



INFORMATION SHEET

December 2022

INTERGOVERNMENTAL COORDINATION GROUP FOR THE PACIFIC TSUNAMI WARNING AND MITIGATION SYSTEM (ICG/PTWS)

WHAT: The ICG/PTWS is subsidiary body of the Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific, and Cultural Organization (UNESCO). The ICG/PTWS was renamed from the International Coordination Group for the Tsunami Warning System in the Pacific (ICG/ITSU) in 2005 to an intergovernmental body focusing on commitments of member states to continually embrace the comprehensive nature of tsunami risk reduction. For more information, visit <http://ioc3.unesco.org/ptws/> For general information on tsunamis, visit <http://www.tsunamiwave.info/> or <http://itic.ioc-unesco.org/>

WHO: The ICG/PTWS is comprised of IOC Member States bordering and within the Pacific Ocean and other interested Member States. The Pacific is comprised of 46 countries. Of these, 43 have identified Tsunami National Contacts and Tsunami Warning Focal Points for receiving information on international tsunami mitigation activities and tsunami alerts or advisories from the PTWC, JMA, and/or US NTWC that serve as the international tsunami alert centres for the PTWS.

HISTORY: The internationally-coordinated tsunami early warning system was established in 1965 in response to the 1960 M9.5 Chile earthquake which generated a Pacific-wide tsunami that travelled across the Pacific causing damage and deaths in Hawaii (59 deaths), Japan (139 deaths), and the Philippines (> 21 deaths). The goal of the warning system is to provide timely and reliable alerts. The system depends on the free and open sharing of seismic and sea level data to be able to continuously monitor and evaluate tsunamigenic events, and robust international communications systems for the timely dissemination of alerts to all countries. Over history, 69% of the world's confirmed tsunamis have occurred in the Pacific. Between 1980 and 2022, there were 39 local or regional confirmed tsunamis that resulted in deaths or property damage, 27 of these were in the Pacific and its adjacent seas.

PURPOSE: The ICG/PTWS acts to coordinate international tsunami warnings and mitigation activities. One of the most important activities of the ICG/PTWS is ensure the timely issuance of tsunami alerts in the Pacific. The system, as described by the PTWS Operational Users Guide (Jan 2009, update 2011, formerly Communications Plan), depends on the free and open sharing of seismic and sea level data to continuously monitor and evaluate tsunamigenic events, and robust international communications systems for the timely dissemination of tsunami threat advice to each country's National Tsunami Warning Centres (NTWC). The NTWC's are then responsible for issuing tsunami warnings to their citizens, and they work with their national and local emergency management agencies to ensure public safety during emergencies. Comprehensive tsunami mitigation programmes require complementary and sustained activities in tsunami hazard risk assessment, tsunami warning and emergency response, and preparedness. Stakeholder involvement and coordination is essential, and community-based, people-centred mitigation activities will help to build tsunami resiliency.

SUPPORTING CENTRES: The Tsunami Unit in IOC Paris Headquarters serves as the Secretariat for the PTWS, and provides overall direction for the implementation of the global tsunami warning and mitigation system. The International Tsunami Information Centre (ITIC) in Honolulu, Hawaii serves as technical and capacity building resource to Member States. The Pacific Tsunami Warning Center in Honolulu, Hawaii, USA serves as the operational headquarters of the tsunami warning system; sub-regional centres in Japan and Alaska, USA work with PTWC to provide international warnings and advisories for the Pacific and its marginal seas.

As a technical resource centre for Member States, the ITIC monitors the effectiveness of the PTWS in order to recommend and facilitate improvements in the timeliness and accuracy of tsunami warnings, works closely with the PTWC and sub-regional centres to enhance its operations and directly with Member States to establish new or strengthen existing national tsunami warning systems, facilitates technology transfer through training and other capacity building activities, and acts as an information resource for the implementation of comprehensive national tsunami mitigation programmes, education, and awareness. The ITIC is the only global centre dedicated solely to mitigating tsunami hazards so as to save lives and reduce property damage. The Caribbean Tsunami Information Centre serves the Caribbean region, the Jakarta Tsunami Information Centre serves Indonesia and the Indian Ocean, and the Northeastern Atlantic and Mediterranean Tsunami Information Center serves Europe.

The ITIC has supported strongly the IOC's global tsunami warning and mitigation system implementation in the Indian Ocean, the Caribbean, and the north Atlantic and Mediterranean. As Member States of the PTWS also belong to the ICG/IOTWS or ICG/CARIBE-EWS, the 50+-year-old PTWS has played a leading role in ensuring system consistency across oceans.

INTERNATIONAL WARNING SYSTEM ARRANGEMENTS:

The Pacific Tsunami Warning Center in Honolulu, Hawaii, serves as the operational headquarters of the international tsunami warning system in the Pacific. The PTWC (started in 1949 after the 1946 Alaska tsunami) works in close cooperation with sub-regional centers in

- Japan (Japan Meteorological Agency (JMA) started in 1952 as national tsunami warning centre). Northwest Pacific Tsunami Advisory Center (NWPTAC) started in 2005;
- China (National Marine Environmental Forecast Centre, SOA). South China Sea Tsunami Advisory Centre (SCSTAC) started in 2019;
- Nicaragua (Instituto Nicaragüense de Estudios Territoriales (INETER). Central America Tsunami Advisory Centre (CATAC) started interim service with full functionality on January 2022.

