

NTWC OPERATIONS - WEB SITE URLS – BOOKMARKS (Oct 2019, update Dec 2022)

Tsunami Threat / Warning Messages, Earthquake and Sea Level Monitoring

Depending on internet bandwidth, display may be slow.

TSUNAMI THREAT SERVICES – Global Tsunami Warning System (as of 1 April 2016)

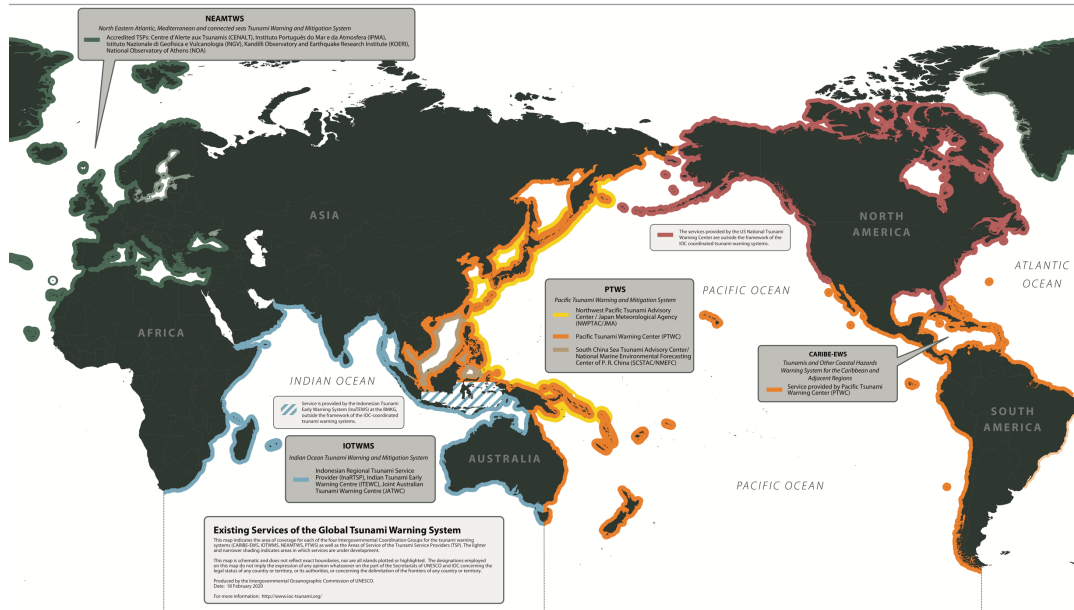
User's Guides by each Tsunami Service Provider describe the services they provide to customers

IOC Public List Serve Message Subscriptions

Summary: http://itic.ioc-unesco.org/index.php?option=com_content&view=category&layout=blog&id=1437&Itemid=1437

Subscribe: <https://lists.unesco.org/wws/subscribe/tsunami-information-ioc>

Global System, Feb 2020



PACIFIC and CARIBBEAN SERVICE AREAS

NOAA's NWS "Tsunami Alerts" site (PTWC, US NTWC): <http://www.tsunami.gov>

NOAA's NWS Tsunami Message Subscriptions: <http://tsunami.gov/?page=productRetrieval>

PTWC –US Pacific Tsunami Warning Center

<http://www.tsunami.gov>

AORs:

International: Pacific Ocean including marginal seas, Caribbean and Adjacent Regions

National: Hawaii, American Samoa, Guam/CNMI, Puerto Rico/US and British Virgin Islands

The PTWC serves as a Tsunami Service Provider providing threat information, including estimated/observed arrival times and tsunami heights, for the PTWS (Pacific) and CARIBE-EWS (Caribbean). The PTWC provides Warnings for Hawaii, American Samoa, Guam and CNMI, Puerto Rico and US and British Virgin Islands,

US NTWC – National Tsunami Warning Center (formerly WC/ATWC)

<http://www.tsunami.gov>

AORs: Continental USA, Canada, Alaska

The US NTWC provides Warnings for above customers.

