XI ICG/CARIBE-EWS
CARTAGENA, COLOMBIA, FROM 5 TO 7 APRIL 2016.

Working Group 3
TSUNAMI RELATED SERVICES
Progress Report
2015 - 2016

Chair: Antonio Aguilar, Venezuela (2014-2016)

Vice-Chair (Technology and communications platform for alerts): Ernesto Morales (USA 2014-2016)

Vice-Chair (Protocols for end to end communication and dissemination of warnings): Eric Mackie (Trinidad and Tobago, 2015-2017)
Working Group Three: Tsunami Related Services (ToR)

Purpose:
To examine current and developing capacities in each country of the region and advise the ICG about the definition and composition of early warnings and tsunami products and the methods and best practices for effective procedures for end to end communication and dissemination of early warnings and tsunami products.

Functions:
- Explore and document the capabilities for dissemination of existing guidance and alerts in the countries of the region.
- Identify the difficulties and challenges existing in the region for effective “end to end” communication and dissemination of early warnings.
- Establish strategies for the development and implementation of methods and technologies to strengthen the media and dissemination of early warnings in the countries of the region.
- Routinely test (and periodically evaluate) the mechanisms of communication and dissemination of warnings for all countries in the region, in order to identify weaknesses and make recommendations to help strengthen these delivery systems.
- Create communication protocol and standardized information identifying the minimum acceptable levels for communication and dissemination of tsunami early warning in all countries for approval by the IGC.

Sub-group to Technology and communications platform for alerts

Sub-group to Protocols for end to end communication and dissemination of warnings
Progress and challenges on aspects of technology and communications platform for alerts:

The opportunities given by the execution of the exercises Caribe Wave 2015 and 2016, to test the media and transmission platforms, and assess their effectiveness far could be exploited. The main observations were:

- For the dedicated channels of the World Meteorological Organization, the GTS and AISR (Aeronautical Information System Replacement) there are reports that the systems continue functioned smoothly in countries that use it regularly. As a novelty, Venezuela tries to access this platform to receive messages through this medium.
-Regarding the use of social networks based on widely available Internet, tests were made to evaluate its use and application for the transmission of alert messages and information exchange. They were scanned messaging networks: Twitter, Whatsapp, Blackberry Messenger, Line; Social networks: Facebook, Instagram, Flirck; videoconferencing and utilities: Hangout, Blackboard, Skype. They were: Twitter, Whatsapp, Facebook, Hangout and Skype turned out to be the most accessible and stable.

- The testing of direct satellite connections of Internet access experienced in Venezuela, enhance the availability of Internet in remote areas and extreme conditions, which will be very useful in a disaster, when it is assumed that conventional platforms of Internet service providers will collapse. This experience could be transferred to other countries in the region.
-The impact and scope of the conventional telephone network, fax and cellular wireless networks, as effective means to transmit and receive messages if tsunamis were evaluated. A first approach suggests that much of the infrastructure cell phone on one side, not on the shorelines at sea level due to the need for these teams to work in high places; and on the other hand, have limited battery in case of power failure backup. Given these conditions, we can say that:

1) If not directly affected by the earthquake, no significant damage expected in the infrastructure.
2) While infrastructure remains intact, it may only work for a very limited time, not having an adequate backup power.
3) Studies in more detail are required to establish actual levels of vulnerability of the network. What is conclusive in the fact that this platform is the most widely used throughout the Caribbean region for all people, for information on tsunamis and alerts, coupled with the availability of smartphones interconnected with Internet networks is extensive and disseminated.
Progress and challenges on aspects of Protocols for end to end communication and dissemination of warnings

- There is agreement as to which there must be various types of information for each audience, pursuing certain goals. The information shared by researchers, emergency managers, the different levels of government, the armed forces and the general public are substantially different.
- An important recommendation on the design of warning dissemination systems "in parallel" based on communities. This means that the subject at risk for tsunami coastal populations, should acquire ability to identify at sea signals tsunamis, and enable organizational plans and response at the local level to implement self-protection measures by themselves, because the formal and bureaucratic channels for transmit and receive alerts at the final destination could delay, too late.
The media continue to be an important channel for transmission of public information in the event of tsunamis and other threats. It is necessary to promote training oriented to journalists, in order to win them as allies in case of tsunamis, but especially for information campaigns on self-protection measures and preparedness this threat.

