

SECOND PACIFIC ISLANDS CLIMATE OUTLOOK FORUM (PICO-2)

17-18 October 2016

TANOA Hotel, Nadi, Fiji,



Background

The Second Pacific Island Climate Outlook Forum (PICO-2) provides an opportunity to bring together the providers of climate information i.e. the National Meteorological and Hydrological Science Services (NMHSs) and one of the end users of this information, the Disaster Risk Reduction (“DRR”) Community or the National Disaster Management Offices (NDMOs) at the country level, in a roundtable discussion where information can be exchanged and provide guidance on decision-making.

PICO-2 also provided the opportunity for NMHSs to discuss the tropical cyclone season ahead for the southern Pacific Countries as well as discuss in depth the likelihood of an El Niño Southern Oscillation (ENSO) event and its likely impacts in the region.

The concept of PICO has been implemented for several years in the PI region through online teleconferences offered under three separate arrangements; the Climate and Oceans Services Program in the Pacific (COSPPac) Online Climate Outlook Forum (OCOF), the Island Climate Update (ICU) Forums and the Pacific ENSO Application Climate (PEAC) Centre Forum.

The specific objectives of PICO-2 included the following:

- i. To compare the various seasonal climate forecast guidance for the Pacific region and discuss how these are produced in terms of accuracy, utility, weaknesses and strengths of the regionally produced guidance;
- ii. To compare and refine national level consensus-based climate outlooks for the upcoming season (November–December–January);
- iii. To continue capacity building/human resource development activities for the Pacific region, particularly in seasonal prediction;
- iv. To discuss how NMHSs are currently accessing and assessing the available guidance, making them nationally-relevant and disseminating them to users and the use of games to assist in this effort;
- v. To provide a platform for the stakeholders through the PICO-2 to share and exchange experiences and knowledge on wet/tropical cyclone season and its prediction;
- vi. To discuss how representatives from the DRR sector are using or may use the guidance (or some derivative from it);
- vii. To identify the needs of the DRR sector for climate services;
- viii. To build collaboration and partnerships among NMHSs and the DRR sector;
- ix. To discuss opportunities for integrating climate information into disaster risk reduction and disaster management.

Meeting Outputs

- Improve the understanding of how seasonal climate outlooks are produced, how they are and can be made regionally and nationally relevant, and how they can be tailored to the needs of users from the DRR community.
- Launch of the Disaster Resilience in Pacific Small Island States which is funded by the Russian Government and implemented through UNDP. This three-year project will provide direct technical and financial assistance to 14 PICs in the area of climate early warning systems, disaster preparedness and recovery, and disaster risk financing.

- PICO-2 Statement on “Impacts and lessons learned from the 2015/16 El Nino for Climate/DRRDM and outlook and preparations for the 2016/17 La Nina.
- Regional Consensus Forecast (rainfall and SST for Nov 2016-Jan 2017) for SW Pacific Islands and North Pacific Islands.

Session 1: Opening of the PICO-2 and Overview

Statements

Mr. Lui Naisara, Deputy Secretary of Transport-Fiji Government welcomed on behalf of the government of Fiji the participants from WMO, SPREP, UNDP, PICS Panel, Russian Delegation, NMHSs, NMDO, Partners of PMC and CROP agencies.

Ravind Kumar (Director Fiji Met Service) in his opening statement acknowledged the Pacific’s vulnerability to disasters and the importance of PICO in preparing and providing the information to government to for the upcoming cyclone season.

Dr Netatua Pelesikoti thanked the members, delegates and participants for the support on behalf of the Director General of SPREP. She highlighted the importance of discussions on El Niño and its impacts and noted the lessons learned from the FINPAC practitioner’s workshop where NMH’s, NDMO’s and communities are working in disaster preparedness and turning early warnings into early actions. She also acknowledged the need to seek support and partnership outside of the Pacific region such as the new Regional Disaster Resilience in the Pacific Small Island Developing States (RESPAC) Russia project. Regional Disaster Resilience in the Pacific Small Island Developing States

Mr. Bakhodir Burhhanov (Country Director and UNDP’s Head of Regional Policy and Programme in Fiji) recognised ongoing recovery efforts in Fiji after Cyclone Winston. He emphasised the need to simplify complex weather information so that communities can understand and take necessary precautions. .

