

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION

(of UNESCO)

IOC/PTWS Working Group Two

Intercessional Report of the 2nd Sessional Meeting of the Task Team on Warning Dissemination (formerly Pacific Emergency Communications) – August 26, 2013

At the 24th Session of the UNESCO/IOC/Pacific Tsunami Warning and Mitigation System, the Working Group 2 Task Team on Warning Dissemination was reconstituted with Ms. Filomena Nelson (Samoa) as Chair, and Mr. Edward H. Young, Jr. (USA) as co-Chair. The Task Team on Warning Dissemination was assigned 3 tasks within its Terms of Reference:

- 1. To encourage Member States to develop arrangements for the transmission and receipt of tsunami warning alerts from international centres, and the dissemination of alerts and public safety actions within their countries;
- 2. To provide a forum to identify methods and systems currently available and planned for the future for alert dissemination within Member States, and internationally across the Pacific, and between Oceanic basins;
- 3. To consult with National Tsunami Warning Focal Points to determine appropriate requirements for the dissemination of alerts from Tsunami Warning Centres and exchanges of information for the confirmation of reception.

In the Summary Report of the "A Pacific-wide Tsunami Warning and Communication Exercise, conducted November 9-10, 2011 (Volume 2), in Section 3 of the Post-Exercise Evaluation Findings, pages 12-13, it was noted that under **Objective 3: To validate the readiness of Member States to respond to a local/regional source tsunami**,

- Most of the lead agencies were successful in disseminating the tsunami warnings in country to their emergency services agencies, national government agencies and local, provincial, and regional government agencies.
- A wide variety of communications methods were used, including fax, telephone, email, SMS, dedicated landlines, satellite links, and radio communications.
- There was a positive response by 81% of participating countries and agencies, stating that communications methods used and the timeliness of information issued was sufficient to support national information requirements.
- Systems largely worked, but there were some difficulties with telecommunications systems in developing countries."

The PacWave11 Summary Report included the following recommendations from PacWave 2008 related to early warning systems:

- The PTWS Working Group on Pacific Emergency Communications serve as a focal point providing information on methods of robust public alerting, especially down to the local levels within countries and the role of the media in information dissemination;
- The FSM recommended that a feasibility study be conducted in all PTWS Member States to identify and evaluate relevant warning systems that can be utilized in those places lacking the financial resources and assets to improve their own warning coordination;

The PacWave13 made the following recommendations:

Timely Public Alerting –

- National and local response agencies with 24/7 capacity should establish redundant pathways to receive international TWS messages directly, in addition to official notification through TWFP protocols;
- Recommended that the PTWS Working Group on Pacific Emergency Communications, with assistance from ITIC as required, continue to serve as a focal point providing information on methods of fast, reliable, robust public alerting, especially down to the local levels within their countries and the role of media in information dissemination;

Warning Dissemination -

• Recommended that a Feasibility Study be conducted in PTWS countries to identify and evaluate relevant warning systems that can be utilized in those places lacking the financial resources and assets to improve their own warning coordination.

The Task Team on Warning Dissemination did not formally meet during the Intercessional period, lacking representation from the different PTWS Regional Working Groups. However, Task Team members were quite active in addressing warning system gaps in the SW Pacific area, and note the following:

 As a result of the US NOAA switching its western Geostationary meteorological satellite on December 14, 2011, to GOES-15 considerable effort was put into insuring the EMWIN broadcast on GOES-15 would be received in PICTs (Pacific Island Countries and Territories), after the EMWIN broadcast on GOES-11 was terminated. Through support from SPREP, SOPAC Division/SPC, the UNESCO/IOC, and with funding from the US contribution to the WMO Voluntary Cooperation Programme and USAID, EMWIN receivers were replaced in the November, 2011-May, 2012 timeframe at Pacific Island national meteorological offices, and new EMWIN systems were installed at Pacific Island national disaster management offices, including one at the office of the Fiji national tsunami warning contact, and at the offices of SOPAC Division/SPC.

