Climate and Oceans Monitoring and Prediction (COMP)

Pacific Islands - Online Climate Outlook Forum No. 100 Summary Report

Date: Tuesday 19 January 2016

Time: Australian Eastern Daylight Time 11:00AM (01:00 UTC)

Chair: Bureau of Meteorology

Main purpose for the OCOF:

- To provide a regular forum for the 11 participating PIC NMSs to discuss the current ENSO status, recent one and three-month rainfall, drought (if present) and their seasonal climate outlooks with other countries and the COMP project team.

In addition it serves as an online training forum for recent SCOPIC[*] development and gives the project team and the NMSs an opportunity to discuss other project related matters.

Agenda:

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

2. Acting Assistant Director of Climate Information Services, Scott Power, and COSPPac project manager, Janita Pahalad, gave speeches to celebrate the 100th OCOF milestone. Testimonials were also presented by many of the PICs, including Climate Manager, Philip Malsale (Vanuatu) , director Samuel Maiha (Papua New Guinea), director Ausetalia Titimaea (Samoa), Senior Climatologist Bipen Prakash (Fiji), climate manager Lloyd Tahani (Solomon Islands) and acting director Rossy Mitiepo (Niue).

3. Brief report on current ENSO status.

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

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

6. Feedback on COSPPac products and services.

7. Country statements with regards to drought or drought-like conditions, drought module issues/concerns.

8. Next meeting (Tuesday 9 February - TBC) and Chair (Samoa).

Participants:

The Forum was attended by 26 climate officers from ten partner PIC NMSs.

Cook Islands: Arona Ngari

Fiji: Bipen Prakash, Arieta Baleisolomone, Yogesh Maharaj, Swastika Devi

Kiribati: Mauna Eria, Ueneta Toorua, Kamaitia Rubetaake

Niue: Rossy Mitiepo, Mellisa Douglas, Clemencia Sioneholo

Papua New Guinea: Kila Kila, Ruth Apuqahe, Agnes Diap, Kisolel Posanau, Samuel Maiha

Republic of Marshall Islands:

Samoa: Tile Togaeono, Junior Lepale, Faapisa Aiono

Solomon Islands: Lloyd Tahani, Noel Sanau, Max Norman

Tonga: Seluvaia Finaulahi

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

Australian Aid Project: Climate and Oceans Support Program in the Pacific (COSPPac)

Tuvalu:

Vanuatu: Shanna Joseph, Philip Malsale, Daphne Nalawas, Melinda Natapei, Peter Feke (as well as several stakeholders who assisted in the celebrations)

The Bureau team: Janita Pahalad, Scott Power, Melissa Matthews, Grant Smith, Grant Beard, Karen Bennett and Elise Chandler

OCOF tables were received from 6 participating countries before the meeting.
Observations and Verification of October to December 2015 outlooks:

Observed rainfall for the one and three month periods ending December 2015 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	Year of record
Rarotonga, Cook Is	Dec	21	3	87
Rarotonga, Cook Is	Oct-Dec	220	8	87
Ono-i-lau, Fiji	Dec	16	4	70
Lautoka Mill, Fiji	Oct-Dec	137	7	116
Lakeba, Fiji	Oct-Dec	147	3	67
Ono-i-lau, Fiji	Oct-Dec	51	2	70
Kanton, Kiribati	Dec	382	53	57
Kiritimati, Kiribati	Dec	667	82	82
Kanton, Kiribati	Oct-Dec	763	50	54
Kiritaimati, Kiribati	Oct-Dec	1372	74	75
Majuro, Marshall Is	Oct-Dec	567	1	62
Nadzab, PNG	Dec	280	38	41
Goroka, PNG	Dec	108	3	47
Wewak, PNG	Oct-Dec	321	3	59
Goroka, PNG	Oct-Dec	298	1	45
Momote, PNG	Oct-Dec	506	2	67
Nafanua, Samoa	Oct-Dec	1425	38	41
Faleolo, Samoa	Oct-Dec	596	53	54
Henderson, Solomon Is	Dec	433	38	41
Ha'apai, Tonga	Oct-Dec	114	5	69
Nanumea, Tuvalu	Dec	648	74	75
Nanumea, Tuvalu	Oct-Dec	1330	74	75
Nui, Tuvalu	Oct-Dec	1197	67	70
Funafuti, Tuvalu	Oct-Dec	1268	77	83

[Note: The above data may not have undergone quality control]

Validation of forecasts with observed rainfall for the October to December 2015 (OCOF #96) period showed 34 consistent, 10 near-consistent and 9 inconsistent outlooks (53 stations across 11 countries).

