

HAZARDS AND THREATS

TSUNAMI

ACRONYMS AND ORGANIZATIONS

Forecast Point

The Forecast Point is the location where the Tsunami Warning Center may provide estimate(s) of tsunami(s) arrival time(s) or wave height(s).

GLOSS (Global Sea Level Observing System)

The Global Sea-Level Observing System (GLOSS) is a component of the Global Ocean Observing System (GOOS). GLOSS was established by United Nations Educational Scientific Cultural Organization (UNESCO) International Oceanographic Commission (IOC) in 1985 designed to improve the quality of sea level data as input to studies of long-term sea level change. The observation system consists of a core network of approximately 300 stations distributed along the continental coastlines and throughout each of the world's island groups. The GLOSS network also supports sea level monitoring for tsunami warning with minimum operational standards of 15-minute data transmissions of one-minute sampled data.

GOOS (Global Ocean Observing System)

The Global Ocean Observing System (GOOS) is a permanent global system for observations, modeling and analysis of marine and ocean variables to support operational ocean services worldwide. The GOOS Project aims to provide accurate descriptions of the present state of the oceans, including living resources; continuous forecasts of the future conditions of the sea for as far ahead as possible; and the basis for forecasts of climate change. The GOOS Project Office is located at the International Oceanographic Commission (IOC) Headquarters located in Paris, France since 1992, provides assistance in the implementation of GOOS.

GTS (Global Telecommunications System)

Global Telecommunications System (GTS) of the World Meteorological Organization (WMO) that directly connects national meteorological and hydrological services worldwide. The GTS is widely used for the near real time transmission of sea level data for tsunami monitoring. The GTS and other communications methods are used for the transmission of tsunami warnings.

ICG (Intergovernmental Coordination Group)

The Intergovernmental Coordination Group (ICG) is a subsidiary of United Nations Educational Scientific Cultural Organization (UNESCO) International Oceanographic Commission (IOC). The ICG meets to promote, organize and coordinate regional tsunami mitigation activities, including the issuance of timely tsunami warnings. To achieve this objective requires the participation, cooperation and contribution of many national and international seismic, sea level, communication and dissemination facilities throughout the region. The ICG is comprised of member states in the region. Currently, these are the ICGs for tsunami warning and mitigation systems in the Pacific, Indian Ocean, Caribbean and adjacent regions, and north-eastern Atlantic, the Mediterranean and connected seas.

ICG/CARIBE-EWS

ICG/CARIBE-EWS is the Intergovernmental Coordination Group for tsunami and other coastal hazards warning systems for the Caribbean and adjacent regions established by Resolution XIII-14 of the 23rd Session of the International Oceanographic Commission (IOC) General Assembly in 2005. The ICG is made up principally of IOC member states and regional organizations from the Wider Caribbean Region. Through the coordinating efforts of the IOCARIBE Sub-commission starting in 1993, a group of experts formulated a proposal for the building of the Intra-Americas Tsunami Warning System that was endorsed by the IOC General Assembly in 2002.

http://www.ioc-tsunami.org/index.php?option=com_content&view=article&id=9&Itemid=15&lang=en

ICG/IOTWS (International Coordination Group/Indian Ocean Tsunami Warning and Mitigation System)

The Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWS) established by Resolution XXIII-12 of the 23rd Session of the IOC General Assembly in 2005. The IOC Regional Program Office located in Perth, Australia, serves the IOTWS Secretariat. There are 27 member states.

http://www.ioc-tsunami.org/index.php?option=com_content&view=article&id=8&Itemid=13&lang=en

ICG/ITSU (International Coordination Group/International Tsunami Warning System)

The Intergovernmental Coordination Group for International Tsunami Warning System in the Pacific was established by Resolution IV-6 of the Fourth Session of the International Oceanographic Commission (IOC) General Assembly in 1965. The ICG/ITSU was renamed to the ICG/Pacific Tsunami Warning System (PTWS) in 2005.

ICG/NEAMTWS (Intergovernmental Coordination Group/North-Eastern Atlantic, Mediterranean Tsunami Warning System)

The Intergovernmental Coordination Group (ICG) for Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, Mediterranean and connected seas was established by Resolution XXIII-13 of the 23rd Session of the International Oceanographic Commission (IOC) in 2005. The ICG is comprised of IOC member states bordering the north-eastern Atlantic and those bordering or within the Mediterranean or connected seas.

ICG/PTWS (Intergovernmental Coordination Group/Pacific Tsunami Warning Mitigation System)

The Intergovernmental Coordination Group for Pacific Tsunami Warning and Mitigation System (ICG/PTWS) was renamed by Resolution International Tsunami Warning System (ITSU)-XX.1 of the 20th Session of the ICG/ITSU in 2005. There are 32 member states in the ICG/PTWS. The ICG/PTWS was formerly referred to as the ICG/ITSU.

http://www.ioc-tsunami.org/index.php?option=com_content&view=article&id=11&Itemid=12&lang=en

ICG Tsunami National Contact (TNC)

The Intergovernmental Coordination Group (ICG) has designated by an ICG member states government to represent his/her country in the coordination of international tsunami warning and mitigation activities. The person is part of the main stakeholders of the national tsunami warning and mitigation system program. The person may be the Tsunami Warning Focal Point, from the national disaster management organization, from another agency with tsunami warning and mitigation responsibilities.

ICG Tsunami Warning Focal Point (TWFP)

The Intergovernmental Warning Focal Point is the contact person who is available seven days a week on a 24-hour basis, or other official point of contact or address, for rapidly receiving and issuing tsunami event information (such as warnings). The Tsunami Warning Focal Point (TWFP) either is the emergency authority (civil defense or other designated agency responsible for public safety), or has the responsibility of notifying the emergency authority of the event characteristics (earthquakes and/or tsunami), in accordance with national standard operating procedures. The TWFP receives international tsunami warnings from the PTWC, WC/ATWC, the JMANWPTAC, or other regional warning centers.