EMWIN/LRIT upgrades at the Kiribati Meteorological Service will be replaced in September, 2013. Pacific Island countries in the northwest Pacific will receive RAPIDCast systems late in 2013 to replace the EMWIN re-broadcast on GOES-7, which was operated by PEACESAT (and now decommissioned). New US and Japanese geostationary meteorological satellite systems will be launched in the 2015-2016 timeframe, requiring technical and fiscal planning by PICTs, PTWS members, and donor partners to ensure dissemination new technologies that will likely operate at higher data speeds and require new satellite dissemination equipment upgrades. A number of countries have installed siren systems to warning the at risk communities of an approaching tsunami and other types of disasters, such as in American Samoa, Cook Islands, Tonga, Samoa, Fiji. Also some countries are now using SMS to send messages, including Samoa, Fiji, Tonga,

 The SW Pacific Working Group met in Apia, Samoa on July 14, 2012, immediately prior to the 14th Session of the WMO Region V Tropical Cyclone Committee (WMO RA V TCC) meeting, and the benefit of close coordination between a WMO Region V (Southwest Pacific), and the UNESCO/IOC/PTWS SW Pacific Working Group resulted in a decision by the WMO RA V Management Group to tie upcoming RA V TCC meetings to when the PTWS SW Pacific Region meetings, as PTWS relies on close cooperation and coordination with WMO and its WIS (WMO Information System) and WIGOS (WMO Integrated Global Observing System) infrastructure.

The Task Team feels that with the upcoming implementation of the new enhanced PTWC products, it has become more urgent for feasibility studies to be conducted to identify and evaluate relevant warning systems that PTWS Member States are utilizing and identifying new and emerging dissemination technologies and systems, particularly low cost technologies that will work in those places lacking the financial resources and assets to improving their own warning coordination. However, that assessment, and recommendations that arise from these studies are best developed within each PTWS Regional Working Groups, where familiarity with local, national, and cross-national/regional early warning disseminations have common infrastructures in place and where opportunities to work with their respective WMO Regional Associations are greatest, in conjunction with existing regional organizations dedicated to representing PTWS member and non-member states, and which may have better opportunities to secure donor assistance.

The WG2 Task Team on Warning Dissemination decided to:

- Work with PTWS Regional Working Groups to collate information on available emergency technologies currently used elsewhere for inclusion as examples in the emergency communications guideline on emergency technologies transmit data from seismic and sea level stations to national warning centres, to receive warnings from international warning centres to national warning centres and to disseminate warnings, and to disseminate warnings to at risk communities;
- Work with PTWS Regional Working Groups to review PTWS Members guidelines for early warning system dissemination systems to include all available emergency communication technologies including their use and inoperability of these technologies, setup, costing, and limitations to assist member states in setting up their own systems and identify possible solutions that member states can sustain within their own local resources;

• Working with PTWS Regional Working Groups, identify regional mechanisms to assist member states in PTWS regions in setting up their warning systems especially to address the gaps of existing systems; and identify opportunities to strengthen partnership with and support from regional organizations donors in setting up tsunami warning and mitigation systems with particular focus on emergency communication technologies.

The WG2 Task Team on Pacific Emergency Communication recommends:

- That the Task Team be reconstituted at the ICG/PTWS XX-V Session, as a Task Team under Working Group 2 Warning Dissemination, assisted by ITIC.
- That each PTWS Regional Working Group designate experts from among Member within each region to assist in the work of the Task Team, focused on early warning systems in their respective.
 - That these relevant designated experts, including those from other international and regional organizations, are engaged in warning system dissemination technologies, and can provide insight on existing communication technologies including emerging and future technologies;
 - That each Task Team Members explore ways to invest in suitable emergency communication technologies to strengthen the functionality of early warning systems being used by Member States in their region, and which is reported in conjunction with Regional Working Group meetings;
 - That UNESCO/IOC and WMO work with their respective organizations to assist their respective Member States to conduct feasibility studies to insure efforts are coordinated with donor agencies to develop and expand early warning systems that include use of new emergency communication technologies to transmit data from their monitoring stations to national and international warning centres, and to receive and disseminate warnings to at risk communities; and
 - That UNESCO/IOC and WMO work with their respective organizations to assist their respective Member States Member states look at relevant legal frameworks to encourage and require telecommunication service providers to put in place infrastructure and necessary equipment to provide emergency managers' ability to alert individuals in areas vulnerable to tsunamis