For this reason, it is necessary to design short courses, diploma courses and other measures to capture the attention of these professionals on the role to be played before, during and after a tsunami.
Pending issues

- There is still very little information that can help determine whether the information received by countries on related products tsunamis finally reaches the coastal towns and other interests that make life on the sea. This remains a challenge posed to all countries in the region:

  • In the region many countries have now defined a protocol or criterion of information on public warning in case of tsunamis, according to the new products PTWC?

  • Has it been made clear the nature of new products issued by the PTWC, especially the role to be assumed by each country regarding its use in determining alert levels?

  • If every country should have alert levels according to their own realities and contexts, how to propose a common basis from which to compare, evaluate and improve these systems, allowing its evolution?

  • Finally, we need to create a training program - advice on these issues?
Outstanding experiences

- Is highlighted the brief contact maintained during exercise Caribe Wave 2016, between the National Institute of Seismology, Volcanology, Meteorology and Hydrology of Guatemala (INSIVUMEH), the National Monitoring System Tsunamis (SINAMOT) of Costa Rica, the OSSO Corporation and DIMAR of Colombia, who on March 17, as part of the exercise Caribe Wave 2016, established contact via Hangout with FUNVISIS in Venezuela, to receive first hand information from damage and data from earthquake and tsunami scenario.

- In addition to these media, it continues to promote the participation of amateur radio volunteers who consistently maintained networks of radio communications national and international level in the HF bands: 2, 11, 20, 40 and 80 meters. During the last few years it has seen an increased interest from this group of people to collaborate and play a leading role in the event of disasters, both in Venezuela and throughout the Caribbean region, demonstrating its importance in emergencies.
- It is necessary to assess the experiences that arise spontaneously organized social groups to provide solutions to the problems of communications. It highlights the experience developed by L'association Gwadalug (Guadeloupe), in conjunction with other activist groups, free software enthusiasts, who anticipates a project called "Geek Contre Tsunamis". To exercise Caribe Wave 2015 established an emergency bridge Internet to contact the Désirade island, and where loss of the connection and emergency data backups (for details simulated: http://www.gwadalug.org/spip.php?article139). Also, for the Caribbean Wave 2016, they used drones, seismic and meteorological sensors operating in real time as well as emergency Internet connection from the island of Marie Galante with other nearby islands.
RECOMMENDATIONS FOR ICG / CARIBE EWS

-Urge countries to diversify their media, so that the redundancy of communications between PTWC and national centers can be established to ensure receipt of messages.

-Invite countries to enable and incorporate within their, means of communication for the exchange of information in real time, allowing exchange scientific data and information for the assessment of tsunamis and response scientific and emergency management agencies to the same.

-Invite countries to explore the effectiveness and applicability of the use of social networks and other media based on the web, for the dissemination of educational messages and public awareness, community preparedness, and to disseminate emergency messages.

-Urge countries to formally incorporate collaborative initiatives to message broadcast systems, incorporating valuable contribution of amateur radio, and other organized groups of the population.

-We suggest countries promote and encourage training programs for representatives of the media, in order to win them and engage them as partners in the dissemination of key information to communities about tsunamis, both in terms of preparation and response, and aspects of risk reduction.

-Urge countries to establish mechanisms that help determine whether the information received from PTWC on products related to tsunamis, finally reaches the coastal towns and other interests that make life on the sea, and identify these problems and their solutions.

- We recommend countries continue to drive continue the development of early warning systems, both with technological deployments and institutional protocols; as well as in communities, enhancing and strengthening their capabilities, so they can act for themselves before the occurrence of these phenomena.
Join the working group!
Joignez-vous au Groupe de Travail!
Unanse al equipo de trabajo!
Gracias por su atención

Questions?