IOC

The International Oceanographic Commission (IOC) of United Nations Educational Scientific Cultural Organization (UNESCO) provides member states of the United Nations with an essential mechanism for global cooperation in the study of the ocean. The IOC assists governments to address their individual and collective ocean and coastal problems through the sharing of knowledge, information and technology and through the coordination of national programs.

<http://ioc-unesco.org/>

International Tsunami Information Center (ITIC)

The International Tsunami Information Center (ITIC) was established in November 1965 by the Intergovernmental Oceanographic Commission (IOC) of United Nations Educational Scientific Cultural Organization (UNESCO) to support the Intergovernmental Coordination Group (ICG)/International Tsunami Warning System (ITSU) in the Pacific. The ITIC also provides technical and capacity building assistance to member states for the global establishment of tsunami warning and mitigation systems in the Indian and Atlantic Oceans, the Caribbean and Mediterranean Seas, and other oceans and marginal seas. In the Pacific, the ITIC specifically monitors and recommends improvements to the Pacific Tsunami Warning System (PTSW), coordinates tsunami technology transfer among member states interested in establishing regional and national tsunami warning systems, act as a clearinghouse for risk assessment and mitigation activities, and serves as a resource for the development, publication, and distribution of tsunami education and preparedness materials.

<http://tsunamiwave.info>

International Union of Geodesy and Geophysics (IUGG)

The International Union of Geodesy and Geophysics (IUGG) is a non-governmental scientific organization established in 1919. IUGG is dedicated to promoting and coordinating studies of Earth and its environment in space. The IUGG Tsunami Commission, started in 1960, is an international group of scientists concerned with various aspects of tsunamis, including an improved understanding of the dynamics of generation, propagation, and coastal run-up of tsunami, as well as their consequences to society.

<http://iugg.org>



(Photo provided by the Japan Meteorological Agency)

Japan Meteorological Agency (JMA)

The Japan Meteorological Agency (JMA) was established as a tsunami warning service in 1952. JMA now serves as a National Tsunami Warning System that continuously monitors 24 hours-a-day all seismic activity in Japan, and issues timely information concerning earthquakes and tsunamis. In 2005, the JMA began operations of the Northwest Pacific Tsunami Advisory Center (NWPTAC). The NWPTAC provides supplementary tsunami information for events in and around Japan and the northwest Pacific, and interim services for the South China Sea region, in close coordination with the PTWC. Since then, the JMA and PTWC have provided interim services for the Indian Ocean.

<http://www.jma.go.jp/jma>



(Photo provided by the Japan Meteorological Agency)

Master Plan

The Master Plan is a long-term guide for improving the Tsunami Warning System (TWS). The plan provides a summary of the basic elements which comprise the TWS, a description of its existing components, and an outline of the activities, data sets, methods, and procedures that need to be improved in order to reduce tsunami risk. The first edition of the Intergovernmental Coordination Group (ICG)/Pacific Tsunami Warning System (PTWS) Master Plan was released in 1989. The second edition was published in 1999. The third edition was released in 2004.

http://itic.ioc-unesco.org/index.php?option=com_content&view=category&layout=blog&id=1064&Itemid=1142&lang=en

Ocean-Wide Tsunami Warning

An Ocean-Wide Tsunami Warning is issued to all participants after there is confirmation of tsunami waves capable of causing destruction beyond the local area. This warning contains estimated tsunami arrival times (ETAs) at all Forecast Points. Ocean-Wide Tsunami Warning Bulletins also normally carry information on selected wave heights

and other wave reports. The Warning will be cancelled when it is determined that the tsunami threat is over. As local conditions can cause wide variations in tsunami wave action, the all-clear determination should be made by the local action agencies and not the Tsunami Warning Center (TWC). In general, after receipt of a Tsunami Warning, action agencies can assume all-clear status when their area is free from damaging waves for at least two hours, unless additional ETAs have been announced by the TWC (for example for a significant aftershock) or local conditions, that may include continued searching for particularly strong currents in channels and harbors, warrants the continuation of the Tsunami Warning status.

Pacific Tsunami Warning Center and West Coast & Alaska Tsunami Warning Center (PTWC and WC/ATWC)



(Photo provided by the Pacific Tsunami Warning Center)

The Richard H. Hagemeyer Pacific Tsunami Warning Center (PTWC) located in Ewa Beach, Hawaii was established in 1949. The PTWC serves as the warning operations headquarters for the Pacific Tsunami Warning System (PTSW) and works closely with sub-regional and national centers in monitoring and evaluating potentially tsunamigenic

earthquakes. It provides international warning advisories for tele-tsunamis to countries in the Pacific, and warnings for Hawaii and U.S. Pacific island interests. PTWC has provided interim services for the Indian Ocean and the wider Caribbean since 2005.



(Photo provided by the Pacific Tsunami Warning Center)



(Photo provided by the West Coast and Alaska Tsunami Warning Center)

The West Coast and Alaska Tsunami Warning Center (WC/ATWC) was established in 1964. The center provides warning services to the continental U.S., Puerto Rico, the Virgin Islands, Canada and serves as the back-up to the PTWC.

<http://www.weather.gov/ptwc/>

<http://wcatwc.arh.noaa.gov/>

Sources: Intergovernmental Coordination Group, United Nations Educational Scientific Cultural Organization, National Ocean Atmospheric Administration

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