Climate and Oceans Monitoring and Prediction (COMP)

Pacific Islands - Online Climate Outlook Forum No. 75 Summary Report

Date: Thursday 12 December 2013

Time: Australian Eastern Daylight Saving Time 12:00PM (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. Interactions with stakeholders (new or existing)
7. Next meeting (Thursday 23 January) and Chair (Samoa).

Participants:

The Forum was attended by 13 climate officers from 8 PIC NMSs.

Cook Islands: -

Fiji: Bipendra Prakash, Arieta Baleisolomone and Ravind Kumar

Kiribati: Kamaitia Rubetaake

Niue: Rossy Mitiepo

Papua New Guinea: Ruth Apuqahe, Nanao Bouauka and Agnes Diap

Republic of Marshall Islands: Nover Juria

Samoa: Tile Tofaeono and Faagalo Key

Solomon Islands: Lloyd Tahani

Tonga: -

Tuvalu: Eli Ene

Vanuatu: -

The Bureau team: Elisabeth Thompson, Grant Beard and Grant Smith.

OCOF tables were received from ten of the 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 May to July outlooks from OCOF #71:

Observed rainfall for the one and three month periods ending November 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
Madang, PNG	November	166	5	66
Nadzab, PNG	Sep-Nov	454	34	37
Momote, PNG	Sep-Nov	1118	62	65
Henderson, Solomon Is.	November	22	4	39
Honiara, Solomon Is.	November	34	5	57
Kirakira, Solomon Is.	November	76	4	46
Lata, Solomon Is.	Sep-Nov	2326	**39**	39
Haápai, Tonga	Sep-Nov	99	5	67

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

Validation of forecasts with observed rainfall across the region for September to November 2013 showed mostly near-consistent results (21 out of 47 stations) at the ten countries. Consistent results significantly outnumbered inconsistent results (18 versus 8 respectively). The largest inconsistency was at Henderson, Solomon Islands, where below normal rainfall was observed (291mm) against outlook probabilities of 12/19/69 with high skill (LEPS=15%). The strongest consistent verification was at Lautoka Mill, Fiji, where above normal rainfall was observed (426.4mm), with outlook probabilities of 7/23/70 and high skill (LEPS=21.5%).

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

Cook Islands (1C,1NC); Fiji (3C, 8NC); Kiribati (3NC, 1I); Niue (1NC); PNG (4C, 2NC, 2I); RMI (1I); Samoa (3NC, 1I); Solomon Islands (5C, 1NC, 1I); Tonga (3C, 1NC, 2I); Tuvalu (2C, 1NC); and Vanuatu (N/A).
Overall: 18C, 21NC, 8I.

January to March 2014 Outlooks:

Of the ten countries contributing to the OCOF, four chose the combination of SSTa 1 and 9 over September to November 2013 as the predictors for the January to March 2014 outlook, one chose SSTa 1 and 9 over one month (November), one chose NINO3.4 over the same three month period, while four chose the September to November SOI.

SCOPIC outlooks for the coming season mainly favoured tercile 3, i.e. above normal; with 20% of stations with high probabilities in tercile 1; 30% in tercile 2; 40% of the stations with the highest probabilities in tercile 3; 6% of the stations with equal chance of terciles 2 and 3; 2% of the stations with equal chance of terciles 1 and 2; and 2% climatological probabilities. POAMA outlooks mainly favoured tercile 3 (17 out of 32 stations) and tercile 2 (8 out of 32 stations) 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 through the Austral autumn. Most international models predict this persisting neutral pattern for the coming months.

There was a slight warming along the equator from October to November, with the latest monthly values being: NINO3 0.0°C (no change); NINO3.4 +0.2 °C (up 0.3°C); and NINO4 +0.5 °C (up 0.1°C). The latest weekly values in NINO3, NINO3.4 and NINO4 are –0.1 °C, +0.2 °C and +0.5 °C respectively. November sub-surface temperatures were still neutral overall, with weakly positive anomalies in the central and western Pacific in the upper fifty metres. Weak cool anomalies are currently present in the east Pacific, which may lead to weak sea surface cooling.

The official Southern Oscillation Index (SOI) for November rose significantly to +9; an increase of 11 points from October's –2. The current approximate 30-day SOI value is +7, while the 90-day value is +3 at the time of writing.

For the third month the SPCZ has been split. One branch extended from the Solomon Islands to Fiji, and a secondary branch also extended east from the region north of Samoa.

The trade winds were close to average over much of the tropical Pacific for the month of November. The MJO remained weak to indiscernible for most of November. There is a mixed outlook among the models for the upcoming MJO forecast, with some suggesting a strengthening pulse into the Indian Ocean during early December.

ENSO Update (Issued on 3rd December 2013)

The El Niño-Southern Oscillation (ENSO) remains neutral, with the majority of atmospheric and oceanic indicators close to their long-term average. The Southern Oscillation Index (SOI) has risen steeply over the past two weeks; this is partially an effect of monsoon activity over Darwin. International climate models indicate that the tropical Pacific will remain neutral at least through to the austral autumn.

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

Observed Rainfall and Validation

Country	November 2013	Sep-Nov 2013	Outlooks Issued for Sep-Nov 2013 (skill level)	Verification† for Sep-Nov 2013 outlooks
Cook Islands	Below Normal to Normal	Below Normal to Above Normal	Below Normal to Normal (low to high skill)	Inconsistent to Near Consistent
Fiji	Below Normal to Above Normal	Normal to Above Normal	Above Normal (moderate to high skill) Below Normal (very low skill) [Rotuma]	Near Consistent to Consistent
Kiribati	Normal to Above Normal Below Normal (Tarawa)	Normal to Above Normal	Below Normal to Normal (moderate to exceptional skill)	Inconsistent to Near Consistent
Niue	Normal	Normal	Above Normal (moderate skill)	Near Consistent
Papua New Guinea	Below Normal to Above Normal	Below Normal to Above Normal	Normal to Above Normal (very low to high skill) Below Normal (low skill) [Kavieng]	Inconsistent to Consistent
RMI	Normal	Below Normal	Above Normal (very low skill)	Inconsistent
Samoa	Below Normal to Above Normal	Below Normal to Normal	Normal to Above Normal (very low to moderate skill)	Inconsistent to Near Consistent
Solomon Islands	Below Normal to Normal	Below Normal to Above Normal	Normal to Above Normal (low to high skill)	Consistent Inconsistent [Henderson] Near Consistent [Kirakira]
Tonga	Normal to Above Normal Below Normal [Haápai]	Below Normal to Above Normal	Above Normal (very low to good skill)	Inconsistent to Consistent
Tuvalu	Below Normal to Normal	Below Normal to Normal	Below Normal to Normal (very low to good skill)	Near Consistent to Consistent
Vanuatu				

† Forecast is consistent when observed and predicted (tercile with the highest probability) categories coincide (are in the same tercile).
Forecast is near-consistent 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 inconsistent when observed and predicted (tercile with the highest probability) differ by two categories (i.e. terciles 1 and 3).