PACIFIC METEOROLOGICAL COUNCIL

WORLD METEOROLOGICAL ORGANIZATION

SPREP Secretariat of the Pacific Regional Environment Programme

"Sustainable Weather, Climate, Oceans and Water Services for a Resilient Pacific"

Fifth Meeting of the Pacific Meteorological Council (PMC-5)
Working Papers

7-9 August 2019
Apia
Samoa

Agenda Item 16.1 Progress on the Pacific Island Communication and Infrastructure (PICI) Panel

Purpose:

1. To **provide updates** on the progress of the PICI panel work plan and activities
2. To **invite comments and endorsement** of the proposals and recommendations of the panel

Background:

1. With a view towards strengthening national and regional multi-hazard early warning and prediction for high impact severe weather, tropical cyclone, marine (storm surges), and tsunami events, the purpose of the PICI Panel is to provide technical advice and coordinate the implementation of activities recommended by the PMC related to: (1) infrastructure supporting communications and dissemination of national and regional hydro-meteorological and oceanographic/tsunami (seismic and sea level) observations, forecasts, and warnings, (2) identifying priorities and coordinate work related to planning and implementation of communications facilities, equipment. The PICI Panel will identify priorities, gaps and challenges and promote the importance of the timely delivery of advisories, warnings and alerts for the successful operations of National Meteorological and Hydrological Services (NMHS) and its Multi-Hazard Early Warning Systems (MHEWSs) and Multi-Hazard Information Systems (MHISs), as prescribed in the Pacific Islands Meteorological Strategy (PIMS) and other international and regional frameworks (e.g. such as the Sendai Framework for Disaster Risk Reduction and the S.A.M.O.A Pathway).

   The PICI Panel may advise relevant agencies and entities, as recommended by PMC, at the national and regional level that are providers of national telecommunications, Internet, radio networks VHF, HF, FM, and satellite communications systems, as well as regional and national telecommunications regulators, regarding issues such as licensing, improving communication infrastructure, supporting national meteorological and hydrological services and others with multi-hazard early warning and prediction responsibilities (e.g. NDMO, Port Authorities, Fisheries, Geological and other national services, including those focusing on vulnerable groups and people with disabilities in communities).

Update:

Planning Meetings

- The PICI previously existed as the RANET ad-hoc working group on communications that was set up in 2003 at the Regional Meteorological Directors Meeting (RMSD) in Vavau, Tonga. This was formalised to align with the PMC Panels. The First PICI panel meeting was convened for 1 day in Honiara, Solomon Islands in August 2016.The Second PICI panel meeting was held in Nadi, Fiji, 13-15 May 2017. The Third PICI panel meeting was held prior to the start of PMC4 in August 2017 in Honiara. The Fourth PICI panel meeting was held in Apia, Samoa, 5th of August 2019

PICI panel Teleconference

- The Panel have been holding regular teleconferences to discuss progress and other key activities, since PMC4, the Panel held 3 Teleconference calls in December 2018, 24th January 2019 and 11th July 2019
    - The discussions were focussed on the TOR, the work plan and improving partnerships and coordination amongst NMHS and Telecommunication partners.

Other opportunities

- Consultation with the International Telecommunication Union (ITU) and the Director of the ITU Asia Pacific Office was held at the recent the ITU Global Regulators Symposium 19 (GSR-19)
- Co-chair of the PICI Panel Mr Wilson Leguvaka was present at this symposium and requested clarification on accessing support from ITU in developing National Emergency Telecommunication Plans (NETP) to assure priority restoral of communication possibilities during extreme events and issues on spectrum management and harmonization
- Proposal for PICI panel funding was submitted and accepted as part of the WMO CREWS Pacific Community-based Early Warning project to support the development of a case study based on the current workplan and priorities.
- The World Bank funded Multi-Hazard Impact Based Early Warning System Project in Samoa and Tonga for enhancing the rapid alert notification system (RANS) for emergency communication. A policy brief on RANS for Samoa was shared with stakeholders.

Workplan

A workplan has been developed and updated to align with the new PIMS (2017-2026) and RA V workplan. The following is a summary of the priorities identified by the panel

- **Policies and Frameworks**

  Identifying policies and frameworks and opportunities for NMHS to collaborate and develop National Emergency Telecommunication Plans (NETP)
- **AWS Management and Communication**
    - Review of existing Pacific NMHS communications options for telemetry needs to be conducted with consultation with each country. Consideration should be given to bulk purchasing option (both region and local) and a Note to be prepared for consideration by each country and the PICI panel.

- Investigate optimal cellular contractual arrangements for surface-based telemetry for AWS stations. Eg. Alignment with a regional provider such as Digicel for bulk purchasing of air time and data.

- Investigate optimal contractual arrangements for satellite telemetry for AWS stations. Eg. Alignment with a regional provider such as INMARSAT for bulk purchasing of air time and data

- Seek support and funding for a calibration tool-kit for meteorological instruments and equipment and for a process at the regional level for other Pacific NMHSs that do not have the capability .