The largest inconsistency was at Butaritari, Kiribati where below normal rainfall was observed (446.1 mm) against outlook probabilities of 0/2/98 with exceptional skill (LEPS=46.1%). The strongest

consistent verification was at Tarawa, Kiribati where above normal rainfall was observed (783.5 mm), with outlook probabilities of 0/1/99 and exceptional skill (LEPS= 60.2%).

A summary of results (C-consistent, NC-Near Consistent, I-Inconsistent, NA-not available) for each country for the October to December 2015 outlook is as follows:

Cook Islands (2C); Fiji (8C, 3NC); Kiribati (3C, 1I); Niue (1C); PNG (2C, 2NC, 2I); RMI (2C); Samoa (1C, 3I); Solomon Islands (1C, 3NC, 3I); Tonga (6C); Tuvalu (3C) and Vanuatu (5C, 2NC).

Overall: 34C, 10NC, 9I.

February to April 2016 Outlooks:

Of the 11 countries contributing to OCOF #100, the following predictors and periods were selected: Three-month average NINO3.4 (October-December) – four countries, Two-month average NINO3.4 (November-December) – six countries and one-month average NINO3.4 (December) – one country. NINO3.4 two-month average is recommended as this predictor/period is associated with the highest three-month outlook skill on a regional scale.

Sixty percent of the 58 stations outlooks had the highest probabilities in tercile 1, 10% in tercile 2 and 23% in tercile 3. The remaining 7% had either near equal probabilities in two terciles, near equal probabilities in three terciles or a mixed outlook.
POAMA outlooks: Seventy-three percent of the 45 station outlooks favoured tercile 1, 0% tercile 2 and 38% tercile 3. The remaining 2% had either near equal probabilities in two terciles, near equal probabilities in three terciles or a mixed outlook.

ENSO summary for the December 2015 OCOF

ENSO Status

A strong El Niño continues to dominate the tropical Pacific. In the central tropical Pacific Ocean, sea surface temperatures (SSTs) have remained largely stable over the last few weeks. In terms of comparing this event with past El Niños, it is likely the 2015-16 event will rank in the top three events of the past 50 years. However, several indicators (subsurface temperatures and SOI) currently fall short of other events such as 1982-83 and 1997-98.

ENSO Outlook

El Niño is likely to have reached its peak around late November to early December, with sea surface temperatures having begun to cool in recent weeks. There is, however, the chance of a late boost in the indicators courtesy of the strong WWB mentioned above. Model outlooks and experience from past events suggest the El Niño is likely to decline during the first half of 2016, with a return to neutral sometime in the southern autumn. Nevertheless, impacts from the event may persist much further into 2016.

For more information please see:

COSPPac monthly climate bulletin at http://www.bom.gov.au/cosppac/comp/bulletin/index.shtml

Bureau of Meteorology ENSO wrapup at http://www.bom.gov.au/climate/enso/

Other Discussion

ENSO impacts

Niue: Tropical Cyclone *Ula* impacted upon Niue from 28 December to 1 January. There was little rain from this event but very strong winds. The lack of rain over the past few months is impacting upon local agriculture.

Fiji: Rain in the 2nd half of December and early January, particularly in the north and western parts, has eased the short term drought situation which has been ongoing since at least the beginning of the El Niño event. There are still concerns about water shortages and impacts upon agriculture as we approach the drier months from around April.

Papua New Guinea: Dry conditions continue in most parts of PNG. There was some relieving rainfall over the past month as we move further into the wet season, and while still below normal was enough to assist some communities and agricultural groups.

Have requested short term rainfall forecast, in the order of 2 or 3 weeks. These would be particularly useful to agricultural groups. The question was raised whether much information is currently available that can be accessed?

Observed Rainfall and Validation

Country	December 2015	October to December 2015	Verification[†] for October-December 2015 outlooks
Cook Islands	Below normal to normal	Below normal to above normal	Consistent
Fiji	Below normal to above normal	Below normal to normal	Consistent to near consistent
Kiribati	Above normal (below normal at Butaritari)	Above normal (below normal at Butaritari)	Consistent to inconsistent
Niue	Below normal	Below normal	Consistent
Papua New Guinea	Below normal to above normal	Below normal (above normal at Nadzab)	Consistent to inconsistent
RMI	Below normal	Below normal	Consistent
Samoa	Normal to above normal	Above normal (normal at Faleolo)	Consistent to inconsistent
Solomon Islands	Above normal (normal at Kirakira)	Normal to above normal (below normal at Munda)	Consistent to inconsistent
Tonga	Below normal	Below normal (normal at Niuatoputapu)	Consistent
Tuvalu	Above normal	Above normal	Consistent
Vanuatu	Normal to above normal	Below normal to normal	Consistent to near consistent

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[†] 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).