

Climate and Oceans Monitoring and Prediction (COMP)

Pacific Islands - Online Climate Outlook Forum No. 64 Summary Report

Date: Thursday 17 January 2013

Time: Australian Eastern Daylight Saving Time 12:00 (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 SCOPIC⁷ 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), including reports on TC *Evan*.
8. Next meeting (14 February) and Chair (Papua New Guinea – Alphabetical Rotation Trial).

Participants:

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

Cook Islands: Turi Tutai

Fiji: Bipendra Prakash, Arieta Daphne, Swastika Devi

Kiribati: -

Niue: Mellisa Douglas (Chair), Rossy Mitiepo, Hingano Laufoli

Papua New Guinea: Agnes Diap, Kisolet, K. Kila, Nanao Bouauka

Samoa: Cecilia Amosa, Sunny Seuseu

Solomon Islands: Lloyd Tahani

Tonga: Sione Tu'ungafasi

Tuvalu: -

Vanuatu: Melinda Natapei, Robson Tigona

The Bureau team: Elisabeth Thompson, Nicholas Summons, Grant Beard, Andrew Cottrill.

OCOFC tables were received from all participating countries before the meeting. Kiribati and Tuvalu were unable to provide an attending officer this month.

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

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Summary of the Discussion:

Observed rainfall for the one and three month periods ending December 2012 were discussed for each PIC, together with the seasonal rainfall outlooks for February-April 2013 at one month lead using SCOPIC. The **drought watch** has been cancelled in Niue following reasonable rainfall in December and good falls in the first half of January. The dry spell had persisted since June.

The most noteworthy event for December was severe tropical cyclone *Evan*, which affected Samoa and Fiji in the middle of the month. Samoa was particularly badly hit as the storm became slow-moving in its vicinity during the 12th to the 15th. There was widespread destruction, flooding and three deaths. The storm recurved to the west and strengthened as it made a direct track for Fiji, where it reached peak intensity on the 17th near the east coast of Viti Levu. Record daily rainfall records for December were set at some sites in both Samoa and Fiji.

The POAMA2 experimental outlook for January-March 2013 interpolated to the Pacific Island countries was also presented. In most cases there was reasonable agreement between SCOPIC and POAMA.

Validation of forecasts with observed rainfall across the region for October-December 2012 showed mostly near-consistent results at the eight countries available at the time of writing. Consistent results slightly outnumbered inconsistent results. The largest inconsistency was at Lamap (Vanuatu) where tercile 3 was observed against outlook probabilities of 55/21/24, while the strongest consistent verification was at Vanimo (PNG), with outlook probabilities of 63/25/12. NMSs mainly chose the combination of SSTa 1 and 9 for June-August 2012 as the predictors for the October-December outlooks. A summary of results (**C**-consistent, **NC**-Near-Consistent and **I**-Inconsistent) for each country is as follows:

Cook Islands (1C, 1NC); Fiji (2C, 7NC, 3I); Kiribati (N/A); Niue (1C); PNG (3C, 4NC); Samoa (2NC, 2I); Solomon Islands (1C, 5NC, 1I); Tonga (2C, 3NC, 1I); Tuvalu (N/A); and Vanuatu (2C, 4NC, 1I).

Overall: 11C, 26NC, 8I.

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 September-November period (OCOFC #59).

Grant Beard discussed the current ENSO situation. A neutral pattern has persisted since the middle of 2012, while a recent cooling trend has seen negative anomalies develop in the weekly values of the NINO3 and NINO3.4 indices (latest values both -0.4°C). The latest weekly NINO4 index was 0.0°C . Negative anomalies are mainly confined to a narrow equatorial strip in the central to eastern Pacific. Most ENSO prediction models failed to predict the extent of the cooling; they indicate a persistence of a neutral ENSO pattern for at least the next three months. Some of the text of the most recent ENSO Wrap-Up is shown below.

The South Pacific Convergence Zone (SPCZ) was active in December, extending from the Solomon Islands, to Samoa to the southern Cook Islands. This represented a shift to the northeast from its normal location.

ENSO Update (Issued on 15th January 2013)

Tropical Pacific observations and model outlooks suggest the current neutral El Niño-Southern Oscillation (ENSO) state will continue into the southern hemisphere autumn.

All indicators of ENSO are currently within the neutral range. The tropical Pacific Ocean has cooled over recent months after warmer than normal waters were present during mid to late 2012. Despite cooling, tropical ocean temperatures remain within the neutral range.

As expected, the Southern Oscillation Index (SOI) has returned to near-zero values as the influence of local tropical weather systems dissipated. Other atmospheric indicators of ENSO such as the trade winds and tropical cloud patterns also remain within the neutral range.

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

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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

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Observed Rainfall and Validation

Country	December 2012	October to December 2012	Outlooks Issued for October to December 2012 (skill level)	Verification [†] for October to December 2012 outlooks
Cook Islands	Below normal	Normal at Penrhyn; below normal at Rarotonga	Above normal at Penrhyn; below normal at Rarotonga (moderate to high)	Near-consistent at Penrhyn; consistent at Rarotonga
Fiji	Mainly normal to above normal	Mainly normal to above normal	Below normal (moderate to high)	Mostly near-consistent
Kiribati	N/A	N/A	Above normal (high to exceptional)	N/A
Niue	Below normal	Below normal	Below normal (good)	Consistent
Papua New Guinea	Mainly below normal	Normal to below normal	Normal to below normal (low to high)	Consistent to near-consistent
Samoa	Above normal to normal	Normal to above normal	Below normal (moderate)	Near-consistent to inconsistent
Solomon Islands	Mainly normal to above Normal	Mainly normal to above Normal	Mainly normal (mostly moderate to very high)	Mainly near-consistent
Tonga	Below normal in central division; generally normal elsewhere	Below normal in central division; normal to above normal elsewhere	Mostly normal to below normal (low to high)	Mainly near-consistent to consistent
Tuvalu	N/A	N/A	Above normal (very low to moderate)	N/A
Vanuatu	Mainly normal	Normal to above normal	Normal to below normal (high to very high)	Near-consistent to consistent

[†] 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).