Mr, Dmitry Maximychev (MFA Russia) recognised the importance of the second PICO to prepare the Pacific and reassured the region of Russia’s commitment to increase funding in development assistance. Mr Maximychev recognised the partnership between UNDP and Russian Trust Fund for Development of 35 million USD over the next four years. RESPAC (7.5million) is the largest project from the Trust Fund and will focus on strengthening early warning systems and climate preparedness at the local and national level and fund post recovery efforts.

Ms Lisa Anne Jepsen the WMO representative acknowledged the supporters, organizations and participants of the Second PICO. She echoed the need to strengthen communication between NMHSs and end-users and also stressed the importance of institutionalising PICO and taking on board lessons learned through consultations and NCOFs. She also recognised the challenges faced by the region and sees the value of having regional OCOFs and at the same time offers the challenge to participants to not only take on board the outlooks for planning purposes, but also discuss ways and look at how to make the PICO process sustainable.

Dr. Andrew Tait from NIWA and the chair of PICS Panel introduced the program for the next two days, the sessions and what was expected from the participants.

Session 2: Looking Back and Learning- Presentation of 2015-2016 El Nino

A joint presentation from the regional providers (BoM, NIWA & NOAA) was presented by Dr Nicholas and Dr Simon McGree on the physical evolution of the 2015/2016 El Nino

The dynamic models predicted El Niño well except for the statistical models peak strength was under predicted by most models, what occurred was warmer than what was predictive and the demise of El Niño was also well predicted although a few models hung on to the event a little too long meaning that the peak in the model prediction occurred after the peak in the observations.

Key Discussion Points:

1. The discussion looked at the performance of the models in predicting the 2015 El Niño event compared to the 2014/2015 event. There wasn't enough confidence in the models in 2014 to declare an official El Niño status due to:
 - a. the sea surface temperatures (SST) never reaching official El Niño thresholds
 - b. the Southern Oscillation Index (SOI) showed a mismatch between the ocean and atmosphere
 - c. No coupling of the ocean and the atmosphere.
2. Discussions regarding the timing of an official declaration and implications to national authorities when models are not in agreement causing delays or non-declaration of El Niño events
3. Regional centres encouraged national agencies to consider other El Niño like impacts to issue national statements and clarified that a declaration is issued only when it is a full blown El Niño event as in the case of the 2015-2016 period
4. Papua New Guinea (PNG) noted the importance of using national impacts especially when you have an early onset of El Nino like impacts sooner than expected and the use of other indicators declare El Niño status. Drought impacts were already felt in the province early March-April 2014
5. Discussions on national response from Met Services on issuance of statements and reactions from communities from PNG, Palau and Samoa was shared with examples of islands declaring El Niño status ahead of the official declaration
6. Lessons learned from 2014 events was discussed with regional institutions advising national met services to consider national indicators and not limit consideration to just El Niño indicators to declare an El Niño event.
7. Met services were also encouraged by regional centres to consider national historical data to fine the lag time between ENSO showing in central Pacific and national onset and not wait until onset of impacts to issue warning.

Recommendations

1. National Met services to consider other indicators and not rely primarily on El Niño indicators to declare events
2. NMS's to conduct research and look into historical data to find the lag time between ENSO showing in central Pacific and national onset

Session 3: Lessons Learnt from 2015/16 El Nino and actions (processes) taken to respond to Tropical Cyclones/ENSO and DRR.

The session broke into 5 groups based on location and similar climatic experiences

1. Cook Islands, Niue, Samoa and Tonga
2. PNG, Vanuatu and Solomon Islands
3. Palau, Federated States of Micronesia (FSM) and Republic of the Marshall Islands (RMI)
4. Kiribati and Tuvalu
5. Fiji Met, Fiji Hotel's Association, Ministry of Agriculture, Fiji Sugar Association, Fiji Electricity Authority, Fiji Water Authority, Fiji National Disaster Management Office

The following questions provided guidance for the 5 groups to allow the flow of discussion on how each country/group responded to the 2015/2016 El Niño event in terms of information and communication.