NWPTAC – Japan Northwest Tsunami Advisory Center

Summary: <http://www.data.jma.go.jp/svd/egev/data/nwptac/index.html>

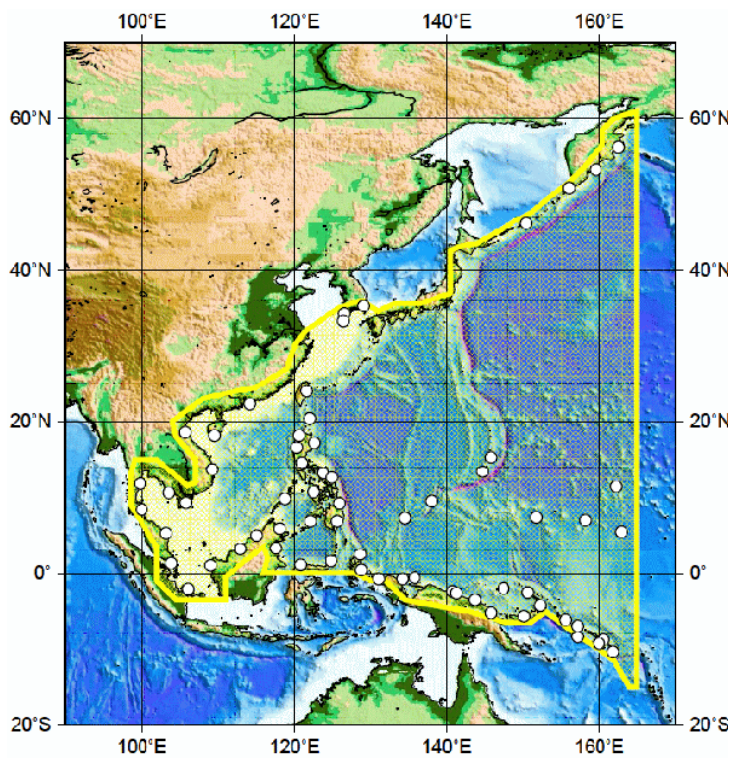
Messages: http://www.jma.go.jp/en/distant_tsunami/WEPA40/indexo.html

The Northwest Pacific Tsunami Advisory Center (NWPTAC) provides information advice on tsunamis in the Western and North Pacific and the South China Sea, including data on estimated/observed arrival times and tsunami heights, as well as earthquake information. Currently issuing since December 20, 2018 enhanced products on experimental basis, in parallel with existing products.

Geographical earthquake source coverage extends to about 100 to 165 deg E.

Forecasts are provided for blocks from Russia to Solomon Islands, and Thailand to Federated States of Micronesia and Marshall Islands (Eniwetok)

NWPTA Geographical Coverage (yellow outline) and Forecast Points (open circle)

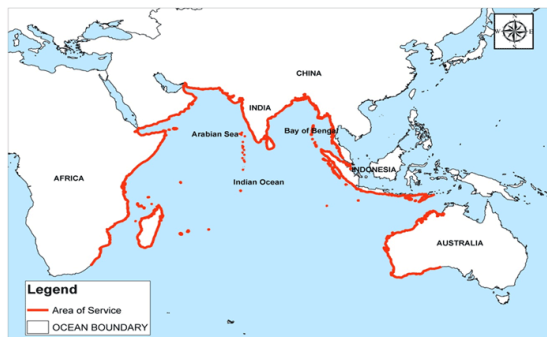


SCSTA Geographic Coverage (darker blue)

SCSTAC – China South China Sea Tsunami Advisory Center

<http://www.scstac.org/>

The South China Sea Tsunami Advisory Center (SCSTAC) provides information advice on tsunamis in the South China Sea and adjacent basins, including data on estimated/observed arrival times and tsunami heights, as well as earthquake information. Currently issuing since January 26, 2018 on trial basis new products.



INDIAN OCEAN SERVICE AREA – PUBLIC BULLETINS

This service is provided by regional tsunami service providers in Australia, India, and Indonesia. Public Notification Bulletins are issued publicly. Threat information is provided to NTWCs through a secure web portal. Public Notification bulletins are available through web sites.

