
LOOKING BACK, LOOKING FORWARD:

BACKGROUND AND OVERVIEW

The Workshop provides an opportunity to share experiences and lessons learned from recent tsunamis and to discuss and elaborate on how effective the PTWS, both as a system and individually as countries, has been in providing early, timely warnings to communities at risk. Recommendations from this Workshop will serve as a catalyst for improving the system.

The Pacific Ocean and its adjacent marginal seas is the largest, most diverse, and most tsunami-prone of any of the earth’s oceans. Pacific Ocean nations face and must be prepared for distant, and local tsunami threats. In the past, Member States depended primarily on the international tsunami warning centers (PTWS, NWPTAC, WC/ATWC) for advice to inform National Tsunami Warning Centre decisions. But a new awareness of local and regional threats demands that Member States address these threats through improved and expanded National Tsunami Warning Centre and Disaster Management Office capacities and through formal regional collaboration. The result should be an interoperable network of National and Regional tsunami warning and advisory centres that complement the distant tsunami advice.

From the historical record, it is known that most tsunamis have only local or regional impact, yet it is also well-documented that a few powerful local tsunamis can propagate across ocean basins as distant tsunamis with sufficient long-lived energy to cause damage one day later and tens of 1000s of kilometers away.

Organized in 1965 in response to the 1960 M9.5 Chile tsunami, the PTWS (formerly ITSU) has successfully shown itself over the last 45 years to be a capable and reliable international system for detecting, evaluating, and alerting Pacific countries to an oncoming distant tsunami. Over the last decade, upgrades in the detection networks and improvements in evaluation techniques have enabled warning centers to respond better and faster, and to thus provide communities with a few extra minutes of lead time to escape the tsunami.

In the last three years, three destructive and deadly tsunamis have placed PTWS countries in various levels of warning for distant tsunamis, and locally, five countries were impacted nearly immediately with people having only 10-30 minutes before the 1st large waves hit. In Japan from 11 March 2011, casualty estimates indicate more than 25,000 people lost their lives and about 130,000 people still remain in evacuation shelters. So, while countries in general responded well to the 2010 and 2011 tsunamis as distant sources, there is still a need to reflect on our effectiveness in responding to local and regional tsunamis.
The PTWS Medium Term Strategy (MTS), 2009-2013, envisions that the PTWS as an “An interoperable tsunami warning and mitigation system based on coordinated Member State contributions that uses best practices and operational technologies to provide timely and effective advice to National Tsunami Warning Centres. As a result, PTWS communities at risk are aware of the tsunami threat, reduce risk, and are prepared to act to save lives.” The MTS builds from the ITSU (PTWS) Master Plan (1999, rev 2004) which summarizes the mitigation of tsunami hazards in the Pacific.

The PTWS MTS is comprised of three Pillars supported by three foundational elements. The Pillars are:

- Risk Assessment and Reduction: hazard and risk identification and risk reduction
- Detection, Warning and Dissemination: rapid detection and warning dissemination down to the kilometer
- Awareness and Response: public education, emergency planning and response

The supporting foundational elements are:

- Interoperability: free, open and functional exchange of tsunami information
- Research: enhanced understanding and improved technologies and techniques
- Capacity Building: training and technology transfer
- Funding and Sustainability: resources to sustain an effective PTWS

Within each Pillar, prioritized activities, guided by the PTWS’s foundational elements, should be undertaken with the aim of making populations at risk safer.

In the context of the PTWS Master Plan and Medium Term Strategy, key questions to consider and answer in this Workshop will be:

- How well prepared are countries for the next tsunami?
- Are risks known, warnings available, and awareness sufficient for effective response?
- What can be done better technically to strengthen national systems?
- What are warning center and response operations gaps for local or distant tsunamis?
- Are there science research gaps that need to be addressed in order to improve warnings?
- Are communications systems adequate for alerting and responding?
- Is the current international system of a PTWC-centered Pacific system adequate for warning against tsunamis (both distant and local /regional), or would a regional approach (PTWS as a system of systems) be more effective?