Key Discussion Points

- a) *What information on the El Nino 2015/2016 was provided by the Met Services*
 - Monthly bulletins
 - newsletter using information from OCOF's
 - Seasonal forecast updates
 - Rainfall predictions
 - El Niño outlooks provided every two months
 - Media releases
 - Sector specific reports prepared upon request
 - Drought analysis
 - ENSO forecasts (Red Cross Alert)
- b) *What type of information is required? Were there any information gaps?*
 - All Met variables (rainfall, temperature, winds etc)
 - Land temperature
 - Use of simple words and awareness materials similar to the climate crab video
 - Impact based forecasting as it is easier for communities to understand
 - Sector specific products and forecasting
- c) *Was the information delivered in a timely manner for your sector? At what time should the information be delivered?*
 - The information was delivered on time for some countries

- The provinces in PNG and the Northern Pacific already experienced El Niño before an official statement was issued
 - Fiji Sugar Association and other sectors would like to have a 12 month in advance or earlier
 - o Planting alternative crops needs more than a year's notice
- d) *How was it packaged (text, map or table etc) How should the message be packaged? What it easy to understand?*
- Quarterly reports
 - Monthly conference
 - Emails
 - Drought statements
 - Text products
 - Currently use maps, graphs tables and text in the outlooks.
 - Communicate by email and on the website
 - Hard copies provided to NDMO
 - Newspaper articles, TV interviews,
 - Radio talk-back shows in multiple languages
 - Translation of technical terms into local languages
- e) *How should the message be communicated? (SMS, email, newspaper article, radio etc)*
- Use all media outlets including social media
 - Use simple and easy to understand jargon
 - Use cartoons, infographics or videos
 - National awareness programs and workshops
 - Radio talkback shows
 - Partnership with NDMO and Red Cross to deliver the message

Recommendations

1. NMS's to use simple language and jargons when communicating information to communities and sectors
2. Use impact based information to deliver messages
3. Use multiple languages and different ways (cartoons, drawings, talkback shows) to deliver key messages
4. Engage communities and conduct more awareness programs and activities well in advance before the onset of events

Session 4: Impacts Seen on the Ground and Mapping with special emphasis on DRR

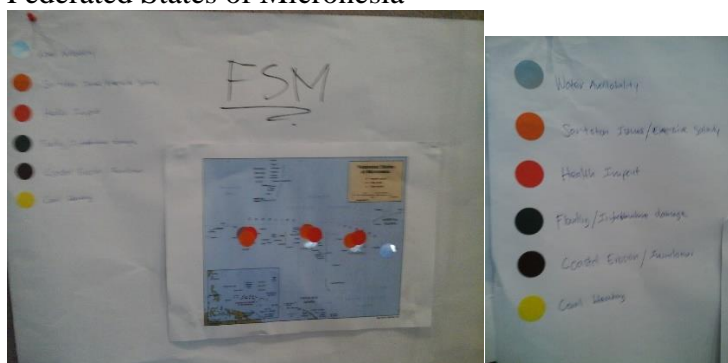
The session broke out into country groups in which they mapped out the impacts for the following

- Water availability, quality (silver colour)
- Sanitation issues (orange colour)
- Health impacts (related to sanitation and vectors) (red colour)
- Flooding / infrastructural damage (dark green colour)
- Coastal erosion / inundation (brown colour)
- Coral bleaching and fish kills (cyan colour)

Kiribati:



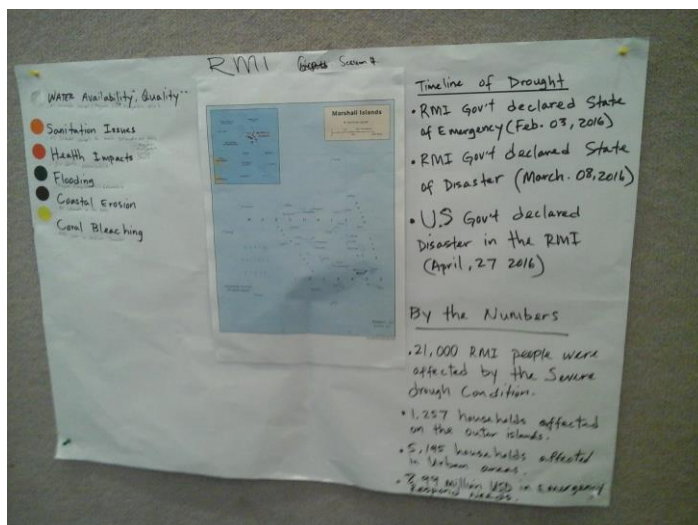
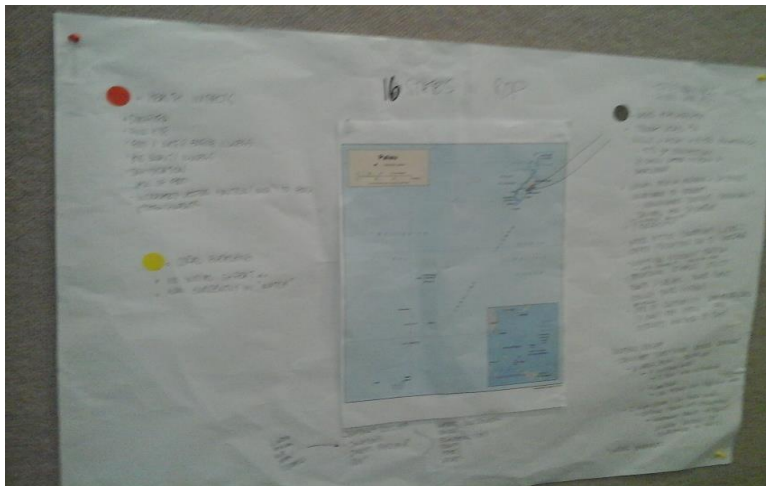
Federated States of Micronesia





Fiji Islands

Palau



Republic of Marshall Islands

Recommendations

It was recommended that that a proper mapping tool be used to map the results of this exercise.

Session 5: Evaluation of the response on the El Nino Event 2015/16 and the Way Forward

The session broke out into subregional groups to discuss and evaluate responses to the El Nino Event and identify ways to improve working relationship between the National Met Services, NDMO's and other stakeholders.

From the discussions, the key lessons learnt from the past El Nino event is that there are existing gaps within Met services regarding how information is collated, analysed and disseminated. The following summarises the discussion

Information processes

- i. National process needs to be in place for getting the information and coming up with consensus statement when models are in disagreement about the timing of an event
- ii. Difficult to synthesize the information for smaller NMHSs
 - a. more Met and DRR training to improve uptake of scientific and technical knowledge
 - b. Need of a complete weather/climate glossary for climate terms
 - c. Need to explain diagrams : i.e, gauge with El Niño diagram
 - d. Use of physical gauge (poster)
- iii. Useful to have a template for El Nino or La Nina official declarations
- iv. Climate information development
 - a. national climate forum needs to update and inform stakeholders early
 - b. translate scientific information and statements to simple languages and vernacular languages if possible.
- v. use of information for decision making
 - a. info easy to understand and act upon (Less talk more action)
 - b. suggest actions (Make it practical)
 - c. connecting Impact information from Community outer Island etc

Communication processes

- vi. Informing high level government early through preparation of communications paper , once decision is made it allows for flow of funding
- vii. Timing of PICOF important – used in NCOF and needs to be in line with national government budgeting and planning processes
- viii. NDMO's job is to inform people on what to do
 - a. Linking the hazard to key messages for different sectors e.g. Water rationing for crop management, disease prediction – role of DMO to coordinate