The centres issue international tsunami information for the Pacific that includes tsunami threat information for the largest earthquakes (M6.5 or greater). The messages are sent to designated national authorities, as each country is individually responsible for issuing warnings and public safety information to its population. The Tsunami Service Providers (PTWC, NWPTAC, SCSTAC) will issue tsunami wave amplitude forecasts for potentially dangerous tsunamis.

The advisories are provided to the Pacific Ocean and all marginal seas in the north- and southwest Pacific. These include the Philippine Sea, East China Sea, Yellow Sea, Sea of Okhotsk, Bering Sea, South China Sea, parts of the Eastern Archipelagic Seas (Malacca, Singapore, and Karimata Straits, Timor Sea, Arafura Sea, Halmahera Sea, Sulawesi Sea, Mindanao Sea, Sulu Sea, and Celebes Sea, and the seas of the South Pacific Ocean (Bismarck Sea, Solomon Sea, Coral Sea, and Tasman Sea). Indonesia covers seas within its national boundaries (Bali Sea, Banda Sea, Ceram Sea, Flores Sea, Halmahera Sea, Java Sea, Makassar and Sunda Straits, Molucca Sea, and Savu Sea).

The PTWC and Japan Meteorological Agency cooperatively provided interim advisory information for the Indian Ocean from 2005-2012, and the South China Sea Region from 2006-2019.

Within North America, the Alaska, USA (US National Tsunami Warning Center (USNTWC), formerly West Coast/Alaska Tsunami Warning Center, started in 1967 after 1964 Alaska tsunami, provides alerts for Canada under bi-lateral arrangements. USNTWC monitors the Pacific, Atlantic, Caribbean, and Gulf of Mexico to provide authoritative tsunami warnings for the US Alaska, the West, East, and Gulf Coast states, and for the West and East Coasts of Canada. PTWC similarly monitors these same oceans to provide authoritative warnings for Hawaii, Puerto Rico, the US and British Virgin Islands, and US national interests in the Pacific. The PTWC provides advisories for the wider Caribbean and adjacent seas.

National Tsunami Warning Centres are active in a number of countries. The oldest are in the Russian Federation (Sakhalin and Kamchatka Tsunami Warning Centers started after the 1952 Kamchatka tsunami), in Chile (Servicio Hidrográfico y Oceanográfico de la Armada de Chile (SHOA) Sistema

Nacional de Alarma de Maremotos (SNAM), started in 1964 after the 1960 Chilean tsunami), and in Tahiti, France (Centre Polynésien de Prévention des Tsunamis (CPPT) started in 1965 after the 1964 Alaska tsunami and providing tsunami warnings for French Polynesia which encompasses a large geographic area of the south Pacific).

HOSTING COUNTRIES:

The PTWC and USNTWC are part of the US NOAA National Weather Service (NWS), and coordinate their messages prior to issuance to ensure consistency and minimize confusion. Since 1965, ITIC has been a joint partnership of the IOC and NOAA NWS; Chile has provided the ITIC Associate Director since 1998, and Japan seconded a staff to the ITIC from 2007 to 2009.

WHEN DO ICG MEET:

The ICG normally meets every two years, or more often as needed, in order to review and report on progress, and identify, discuss, and take action to continually strengthen the system and enhance the timeliness and accuracy of tsunami alerts. The recommendations and resolutions from each ICG are provisional until formally presented and accepted at the annual sessions of the IOC General Assembly or Executive Council.

ICG/ITSU-XX: 3-7 October 2005, Vina del Mar, Chile

ICG/PTWS-XXI: 3-5 May 2006, Melbourne, Australia (Extraordinary Session)

ICG/PTWS-XXII: 17-20 September 2007, Guayaquil, Ecuador

ICG/PTWS-XXIII: 16-18 February 2009, Apia, Samoa

ICG/PTWS-XXIV: 24-27 May 2011, Beijing, China

ICG/PTWS-XXV: 9-11 September 2013, Vladivostok, Russia

ICG/PTWS-XXVI, 50th Anniversary: 22-24 April 2015, Honolulu, Hawaii, USA

ICG/PTWS-XXVII, 27-30 March 2017, Tahiti, French Polynesia

ICG/PTWS-XXVIII, 2-5 April 2019, Montelimar, Nicaragua

ICG/PTWS-XXIX, 1-2 and 7-8 December 2021, online virtual

ICG/PTWS-XXX, 11-15 September 2023, Nuku'alofa, Tonga (planned)

HOW TO JOIN the ICG/PTWS:

All PTWS Member States must be first be members of the IOC and UNESCO. There is no financial cost for membership to the IOC. Formally joining to the ICG/PTWS is made by letter request to the IOC Executive Secretary. Government Foreign Ministries should send a formal letter requesting to join, and briefly explain their country's interest to join; if applicable the letter may come from the IOC Action Address.

The letter should also designate an official PTWS Tsunami National Contact (TNC) to which intergovernmental tsunami coordination information and activities will be directed towards, and a 7x24 Tsunami Warning Focal Point (TWFP) who will receive the international tsunami bulletins. Designations should come from the Ministry of Foreign Affairs, Head of UNESCO National Commission, Permanent Delegate to UNESCO, or Head of the specified national coordinating body for liaison with the Commission ("IOC Focal Point"). Upon receipt of the letter, the IOC shall reply confirming the designations. TNC and TWFP Forms are available for this purpose.

IOC and ICG/PTWS Secretariat Contact Information:

IOC Tsunami Programme : <http://www.ioc-tsunami.org/>

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