

ICG/PTWS-XXX/3.7

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**REGIONAL WORKING GROUP ON TSUNAMI WARNING AND MITIGATION SYSTEM IN THE SOUTH
EAST PACIFIC REGION (WG-SEP)**

REPORT OF INTERSESSIONAL ACTIVITIES

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This report of the South East Pacific Regional Working Group (SEP-WG) covers the intersessional period from ICG/PTWS XXIX held virtually to the ICG/PTWS-XXX session in September 2023 held in Nuku'alofa, Tonga.

I.- BACKGROUND

The following terms of reference for the ICG/PTWS that were established at ICG/PTWS Session XXVIII for the group:

- A.- To enhance regional capabilities in the South East Pacific Region for the Detection, Assessment, Warning and Dissemination of tsunami events, based on lessons learned and global trends, to improve opportunities for the National Tsunami Warning Centers (NTWC) following the Sendai framework priorities as a reference.
- B.- To facilitate cooperation in the establishment and upgrading of seismic and sea level stations and networks and communication systems in the region, and their interoperability in accordance with ICG/PTWS requirements, through the active participation of appropriate national delegates from Member States, in the Working Group 2: Tsunami Detection, Warning and Dissemination.
- C.- To improve the communication channels between the countries, according to the regional communications protocol established under Permanent Commission of the South Pacific (CPPS), through periodical tests using redundant systems.
- D.- To analyze the convenience of piloting Tsunami Ready program in the region.
- E.- To promote regional activities and join projects considering in-region capacity building and enhancing disaster preparedness for response as main efforts, according the priorities number 1 and 4 of the Sendai framework.
- F.- To facilitate capacity building and the sharing of sea level information among others, including the free and open exchange of data.
- G.- To improve the educational programs with regional criteria based on social, cultural and economic reality, through the active participation of appropriate national delegates from Member States, in the Working Group 3: Disaster Risk Management and Preparedness.
- H.- To develop synergies with universities and academic centers to promote and to facilitate the regional tsunami research in order to cope with regional needs.

The Group will be composed of representatives nominated by the Member States of Chile, Colombia, Ecuador and Peru, with a Chair and a Vice-Chair from each country rotating every two years, following an alphabetical order. In this context, the Vice-Chair will assume regional presidency for the coming period.

II.- PROGRESS UPDATE:

A.- Virtual Meetings:

- 1.- The Group held six regular virtual meetings in March (2022), June (2022), August (2022), October (2022), February (2023), and June (2023). The main focus of these meetings was to plan future activities for the Region, coordinate operational exercises, and explore opportunities for cooperation between Member States or other Working Groups.
- 2.- After the Hunga Tonga-Hunga Ha'apai (HTHH) event on January 15, 2022, two post-emergency meetings were held, the first one the week next to do a situational report of each NTWC and later in February, a lessons learned session with the NTWCs.

B.- In-person meeting:

- 1.- Between November 14 and 17, 2022, the annual meeting of the Group in Santiago, Chile, funded by the Permanent Commission of the South Pacific (CPPS), was the first in-person event after the COVID-19 pandemic, with the participation of representatives from Chile, Colombia, Ecuador, and Peru. Each Member State presented its national actions in the inter-sessional period, gave its national protocol in case of a new HTHH event, and updated the group with its advances with the Tsunami Ready Recognition Programme (TRRP) implementation. Also, the member states worked together to update the Regional Communication Protocol and the Group's Terms of Reference.

C.- Regional Exercises:

- 1.- June 02, 2022, the four Member States of the WG-SEP executed an Operational Exercise organized by Colombia and Ecuador, with a scenario with two significant magnitude events separated by 85 minutes, one in Southern Panama (8.8 Mw) and another in Central Chile (7.7 Mw), allowing to train a situation of simultaneous Tsunami Threat with different seismic sources.
- 2.- The whole Group participated in the Pacific Wave 2022 (PACWAVE22) exercise, doing a Regional Coordinated Operational Exercise with a near-field and far-field scenario for each of the 4 Member States, organized by Chile and Peru. The activity had two phases: October 20th (Near-Field: Chile and Peru – Far Field: Colombia and Ecuador) and October 27th (Near-Field: Colombia and Ecuador – Far Field: Chile and Peru). This exercise allowed the whole Group to train coordination for near and far field scenarios and, in the case of Chile and Colombia, to involve their NDMOs, accomplishing the objectives for the four Member States of PACWAVE22.
- 3.- The first regional exercise in 2023 was a surprise HTHH Scenario Regional Exercise organized by Colombia and Chile. Member States could test their national protocols using the new Products for HTHH from PTWC. The group had synthetic

mareograms available every 5 minutes, simulating the IOC Sea Level Monitoring Platform.

D.- Other activities

- 1.- The "Shared Access to Data on Continuous Observation of Sea Levels: Tool for Effective Regional Response to Tsunami Emergencies" workshop, took place at the Chilean Navy Hydrographic and Oceanographic Service (SHOA), office that operates the Chilean NTWC, between 27 and 30 September 2022. It brought together representatives from the National Tsunami Warning Centers of Chile, Colombia, Ecuador, and Peru. Expert presentations were also made by the Pacific Tsunami Warning Center (PTWC), VLIZ, the IOC-UNESCO, and SHOA. The primary objective of the workshop was to enhance the capabilities of WG-SEP Member States for tsunami warning and mitigation through the sharing of data in real-time from regional sea level stations. The outcome was the addition of 15 new sea level stations located in Colombia, Ecuador and Peru shared with the IOC Sea Level Monitoring Facility, thus providing additional information to decision-makers across the region.
- 2.- Between August 22 and 25, 2023, in the city of Arica, the UNESCO/IOC Meeting of Experts on tsunami sources and hazards in southern Peru and northern Chile was held, with experts from different parts of the world to identify and quantify credible tsunami sources along the Perú-Chile subduction zone that could significantly impact the local and regional area, the expert consensus was reflected in a Meeting Report soon to be published by UNESCO.
- 3.- The Member States collaborated to develop a supporting document titled "SMART Cables Potential for the National Tsunami Warning Centers", available as a separate working document.

E.- Upcoming planned activities in the short term:

- 1.- Second regional exercise, which Ecuador and Peru will organize.
- 2.- Regional Online workshop on Tsunami Threat Assessment using Modelling.
- 3.- Regional Online workshop subject to be determined.
- 4.- Turnover of Chair and Vicechair to Ecuador and Peru, respectively.