Joint Australian Tsunami Warning Centre (JATWC)

<http://www.bom.gov.au/tsunami/iotws/> (TSP, web page under construction as of May 2018)

<http://www.bom.gov.au/tsunami/index.shtml> (national)

Indian National Centre for Ocean Information Services (INCOIS)

<http://www.incois.gov.in/tsunami/egevents.jsp>

Meteorological, Climatological and Geophysical Agency of Indonesia (BMKG)

<http://rtsp.bmkg.go.id/publicbull.php>

HISTORICAL TSUNAMIS

LIST OF TSUNAMIS (BY DECADE)

http://itic.ioc-unesco.org/index.php?option=com_content&view=category&layout=blog&id=1160&Itemid=1077

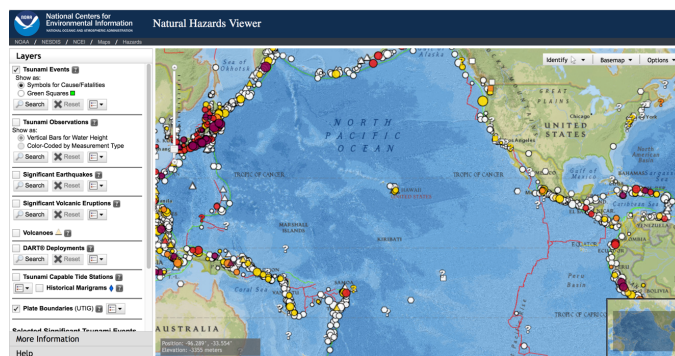
ICSU World Data Service, World Data Center for Marine Geophysics, Tsunamis

HISTORICAL TSUNAMI DATABASE

http://www.ngdc.noaa.gov/hazard/tsu_db.shtml

The Historical Tsunami Database consists of two related files containing information on tsunami events from 2000 B.C. to the present in the Atlantic, Indian, and Pacific Oceans; and the Mediterranean and Caribbean Seas.

1. Database Searches = results in list that can be downloaded into Excel spreadsheet
 - [TSUNAMI SOURCE EVENT Search](#): information on the source of the tsunami. Data include: source location, date, and time, event magnitude, maximum water height, total number of deaths, injuries and damage for the event
 - [TSUNAMI RUNUP Search](#): information on locations where tsunami effects occurred. Data include: arrival date and time, travel time, maximum water heights, horizontal inundation distances, deaths, injuries, and damage for specific locations.
2. Interactive ONLINE MAP: <https://www.ncei.noaa.gov/maps/hazards/?layers=0>



LATEST EARTHQUAKES – US GEOLOGICAL SURVEY

<http://earthquake.usgs.gov/earthquakes>

Real time information can be received directly from the USGS

Real-time Notifications, Feeds, and Web Services - <https://earthquake.usgs.gov/earthquakes/feed/>

USGS Latest Earthquakes - <http://earthquake.usgs.gov/earthquakes/map/>

USGS EQ Lists, Maps, and Statistics - <http://earthquake.usgs.gov/earthquakes/browse/>

The screenshot shows the USGS Earthquake Hazards Program website. On the left is a navigation menu with options like 'Earthquakes', 'Hazards', 'Data & Products', 'Learn', 'Monitoring', and 'Research'. Below the menu is a search bar. The main content area features a 'Latest Earthquakes' section with a map and a 'Significant Earthquakes, Past 30 Days' table. The table lists earthquakes with their magnitude, location, and distance from the epicenter.

Magnitude	Location	Distance
3.5	8km WSW of Colton, CA	7.5 km
5.0	71km WNW of Tafeeta, Alaska	91.3 km
6.7	68km WSW of Constitución, Chile	11.0 km
6.2	16km SSE of Poroqaipan, Philippines	76.1 km
6.1	38km SSE of Villa La Angostura, Argentina	129.0 km
5.7	20km ESE of Marmararaş, Turkey	10.0 km
6.5	18km S of Kaluku, Indonesia	18.2 km
5.6	8km S of New Mirpur, Pakistan	10.0 km
5.1	61km NNW of San Antonio, Puerto Rico	5.0 km
6.0	68km NNW of San Antonio, Puerto Rico	10.0 km
5.6	8km N of Soerba, Albania	10.0 km
6.1	78km NNE of Binbung, Indonesia	60.0 km
5.2	68km W of Willow, Alaska	63.1 km

You may choose which earthquakes to display (recommended 7 Days, Magnitude 4.5+ Worldwide). This should mimic CISM Display.

Screenshot – 12 September 2016 – with Settings (gear wheel), you may also choose other display filters and/or data layers to overlay

This screenshot shows the USGS Earthquake Hazards Program website with a map of earthquakes. The map displays several yellow circles representing earthquake epicenters. On the left, a list of earthquakes is shown with details like magnitude, location, and distance. On the right, a 'Settings' panel is visible, allowing users to filter earthquakes by time period (1 Day, 7 Days, 30 Days) and magnitude (2.5+, 4.5+, 5.0+). The '7 Days, Magnitude 4.5+ Worldwide' option is selected.