As the PTWS moves forward in the aftermath of the 2009-2011 events, careful and thoughtful thinking and review are again required to draw out and prioritise the critical, practical, and pro-active recommendations for countries and the PTWS should take action on.

Workshop Organizing Committee
Tanya Ivelskaya (Russian Federation)
Dr. Laura Kong (ITIC)
Dr. François Schindélé (France)
Angélica Muñoz (Nicaragua)
PROVISIONAL AGENDA

Session 1 (1100-1105): Workshop Overview (Tanya Ivelskaya, Organizing Committee)
Goals, Outcomes, Format
Each Speaker or Panelist is requested to provide a short (0.5-1.0 page) written summary for inclusion in the Workshop Report.

Session 2 (1105-1300): Looking Back: Highlights and Lessons Learned from Recent Tsunamis
(100 min, 15 min each)
Each speaker is requested to discuss the event in the context of the PTWS Medium Strategy pillars as it occurs in their own country or region. Conclusions should identify what aspects of the pillars have contributed to the success of the PTWS and national systems, and also what lack of action or gaps in the pillars is reducing the timeliness, reliability, accuracy, or efficiency of tsunami warning and response. Thoughts can focus at the local, national, and/or international levels.
1. 29 September 2009: Samoa, American Samoa, Tonga Tsunami - Dr. Ken Gledhill, GEONET Project Manager, Institute of Geological and Nuclear Sciences, New Zealand
2. 27 February 2010: Chile Tsunami - Captain Patricio Carrasco, Director, SHOA, Chile
3. 11 March 2011: Japan Tsunami - Takeshi Koizumi, Senior Coordinator for International Earthquake and Tsunami Information, JMA, Japan
4. Tsunami Warning Perspectives - Dr. Charles McCreery, Director, PTWC, USA
5. Tsunami Response and Preparedness Perspectives - Filomena Nelson, Principal Disaster Management Officer, Samoa Meteorological Division, Ministry of Natural Resources and Environment, Samoa
6. General Discussion (15 min)

Session 3 (1430-1600): Looking Forward: Regional and Technical Priorities of Action
1. Panel Discussion (70 min, 10 min each)
   Format: Each Panelist should represent his WG theme. Panelist is given 5 minutes to respond. This is followed by 5 minutes discussion. If slides are used, no more than 2-3 should be used. Panelists (*) speaking in other sessions may choose to provide only very brief remarks.

   Question: In the next 5-10 yrs, considering the recent tsunamis in the context of the ITSU Master Plan (rev 2004) and PTWS Medium Term Strategy (2009-2013), what are the top three (3) priorities of practical and doable action at the local, national, and/or international level to save lives and property? Are there roadblocks or challenges to getting them done?

   Panelists: PTWS Working Group Chairs
   - PTWS Working Group 1, Risk Assessment and Reduction, Chair – Dr. François Schindelé, CEA/DASE, France (*)
   - PTWS Working Group 2, Detection, Warning, Dissemination, Chair – Dr. Charles McCreery, PTWC (*)
   - PTWS Working Group 3, Awareness and Response, Chair – David Coetzee, MCDEM, NZ
- Central American Pacific Coast Regional Working Group, Chair – Dr. Alejandro Rodriguez, INETER, Nicaragua
- South East Pacific Regional Working Group, Chair, Jorge Cardenas, INOCAR, Ecuador
- South West Pacific Regional Working Group, Chair – Dr. Ken Gledhill, IGNS, NZ (*)
- South China Sea Working Group, Chair – Dr. Mohd Rosaidi Che Abas, MMD, Malaysia

2. General Discussion (20 min)

Session 4 (1630-1715): Keynote (25 min), Discussion (20 min)
   1. Looking Forward – Where are we going?
      Dr. François Schindelé, CEA/DASE, France
   2. General Discussion

Session 5 (1715-1800): Workshop Summary and Recommendations (45 min)
Moderator and Rapporteur (Tanya Ivelskaya, Organizing Committee)