- **EMWIN HRIT/LRIT**
  - GOES-17 began drifting from its launch position of 89.5 degrees west longitude to its GOES West operational location of 137.2 degrees west longitude on October 24, 2018. It completed it's drift on November 13, 2018 and arrived at its final operational location of 137.2 degree west. The change from 137.0 to 137.2 has been made for operational efficiency and to minimize impacts from other geostationary satellites. As of February 12, 2019, GOES-17 transitioned to operations as NOAA's GOES West satellite. GOES-15 and GOES-17 will have a simultaneous broadcast until January 2020.
  - To receive EMWIN/HRIT broadcasts, sites require new hardware as well as a receiver frequency shift to 1694.1 MHz, from 1692.7 MHz (EMWIN) and 1691.0 (LRIT)
  - The RANET Pacific Working Group have completed the necessary hardware upgrades and the purchase of low-cost solutions that are also currently available on the market (ie. Dartcom Systems Ltd. HRIT/EMWIN Receiver(s)). The PRANET Pacific Working Group continue to track other low-cost solutions in development.
  - The RANET Pacific Working Group has provided systems upgrade trainings in July 2018 and January 2019 funded by the USAID and implemented through the University Corporation for Atmospheric Research (UCAR), University of Hawaii, Fiji Meteorological Service and other regional partners. and have shipped and installed systems in Solomon Islands, Tonga, Cook Islands, Vanuatu and Fiji. The remaining upgraded system are scheduled for shipment back to the countries by September 2019.

- **"enterprise" EMWIN**
  - The enterprise EMWIN (eEMWIN) File Transfer Protocol (FTP) service is an anonymous FTP service that provides time segmented archived collections of weather, water and climate information that has been broadcasted on EMWIN. The files are updated/overwritten at specific time intervals, and provide users the option of selecting the most appropriate range of file quantities and latency, ranging from 2min to 3 hours. eEMWIN services are tentatively scheduled to be available by October 2019.

- **Review options** and methods to integrate non-automated observations and automatically generate standard synoptic and metar messages that consider the significant and on-going increase in automated data collection. For example, there needs

to be a synchronization between the timing of automated data collection and the requirement for synoptic reporting that require timely transmission.

- **Capacity Building and Training Needs**
  - Explore development of accredited on-the-job training guidelines, material, and funding for Pacific technical staff for AWS and Climate Early Warning systems, operations and maintenance

- **Dedicated technical and maintenance officer position within SPREP PMDP to support the NMHSs**

Recommendations:

1. The Meeting is invited to:

   - **Note** the progress and updates from the PICI panel workplan and its priorities
   - **Acknowledge** WMO, ITU and other partners for supporting collaborations in progressing the development of National Emergency Telecommunication Plans and policies
   - **Acknowledge** the University of Hawaii for providing the teleconference facilities to host meetings
   - **Acknowledge** the World Bank funded Multi-Hazard Impact Based Early Warning System Project in Samoa and Tonga for enhancing the rapid alert notification system (RANS) for emergency communication. A policy brief on RANS for Samoa was shared with stakeholders.
   - **Recommend** amendments to current PICI TOR to include responsibility into identifying best practices for working with the private sector to find solutions – options, best practices, guidelines and way forward in ensuring maintenance issues and interoperability of systems
   - **Recommend** the establishment of a Communication Infrastructure and technical maintenance position within SPREP PMDP to support the work of the panel and provide policy advice and technical support to the NMHSs

   - **Recommend** the ongoing identification of policies and frameworks and opportunities for NMHS to collaborate and develop National Emergency Telecommunication Plans (NETP)
   - **Recommend** a review of existing Pacific NMHS communications options for telemetry needs to be conducted with consultation with each country
   - **Recommend** to consider bulk purchasing option and optimal contractual arrangements (both region and local) for both cellular and satellite providers for purchasing of air time and data
   - **Recommend** the consideration and review of options and methods to integrate non-automated observations and automatically-generated standard synoptic and Metar messages that consider the significant and on-going increase in automated data collection
   - **Recommend** to seek support and funding for a calibration tool-kit and associated training for meteorological and hydrological instruments and equipment and for a process at the regional level for other Pacific NMHSs that do not have the capability

   - **Recommend** to work together with PIETER panel to explore the development of accredited on-the-job training guidelines, material, and funding for Pacific technical staff for AWS and Climate Early Warning systems operations and maintenance

- **Recommend** to PMC to encourage and implement RANS for all Pacific Countries for rapid disaster management and multi-hazard early warning dissemination system.
- **Recommend** to work together with PIMOS panel to ensure that marine observation and communication infrastructure objectives and outcomes are aligned.

Attachments

- Annex 1 TOR
- Annex 2 Workplan
- RANS Policy Brief

[Date of Submission]