This screenshot shows the 'Latest Earthquakes' section of the USGS website. It includes a title 'v0.4.4, 2014-01-07' and a list of instructions for using the interface icons. A green callout box points to the top right corner of the page, containing the text: 'Please click the list, map or options icon from above.'

- Clicking the list icon in the top right corner will load the earthquake list.
- Clicking the map icon in the top right corner will load the map.
- Clicking the options icon in the top right corner lets you change which earthquakes are displayed, and many other map and list options.
- Clicking the help icon in the top right corner loads this page.

SEA LEVEL MONITORING

IOC Sea Level Monitoring Facility

<http://www.ioc-sealevelmonitoring.org/map.php>

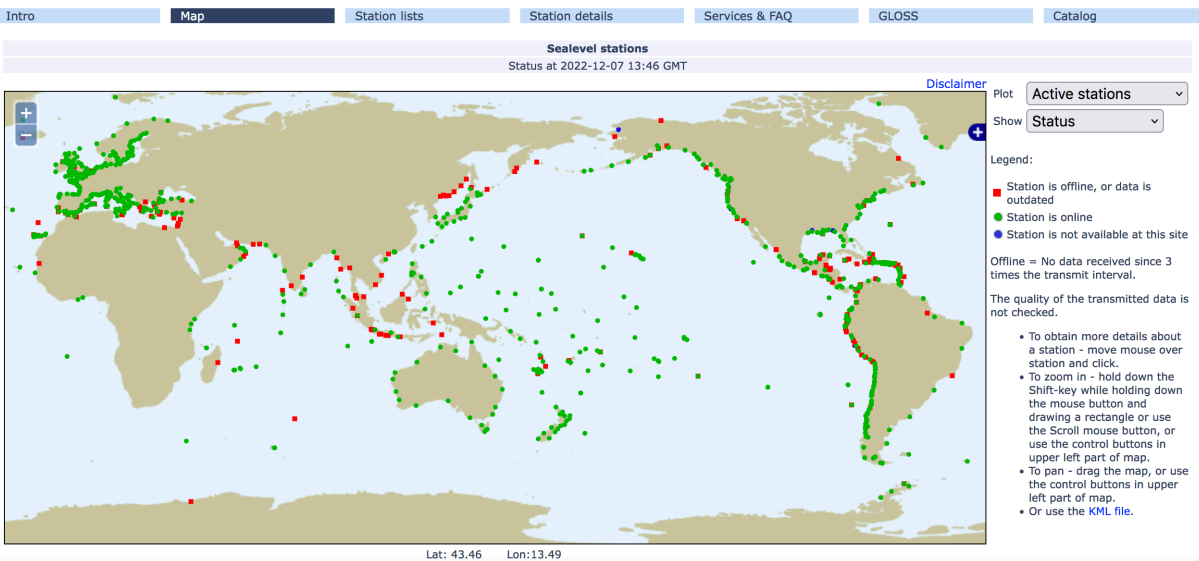
The objective of this service is

- to provide information about the operational status of global and regional networks of real time sea level stations
- to provide a display service for quick inspection of the raw data stream from individual stations.

IOC SLSMF – 7 dec 2022



SEA LEVEL STATION MONITORING FACILITY



Real-time Deep-Ocean Systems

<https://www.ndbc.noaa.gov/obs.shtml?lat=13&lon=-173&zoom=2&pgm=tsunami>

There are 39 US DART systems in the Pacific, Caribbean / Atlantic, and Indian Oceans. Australia, Chile, Colombia, Ecuador, Japan, and Russia also maintain deep-ocean or DART systems in the Pacific. Australia, India, and Thailand maintain deep-ocean or DART systems in the Indian Ocean. Each DART system has two data reporting modes, standard and event. In event-triggered mode, 15-second values are transmitted during the initial few minutes, followed by 1-minute averages. The USA TWCs can manually trigger the event mode transmission of DARTs. NOTE: DART readings are deep-ocean measurements. Numerical modeling is required to forecast (predict) a coastal wave amplitude.

DART System – 7 Dec 2022

