

Climate and Oceans Support Program in the Pacific





Janita Pahalad, COSPPac Manager.

Manager's message

Firstly, I would like to wish all our friends and partners in the Pacific a Happy New Year. I hope you all enjoyed your Christmas break and are feeling refreshed and ready for the coming year.

Since my last message, COSPPac has continued to progress on the traditional knowledge pilot project, malaria project, Red Cross collaboration and the Climate Bulletin. We also completed installing a portable tide gauge in Tonga and commenced the installation of Niue's tide gauge in Alofi.

I anticipate that 2014 will be another big year for COSPPac and I am confident that the team will continue to excel in doing what it does the best; that is to serve our Pacific partners and to deliver the program as promised. This year the Program will be undergoing a mid-term review. I view this as an opportunity for us to assess our work, hear your feedback and make adjustments and improvements as we progress into the latter half of the Program delivery.

A few of the COSPPac team are moving on this year and I wish to acknowledge and thank them for their hard work and contributions - Susie Blake, Rod Hutchinson and especially Amanda Amjadali. Finally, I would like to welcome Celine Becker back to the team after a year off to have baby Ada.

Looking forward to another exciting year.

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Janita

Contact

Bureau of Meteorology

GPO Box 1289 Melbourne VIC 3001 700 Collins Street, Docklands VIC 3008

T: +61 03 9669 4158 E: COSPPac_CDC_Unit@bom.gov.au W: www.bom.gov.au



Happy New Year from the COSPPac team! We are looking forward to another productive and rewarding year working with our partners across the Pacific.

Upcoming events	Fiji workshop
	Tuvalu capacity mapping and workshop
	Tonga workshop
	PNG capacity mapping and workshop
	Regional Observers workshop (Fiji)
	Regional COSPPac workshop

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Top to bottom: Turi and Nathan brainstorming difficulties in communicating climate information in Cook Islands. Workshop participants in Kiribati brainstorming difficulties in communicating climate information.

Staff and Stakeholder Workshops in Kiribati and the Cook Islands

In October and November, the Kiribati and Cook Islands Meteorological Services held workshops with key stakeholders and staff.

The workshops provided valuable opportunities for the Met Services to gather feedback about their products and services, as well as involve stakeholders in learning more about climate and ocean science and how best to communicate climate information.

In Kiribati, the workshops were attended by representatives from the media and members of the Kiribati National Expert Group on Climate Change and Disaster Risk Management, with staff training days to end the week.

In the Cook Islands the focus was on staff development with lots of SCOPIC, statistics and media training. One day was spent with key local stakeholders including the Red Cross and the Office of the Prime Minister.

In both workshops, participants took part in sessions on climate and ocean science, understanding and communicating seasonal climate outlooks, challenges of communicating climate science, and feedback on climate products.



Sunny Seuseu (Samoa Meteorological Service) and Roan Plotz (Bureau's COSPPacTraditional Knowledge Scientist) with the poster, "Linking traditional knowledge with seasonal forecasts: lessons from our elders".

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Traditional Knowledge Poster Award

Sunny Seuseu from the Samoa Meteorological Service and Roan Plotz from the COSPPac team received a poster award at the Greenhouse 2013 Conference for work they presented on the Traditional Knowledge project.

Samoa Meteorological Service and COSPPac are working together on one of four pilot projects where traditional weather and climate knowledge from communities is collated, verified and used to make seasonal forecasts more accessible and useful to community members.

COSPPac sponsored nine participants from Pacific Islands (Cook Islands, Fiji, Vanuatu, Tonga, the Solomon Islands, Samoa, Kiribati, Papua New Guinea and Niue) to participate in the Greenhouse 2013 Conference, and collaborated with participants on a number of science posters and presentations.

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Participants from L-R: Romano Reo, Andrick Lal, Jimmy Ikina, Vaipo Mataora, Petania Tuala, Martin Sokomanu, Tony Kanas, Molly Powers-Tora, Faatasi Malologa, Bob Twilley, Delma Henry, Viliami Folau, and David Chang.

Pacific Surveyors Collaborate at FIG Meeting – Suva, 18–20 September

International Federation of Surveyors (FIG) hosted their firstever meeting focused on the natural resource management needs of Pacific Islands. COSPPac sponsored ten surveyors and land management officers to attend.

According to participants, the three-day meeting was a great forum for sharing knowledge and experiences as well as discussing their aspirations for the region. As Viliami Folau, a surveyor from Tonga, reported, 'This is the first time that [Pacific] surveyors have been able to come together, collaborate, interact, and exchange ideas and resources.'

Ongoing support for data collection was noted as a critical issue. The Pacific Sea-Level Monitoring Project, in particular, was recognised as a successful example of such data collection.

Tuvalu's Director of Lands Faatasi Malologa pointed out that, 'We are the ones who quantify the changes in sea-level. We have a big role to play as surveyors and land management practitioners in the Pacific. It's timely now that we make a stand. Our infrastructure and equipment is in need of updating so that we can contribute to the SIDS climate change approach.'



Australian Bureau of Meteorology and Secretariat of the Pacific Community technical staff installing equipment for the tide gauge in Tuvalu. Pictured, (L-R) Maleli Turagabeci, Avitesh Ram, and Jeff Aquilina.

Tide Gauge Upgrades Complete

Following two weeks of work in Tuvalu by the Bureau of Meteorology and SPC technical team, the 12th and final Pacific Sea-Level Monitoring station upgrade was completed in November.

This last upgrade marks the successful conclusion of a twoyear project funded by the Australian Government to improve sea level and climate monitoring across the region. All 12 stations are now solar powered and have the latest sensors, data logging electronics, and satellite communications systems.

