Climate and Oceans Monitoring and Prediction (COMP)

Pacific Islands - Online Climate Outlook Forum No. 70
Summary Report

Date: Thursday 18 July 2013

Time: Australian Eastern Daylight Saving 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 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 (14 August) and Chair (Cook Islands).

Participants:

The Forum was attended by thirteen climate officers from eight PIC NMSs.

Cook Islands: –

Fiji: Bipendra Prakash, Arieta Baleisolomone, Swastika Devi

Kiribati: Kamaitia Rubetaake (from Fiji on training)

Niue: Rossy Mitiepo, Melissa Douglas, Hingano Laufoli

Papua New Guinea: Ruth Apuqahe, Nanao Bouauka (from Fiji on training)

Samoa: Cecilia Amosa

Solomon Islands: Lloyd Tahani

Tonga: Seluvaia Finaulahi

Tuvalu: -

Vanuatu: Melinda Natapei

The Bureau team: Elisabeth Thompson, Grant Beard, Shannon McNamara, Roan Plotz and Andrew Cottrill.

OCOF tables were received from nine 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 #66:

Observed rainfall for the one and three month periods ending June 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
Bauerfield, Vanuatu	June	71.7 mm	6th Lowest	41
Bauerfield, Vanuatu	April to June	872.3 mm	4th Highest	40
Fuaámotu, Tonga	April to June	235.4 mm	5th Lowest	34
Hanan Airport, Niue	April to June	162.7 mm	5th Lowest	64
Labasa Airfield, Fiji	April to June	176.7 mm	6th Lowest	57
Nadzab, PNG	April to June	575.4 mm	Highest	37
Wewak, PNG	April to June	1022.0 mm	2nd Highest	58
Whitegrass, Vanuatu	April to June	591.5 mm	4th Highest	42

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

Validation of forecasts with observed rainfall across the region for April-June 2013 showed mostly near-consistent results (24 out of 49 stations) at the nine countries available at the time of writing. Consistent results outnumbered inconsistent results (15 versus 10 respectively). The largest inconsistency was at Lakeba, Fiji, where tercile 1 was observed (238.0 mm) against outlook probabilities of 16/40/44 with high skill (LEPS=17.2%). The strongest consistent verification was at Vanimo, Papua New Guinea, where above normal rainfall was observed (763.2 mm), with outlook probabilities of 20/36/44 and low skill (LEPS=4.4%).

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

Cook Islands (2NC); Fiji (2C, 8NC, 2I); Kiribati (2C, 1NC); Niue (1C); PNG (3C, 3NC, 1I); Samoa (2NC,2I); Solomon Islands (3C,3NC, 1I); Tonga (1C, 3NC, 2I); Tuvalu (N/A); and Vanuatu (3C, 2NC, 2I).
Overall: 15C, 24NC, 10I.

Verification of March to May outlooks from OCOF #65:

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 March-May period (OCOF #65). The limited data so far indicate a slightly superior performance by POAMA.

August to October 2013 Outlooks:

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

SCOPIC outlooks for the coming season mainly favoured terciles 2 and 3, i.e. normal to above normal. POAMA outlooks for the selection of sites available were, for the most part, consistent with the SCOPIC outlooks, with high probabilities in terciles 2 and 3. SCOPIC produced a majority of tercile 3 outlooks, with 15.4% of stations with high probabilities in tercile 1, 32.7% in tercile 2, and 51.9% of the stations with the highest probabilities in tercile 3.

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

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 next three months, as predicted by most computer models. POAMA continues to predict La Niña-strength cold anomalies in NINO3.4 during the next two months, but it is the only model doing this. There was little or no change in the NINO indices from May to June, with the latest monthly values being: NINO3 –0.4 °C; NINO3.4 zero; and NINO4 +0.1 °C. The latest weekly values in NINO3, NINO3.4 and NINO4 are –0.4 °C, –0.1 °C and +0.3 °C respectively. Sub-surface temperatures were also clearly neutral.

The Southern Oscillation Index (SOI) reached a 30-day value of +9 and a 90-day value of +6 as of 16 July, so it is remaining consistently positive. Some of the text of the most recent ENSO Wrap-Up is shown below.

The SPCZ was well-defined, somewhat stronger the normal, and displaced to the northeast in June. Its position was from north of PNG, across the Solomon Islands to Tuvalu and Tokelau.

MJO analyses showed a complete cycle during the month from mid-June to mid-July, but presently it's weak. Model outlooks generally show the MJO remaining weak (non-existent) for around the next week or so, before strengthening in phase 1 (African longitudes) near the end of July.

ENSO Update (Issued on 16th July 2013) – ENSO neutral; negative IOD

The tropical Pacific remains El Niño-Southern Oscillation (ENSO) neutral. The cooling trend observed in the eastern Pacific during June has reversed in the past fortnight, with temperatures now generally closer to average than they were in early July. Most climate models suggest a neutral ENSO pattern will persist at least into the austral spring.

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	June 2013	Apr-Jun 2013	Outlooks Issued for Apr-Jun 2013 (skill level)	Verification[†] for Apr-Jun 2013 outlooks
Cook Islands	Normal to Above Normal	Below Normal	Normal (low to moderate skill)	Near Consistent
Fiji	Normal to Above Normal	Below Normal to Normal Above Normal (Lautoka Mill)	Normal to Above Normal Below Normal to Normal (Ono-I-Lau & Tokotoko) (very low to high skill)	Near Consistent With 2 Inconsistent, 2 Consistent
Kiribati	Below Normal to Above Normal	Below Normal to Normal	Normal (low skill)	Near Consistent to Consistent
Niue	Normal	Below Normal	Below Normal (low skill)	Consistent
Papua New Guinea	Mostly Above Normal	Above normal in Momase, normal elsewhere	Mostly normal to above normal	Mainly Near-Consistent or Consistent
Samoa	Above Normal	Normal to Above Normal	Below Normal (very low to low skill)	Inconsistent to Near Consistent
Solomon Islands	Normal to Above Normal Below Normal (Lata)	Below Normal to Above Normal	Below Normal to Normal (very low to moderate skill)	Consistent to Near Consistent Inconsistent (Henderson)
Tonga	Below Normal to Normal	Below Normal to Normal	Normal to Above Normal Below Normal (Niuatoputapu) (very low to moderate skill)	Inconsistent to Consistent
Tuvalu				
Vanuatu	Below Normal to Above Normal	Normal to Above Normal Below Normal (Sola)	Normal to Above Normal Below Normal (Bauerfield) (low to moderate 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).