Climate and Oceans Monitoring and Prediction (COMP)

Pacific Islands - Online Climate Outlook Forum No. 67
Summary Report

Date: Tuesday 9 April 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 1 and 3 months 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 (16 May) and Chair (Tonga – Alphabetical Rotation Trial).

Participants:

The Forum was attended by fourteen climate officers from nine PIC NMSs.

Cook Islands: –

Fiji: Arieta Daphne, Bipendra Prakash

Kiribati: Ueneta Toorua

Niue: Mellisa Douglas, Hingano Laufoli, Rossy Mitiepo

Papua New Guinea: Ruth Apuqahe

Samoa: Cecilia Amosa, Junior Lepale

Solomon Islands: Lloyd Tahani

Tonga: Mele Lakai

Tuvalu: Eli Ene, Kilima Kilima

Vanuatu: Melinda Natapei

The Bureau team: Elisabeth Thompson, Grant Beard and Andrew Cotrill

OCOF tables were received from all ten participating countries before the meeting. Tables were received from Cook Islands although they were unable to attend the OCOF.

---

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

Summary of the Discussion:

The Cook Islands were unable to provide attendees this month due to training commitments.

Observed rainfall for the one and three month periods ending March 2013 were discussed for each PIC, together with the seasonal rainfall outlooks for May-July 2013 at one month lead using SCOPIC. Solomon Islands received their highest rainfall on record for two stations during March: Auki experienced its wettest March in 52 years of record with 967 mm, and Henderson experienced its wettest March in 39 years of record with 641 mm. This extreme rainfall caused river flooding and flash flooding in both the capital and rural areas.

The POAMA2 experimental outlook for May-July 2013 interpolated to the Pacific Island countries was unavailable until the morning of the OCOF#67 so several countries were unable to include the POAMA2 outlook in their reports. There was a tendency for POAMA2 to produce high probabilities in terciles 2 and 3, while SCOPIC-generated outlooks produced a range of predictions within all terciles including numerous climatological forecasts.

Validation of forecasts with observed rainfall across the region for January-March 2013 showed mostly near-consistent results at the ten countries available at the time of writing. Consistent results clearly outnumbered inconsistent results (15 versus 6 respectively). The largest inconsistency was at Kirakira (Solomon Islands) where tercile 3 was observed (1173 mm) against outlook probabilities of 56/33/11 with very high skill (LEPS=26.5%). The strongest consistent verification was at Momote (Papua New Guinea), where above normal rainfall was observed (1020.8 mm) with outlook probabilities of 25/18/57 and low skill (LEPS=3.7%). 70% of NMSs chose the combination of SSTa 1 and 9 and 30% chose the SOI for September-November 2012 as the predictors for the January-March 2013 outlooks. SSTa 1 and 9 for January to March 2013 were also mainly chosen as the predictors for the forthcoming May to July 2013 outlooks. A summary of results (C-consistent, NC-Near-Consistent and I-Inconsistent) for each country for the January to March 2013 outlook is as follows:

Cook Islands (2NC); Fiji (2C, 11NC); Kiribati (3NC); Niue (1NC); PNG (2C, 5NC, 1I); Samoa (4C); Solomon Islands (1C, 3NC, 3I); Tonga (1C, 5NC); Tuvalu (1C, 1NC, 1I); and Vanuatu (4C, 2NC, 1I). **Overall: 15C, 33NC, 6I**.

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 December-February period (OCOF #62).

Grant Beard discussed the current ENSO situation. A neutral pattern has persisted since the middle of 2012 and is predicted to persist into the middle of 2013, with most computer models indicating modest warming. There was only a slight change, between 0°C and 0.6°C, in the monthly NINO index values from February to March, the values for the latter being NINO3 (+0.3°C), NINO3.4 (+0.1°C) and NINO4 (zero). The latest weekly values in NINO3, NINO3.4 and NINO4 are +0.3°C, +0.2°C and +0.1°C respectively. The Southern Oscillation Index (SOI) has been fluctuating in the last month, reaching a 30-day value to April 7 of +9 and a 90-day value of +3. Most ENSO prediction models indicate a persistence of a neutral ENSO pattern well into the southern autumn and into early winter. Some of the text of the most recent ENSO Wrap-Up is shown below.

Lloyd Tahani from the Solomon Islands mentioned that they had recent Stakeholder interactions with a mining company in regards to the seasonal rainfall outlooks and water storage.

ENSO Update (Issued on 9th April 2013)

Tropical Pacific remains ENSO neutral
Current atmospheric and oceanic observations show a neutral El Nino-Southern Oscillation (ENSO) state. Model forecasts unanimously show a persistence of this neutral pattern for the remainder of the southern hemisphere autumn and into early winter. In other words, the development of either an El Niño or a La Niña is very unlikely in the coming three months.

For up to date information on the state of ENSO please refer to the links below;

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

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	March 2013	Jan-Mar 2013	Outlooks Issued for Jan-Mar 2013 (skill level)	Verification[†] for Jan-Mar 2013 outlooks
Cook Islands	Below Normal	Below Normal to Normal	Normal to Above Normal (Low to Very High Skill)	Near Consistent
Fiji	Normal to Above Normal	Normal to Above Normal	Normal to Above Normal and several climatology (Very Low to Very High Skill)	Consistent to Near Consistent
Kiribati	Normal to Above Normal	Normal	Above Normal (Good to Very High skill)	Near Consistent
Niue	Above Normal	Normal	Above Normal (Good skill)	Near Consistent
Papua New Guinea	Normal to Above Normal Below Normal at Nadzab	Normal to Above Normal	Normal to Above Normal Below Normal at Wewak (Very Low to Moderate Skill)	Near Consistent to Consistent Inconsistent at Wewak
Samoa	Below Normal to Normal	Above Normal	Above Normal (Low to Moderate skill)	Consistent
Solomon Islands	Above Normal all except Normal in Taro	Above Normal all except Below Normal in Taro	Below Normal to Normal (Very Low to Very High Skill)	Inconsistent to Consistent
Tonga	Above Normal Vavaú Normal Niuatoputapu Below Normal	Normal to Above Normal	Below Normal to Normal Above Normal at Niuafoóu (Moderate to Very High Skill)	Near Consistent Consistent at Niuafoóu
Tuvalu	Above Normal Below Normal at Nui	Below Normal Above Normal at Funafuti	Below Normal to Normal (Very Low to Very High Skill)	Inconsistent to Consistent
Vanuatu	Normal to Above Normal	Northern Region Above Normal Southern Region Below Normal	Below Normal to Normal Above Normal at Sola (Very Low to Moderate Skill)	Near Consistent to Consistent Inconsistent at Pekoa

---

[†] 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).