

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

Fourth Meeting of the Pacific Meteorological Council (PMC-4) Working Papers

14-18 August 2017
Honiara
Solomon Islands

Agenda Item 17.3: RANET Radio and Internet for the Communication of Hydro-Meteorological and Climate Related Information (RANET)

Purpose:

1. To report on RANET systems and activities since PMC-3, including a report on the overall health of the network of RANET hardware and systems in the Pacific

Background:

2. The United States National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce (DOC), National Weather Service International Activities Office has sponsored demonstration projects in WMO RA-V since 2005. Radio and Internet for the Communication of Hydro-Meteorological and Climate Related Information (RANET) is a project/ initiative of the National Oceanic and Atmospheric Administration (NOAA), funded by the US Agency for International Development Office of US Foreign Disaster Assistance (USAID/OFDA), and is supported by the University Corporation for Atmospheric Research (UCAR)/International Extension and Public Alert Systems (IEPAS).
3. The management of the RANET Program has now come under of the management of UCAR/COMET® Program, which is administered by the NOAA/National Weather Service (NWS).
4. RANET has worked with the hydro-meteorological community to develop and address communications needs necessary for public weather service delivery and alert and notification applications. These initiatives include demonstration projects such as; HF/VHF Internet and Voice, EMWIN, LRIT, Chatty Beetle, and Alertwatcher.
5. RANET initiatives historically emphasized demonstrations / pilots, development and maintenance of shared / regional infrastructure, training, and focused on rural and remote communities; strove to address as many other information needs as possible to promote multiple users, system sustainability, while remaining low cost. RANET attempted to address the many telecommunications gaps that Pacific Island National Meteorological and Hydrological Services (NMHSs) have faced and these gaps continue.

Update:

Review of the health RANET Project

- With the unfortunate passing of Kelly Sponberg, the RANET/IEAPS/UCAR Project Manager in late August of 2015, shortly after the PMC-3, a considerable and extensive

effort was undertaken to fully document the extent of systems, tools, and technologies that had been undertaken by RANET in Africa, the Americas, and the Pacific.

- A RANET Technical and Planning Meeting was held at the University of Hawaii / TASI (Telecommunications and Social Informatics Research Program) / Social Science Research Institute (SSRI) from January 19-22, 2016 with representatives from NOAA NESDIS and NOAA National Weather Service, UH TASI, senior RANET Technical Leads from New Zealand, Australia, and UCAR, and a representative from SPREP.
- RANET/UCAR/COMET® Program co-sponsored the UNESCO/IOC/PTWS SW Pacific Regional Working Group Meeting and the initial meeting of the SPREP PICI (Pacific Islands Communications Infrastructure) Panel on August 24, 2016, in Honiara, Solomon Islands, that was arranged in conjunction with several WMO RA V meetings and included a RANET and EMWIN/LRIT briefing to PMC Met Service Directors.
- Considerable effort was undertaken by the RANET/UCAR/COMET® Program to relocate, consolidate, and upgrade the RANET infrastructure supporting RANET systems and tools from Silver Spring, Maryland to Boulder, Colorado.
- Shipment of new or refurbished RANET Chatty Beetles to Kiribati, Tonga, and Tuvalu to meet new requests were delivered and installed.
- RANET/UCAR/COMET® Program sponsored the 2nd meeting of the SPREP PICI Panel in Nadi, Fiji, May 13th and May 15th, 2017, which followed meetings sponsored by the COSPPac Project, and included representatives from UNDP, the World Food Programme/Emergency Telecommunications Cluster, the University of the South Pacific, SPREP, and WMO.
- A review was conducted in early 2017 with the help of the University of Hawaii to assess the overall health of the network of RANET hardware and systems in the Pacific. Surveys were e-mailed to PMC Meteorological Service Directors, with follow-up phone calls and virtual meetings using Zoom.
- Of the initial 67 Chatty Beetles initially deployed to 13 Pacific Island Countries and Territories (PICTs) prior to 2016, and the 23 Chatty Beetles that were since requested and shipped in 2016/2017 (total 90), 58 are operational, 27 are defective and 3 were lost or misplaced. A total of 111 Chatty Beetles have been requested from 10 countries, most who had not previously requested Chatty Beetles. Most are utilized for collection/dissemination of meteorological observations, as well as for backup dissemination of hydro meteorological warnings.
- Of the 52 Non-RANET funded HF/VHF radio system installed in 10 PICTs, 38 are still operational, with 11 defective systems and 3 waiting to be installed. 18 new HF/VHF systems have been requested.
- Of the 32 EMWIN systems initially deployed to 17 PICTs and 4 installed more recently, some funded via WMO VCP or SOPAC EU Development funds to primarily Meteorological and Disaster Management Offices, 8 are still operational, 20 are defective (hurricane wind damage, lightning strike, and local technical support issues) with 4 new requests remaining.
- Of the 12 LRIT stations deployed thru the US VCP program, 2 remain operational, 9 are defective, and 1 is waiting to be upgraded.

- An incomplete list of new 5 HimawariCast stations installed by JMA were reported to the survey with one not operating.
- In early June 2017, the U.S., WMO RA-V and SPREP representatives met to develop a plan to move forward on repairing and updating the communication and early warning systems by the U.S sponsors in the Pacific. The long-term goal for this program is transition of the management and support to a WMO designated sponsor nation within WMO Region V (South-west Pacific) or a Voluntary Cooperation Program Donor Nation for WMO Region V.
- It was decided that the Chatty Beetle, AlertWatcher, UHF/VHF Internet and Voice will continue to be supported. It was also decided that the EMWIN, LRIT and GEONETCAST systems in the Pacific will be replaced with a HimawariCast Receiving Station that can receive both the Himawaricast and GOES-S.
- A RANET Requirements Group is being formed with representation from BOM Rep, JMA VCP Rep, WMO Designated VCP Rep, RA-V PR Rep, Chair/Vice Chair of SPREP PICI, PMC Chair Tonga/Solomon Is., UCAR Rep, SIDS/LDC Rep Kiribati, UH Rep, and NOAA/NWS (Fred Branski).

Recommendations:

1. The Meeting is invited to:
 - **Note** the update on RANET project.

[13 August 2017]