #67:

Following on from last month, the meeting was also presented with a new analysis of SCOPIC verification data (LEPS and Hit Rates) for all the OCOF issues dating from January 2011, together with a comparison with POAMA outlooks for the subset of stations available with that system. These tables currently run a month behind the other data, so for example, the latest verification statistics are for the April-June period (OCOF #67). The limited data so far indicate a slightly superior performance by POAMA.

October to December 2013 Outlooks:

Of the eleven countries available at the time of writing, six chose the combination of SSTa 1 and 9 over June to August 2013 as the predictors for the October to December 2013 outlook, one chose the combination of SSTa1 and 9 over one month (August 2013), while three chose the June to August SOI.

SCOPIC outlooks for the coming season mainly favoured tercile 3, i.e. above normal; with 14.3% of stations with high probabilities in tercile 1; 12.5% in tercile 2; and 73.2% of the stations with the highest probabilities in tercile 3. POAMA outlooks mainly favoured tercile 3 for the coming season.

Current climate patterns:

The current ENSO situation was discussed. A neutral pattern, which has persisted since the middle of 2012, is expected to persist for the rest of 2013, as predicted by most computer models. The current pattern still has a slight La Niña flavour.

The main NINO indices only changed by 0.1°C from July to August, with the latest monthly values being: NINO3 –0.4 °C (down –0.1°C); NINO3.4 –0.1 °C (no change); and NINO4 +0.3 °C (up 0.1°C). The latest weekly values in NINO3, NINO3.4 and NINO4 are +0.1 °C, +0.1 °C and +0.2 °C respectively, indicating some warming, especially in the east. Sub-surface temperatures showed a slight increase in cool anomalies during August, although during early September there has been a slight strengthening of the weak warm anomalies extending eastward at 100m depth

The official Southern Oscillation Index (SOI) for August was –0.5, a fall of eight points from July's +8, making it the first neutral monthly value since +0.6 in April. The current approximate 30-day SOI value is +4, while the 90-day value is +5 as of 18 September.

The SPCZ was well-defined in August, displaced slightly to the southwest of its normal location. It stretched from just north of PNG, across the Solomon Islands to Samoa. The ITCZ was also evident in August, displaced north of its normal position in the Northern Hemisphere east of the Date Line. A large area of reduced cloud was evident between 140°E and the Date Line, and north of 5°S.

A moderate pulse of the MJO moved through the African sector in late August. During the past week from around the 13th September, another moderate pulse moved over the Maritime Continent. The current models are varied in their MJO outlooks, although there's a slight preference for the current pulse over the Maritime Continent to move eastward closer to the western Pacific during the next week or so.

ENSO Update (Issued on 10th September 2013)
The El Niño-Southern Oscillation (ENSO) remains neutral, with virtually all indicators at near-normal levels. Only cloudiness near the Date Line shows a weak La Niña-like signal. International climate models surveyed by the Bureau of Meteorology indicate that the tropical Pacific will remain ENSO-neutral for the remainder of 2013. Only one of the seven models surveyed suggests a brief period of La Niña-like cooling of the tropical Pacific.

For up to date information on the state of ENSO please refer to the links below;
BoM ENSO Wrap Up - http://www.bom.gov.au/climate/enso/
BoM model survey - http://www.bom.gov.au/climate/ahead/ENSO-summary.shtml
IRI model summary - http://iri.columbia.edu/climate/ENSO/currentinfo/SST_table.html

AUSAID PROJECT: Climate and Oceans Support Program in the Pacific (COSPPac)

Observed Rainfall and Validation

Country	August 2013	Jun-Aug 2013	Outlooks Issued for Jun-Aug 2013 (skill level)	Verification[†] for Jun-Aug 2013 outlooks
Cook Islands	Normal to Above Normal	Above Normal	Normal to Above Normal (very low to good skill)	Near Consistent to Consistent
Fiji	Below normal to Above Normal	Normal to Above Normal Below Normal [Ono-I-Lau]	Normal to Above Normal Climatology [Navua] Equal chances of Below and Above Normal [Suva] Below Normal [Ono-I-Lau] (very low to high skill)	Near Consistent to Consistent
Kiribati	Below Normal	Below Normal to Normal	Below Normal to Normal (very low to good skill)	Near Consistent to Consistent
Niue	Above Normal	Above Normal	Above Normal (very low skill)	Consistent
Papua New Guinea	Normal to Above Normal Below Normal [Southern Region]	Normal to Above Normal	Normal to Above Normal (very low to very high skill)	Near Consistent to Consistent
Samoa	Above Normal	Above Normal	Climatology(very low skill) Equal chances of Normal and Above Normal (moderate skill)	Near Consistent
Solomon Islands	Normal Above Normal [Lata]	Normal to Above Normal	Normal to Above Normal (very low to moderate skill)	Near Consistent to Consistent
Tonga	Normal to Above Normal	Normal to Above Normal	Normal to Above Normal Below Normal [Haápai] (very low to low skill)	Near Consistent to Consistent
Tuvalu	Below Normal to Normal	Below Normal to Above Normal	Below Normal to Normal (very low to moderate skill)	Inconsistent to Consistent
Vanuatu	Below Normal to Normal	Below Normal to Normal Above Normal [Pekoa]	Normal to Above Normal Below Normal [Aneityum] (very low to high skill)	Inconsistent to Consistent

---

[†] Forecast is <u>consistent</u> when observed and predicted (tercile with the highest probability) categories coincide (are in the same tercile).

Forecast is <u>near-consistent</u> when observed and predicted (tercile with the highest probability) differ by only one category (i.e. terciles 1 and 2 or terciles 2 and 3).

Forecast is <u>inconsistent</u> when observed and predicted (tercile with the highest probability) differ by two categories (i.e. terciles 1 and 3).