'The sea-level stations always collected data continuously, but only transmitted the data every hour,' explains Stamy Criticos, Logistics and Installation Manager from the Bureau. 'With the upgrade, the stations are now transmitting every minute and will soon provide real-time data to meteorologists around the Pacific.'

Real-time sea-level data will provide additional weather data from the region, and it can be used to enhance tsunami tracking and warning systems.









Arnauld Yakelo from VMGD training members of the Vanuatu Rainfall Monitoring Network.



Filipe showing Karen Bennett the observations process in Tonga.

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First Vanuatu Rainfall Network Workshop

In October, the Vanuatu Meteorological and Geo-Hazard Department (VMGD) hosted members of the Vanuatu Rainfall Monitoring Network for a workshop in Espiritu Santo, to gain new skills and knowledge in climate and disaster risk reduction.

The rainfall network is a group of 75 members stationed across Vanuatu that help the VMGD record rainfall and weather conditions—playing an important role in boosting the country's regional weather recording capabilities. The five day workshop buzzed with activity, including daily outdoor training in improved rainfall monitoring techniques.

The VMGD and COSPPac are working closely with the rainfall network to begin regularly monitoring Traditional Knowledge (TK) indicators around the country. COSPPac's TK Scientist, Roan Plotz, was invited to attend the workshop and assist in the training of TK monitoring methods. The workshop brought much laughter and positive feedback from members and now that it is over, we will begin to roll out the TK monitoring forms and start recording the data.

Tonga Meetings a Success

As part of planning for the future, the COSPPac Capacity Development & Communication (CD&C) team has been visiting partner countries to discuss the current and future training priorities of Meteorological Services.

In October, the Tonga Meteorological Service hosted Karen Bennett and Lily Frencham for a busy few days of meetings.

It was fantastic getting to know the Climate Services team, and to observe the Tongan Met Service's efficiency. We got an excellent idea of the strengths and skills of the team, as well as their training priorities into the future.

These findings have been used to create a Learning & Development (L&D) Plan, which is currently being finalised. This L&D Plan can be used by the Met Service not just in planning COSPPac activities, but also as a resource in planning activities with all donors and partners.

Overall it was a very successful and rewarding trip. Thank you to our partners at the Tonga Met Service for your hospitality and insight!

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The dice appear to form an impossible triangle. Your eyes and brain are fooled because they assume that all of the corners of the triangle are touching one another. If the position of the camera was to shift slightly, you would see that in reality the 'triangle' is actually created by three lines of dice arranged in the shape of the letter 'Z'. This idea is based on a drawing of an impossible triangle originally created by physicist Roger Penrose in 1954. Image source: http://www.dailymail.co.uk/home/moslive/ article-1314281/Ten-greatest-optical-illusions.html

Barriers to using Seasonal Outlooks – Cognitive Illusions

Over the years, some studies have examined why climate predictions were not consistently used by decision makers. Researchers found several key reasons, including difficulties interpreting outlooks, and a lack of models to integrate information and uncertainty over accuracy.

These are all practical matters. There's another kind of barrier that psychologists have studied extensively: cognitive (mental) illusions. These are similar to optical illusions in that they cause people to perceive or judge things incorrectly without realising. They arise from our difficulties in quantifying and dealing with probabilities, uncertainty and risk.

One of the many sources of cognitive bias is the tendency to ignore base rates. The base rate is the natural or long-term frequency of an event; drought, for example.

Imagine a climate prediction model with 90 per cent accuracy predicts that my farm will be in drought next year. Imagine also that historically there is a ten per cent chance of being in drought. Assume further that the model is unbiased, that is, over the long run it forecasts just as many droughts as occur in reality (ten per cent).

Question: What is the chance that there really will be a drought on my farm next year?

The answer is not 90 per cent (model accuracy), but 50 per cent. I'll show the reasoning for this in the next newsletter, but I'll give a special mention to anyone who can prove why before then. Hint – use Bayes' Theorem.

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Grant Beard (g.beard@bom.gov.au)



Isabelle Jeanne.



Kamaitia presenting work to the Kiribati National Expert Group.

People profiles

Isabelle Jeanne, Technical Expert – Climate and Ocean Monitoring and Prediction Project (COMP)

Isabelle has been with the COSPPac team since April 2013. Her work involves researching the links between climate and malaria to help develop a malaria early warning system in partnership with the Solomon Islands Meteorological Service and other partners.

She is a qualified medical doctor with a PhD in geographical information, and specialises in the use of mapping technology for public health in tropical countries.

Originally from France, Isabelle has also lived and worked in South America and Africa.

When she is not working, Isabelle enjoys spending time close to nature - going for walks, taking photos and getting to know native flora and fauna.

Kamaitia Rubetaake, Assistant Climate Officer, Kiribati Meteorological Service

Kamaitia joined the Kiribati Meteorological service in May 2013. In her role as Assistant Climate Officer, she focusses on the Online Climate Outlook Forum, producing the Kiribati Climate Outlook and assisting with client requests for climate information. Some of her favourite parts of the job include doing research, learning problem solving skills from her colleagues and working with the tables in the OCOF outlooks.

Kamaitia likes to listen to music, read and play with her nieces and nephews. She also enjoys excursions and island beauty such as views of the clear blue lagoon, green trees, white sandy beaches and sunset.

Kamaitia graduated with a Bachelor of Marine Science from the University of the South Pacific in April 2013.



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Down here in Melbourne, we'd love to hear about the work you are doing in the sunny

Tell us about your work on climate and sea-level

islands. If you have attended a terrific climate or sea-level conference, done some interesting work with stakeholders, or even just broken a climate record recently, drop us an email to let us know about it! COSPPac_CDC_Unit@bom.gov.au.