- ix. Key relationships are the clusters, utilising existing networks and working groups who are experts in managing its own sectors
 - a. Adding to the messaging of the NMHSs (partnership with the media, make sure this is prominent in the outlook
- x. Key challenge is the simplifying the complex science information (use pictures) /translation difficult to keep meaning clear
 - a. Real need for impact forecasting using past events as examples
 - b. Still need work on actions to prepare for slow onset hazards
 - c. People often don't do anything until impacts start
- xi. Having information readily available and accessible from Met services and NDMO
- xii. Strengthening of coordination and execution of roles and responsibilities of key stakeholders
- xiii. Strengthen the efficiency of the dissemination of information to all from national level to community level
 - a. Isolated island- work with existing local initiatives to relay information, collect impact status, example water project on Christmas Island
- xiv. utilization of information with ongoing and or planned works of stakeholders/sectors to enable informed decision making
- xv. Strengthen partnerships collaborations between agencies to improve execution of roles in terms of efficiency

Recommendations

1. It was recommended that NMS's have national climate outlook forum's(NCOF) to discuss the seasonal outlook and use the event as a way to strengthen relationships with stakeholders, increase awareness, build capacity and work with the local media.

Session 6: "Looking Forward and Preparing"

This session was a joint presentation of the 2016-2017 La Nina Forecast presented by Simon McGee of the Australian Bureau and Dr. Nicolas Fauchereau of NIWA.

Based on the presentations, the following were the key recommendations from the discussions

Recommendations

1. From the scenarios presented regardless of which one the NMHSs use, preparing the islands and country for these events should be the paramount objective and should get communities prepared from start
2. NMHSsNMS's were advised that NOAA, BOM and NIWA all have different thresholds for declaring events. BoM uses a more conservative threshold and NMS's should consider and monitor all three(NIWA, BoM, NIWA) and also keep in mind that the La Nina and El Nino are not always the main players causing the events

Session 7: Presentation on current Tropical Cyclone outlook

The session consisted of a joint presentations from NOAA, BoM and NIWANIWA and is summarised as follows:

For the upcoming cyclone season the region will experience

1. near average numbers of tropical cyclones (TC) for the 2016–17 season (November 2016 to April 2017).
2. Approximately 8 to 10 named tropical cyclones are expected (climatology: 12.4)
3. Tropical Cyclone activity is elevated for the Pacific Island countries to the north of the Coral Sea and close to the International Date Line near Tonga and Niue

Recommendations

1. Regional statement – it was recommended that the following should be included in the regional statement
 - a. The use of key messages
 - b. even if La Nina is not fully declared it is important to prepare as we are still seeing La Nina like impacts and these should also be included in the statements
2. Focus on sea anomalies, coral bleaching, statement to be brief, coordination between Met and NDMO, excellent coordination during El Nino and worth promoting
3. Max- 3-4 pages for the regional statement and should not take away from the National outlook

Session 8: Consensus Forecast for Pacific Islands (November 2016-January 2017)

The Session focussed on the presentations of Global Climate Models for Consensus Forecast from the different models: POAMA, SCOPIC, and Multi-model ensembles (eight models). This was the first time a consensus forecast methodology has been attempted for rainfall and temperature.

The purpose of a consensus forecast is to provide and highlight gaps and information so that the information could be nationalised. Most NMS's employ SCOPIC as a tool for climate predictions and it is consistent with the dynamic modelling.

The Republic of Korea-Pacific Islands Climate Prediction Services (ROKPI-CLIPS) is a project providing access to building capacity of countries to familiarise and learn how to use dynamical modelling so that NMHSs eventually increase capacity and decrease reliance on regional centres.

Session 9: Country Group Discussions on the provision and use of Climate information

During this session, individual countries presented their individual national outlooks, possible impacts and key messages, channels and level of communication to be used at each stage of an event, impacts to look out for that is visible and can be used as indicators for issuing the different levels of warning (eg. drought/drought watch) and actions to be taken at each level.

There were no recommendations from this session

Session 10: Plenary discussion on Key Next Steps and PICOF-2 Statement

The Plenary discussion focussed on a consensus PICOF-2 Statement reporting on Impacts and lessons learned from the 2015/16 El Nino for Climate/DRRDM and outlook and preparations for the 2016/17 La Nina. A final statement was approved and circulated after the session.

Closing Remarks by the Director of the Climate Change Division for SPREP followed immediately after this session.