

WORLD DATA SERVICE FOR GEOPHYSICS



NOAA's National Centers for Environmental Information (NCEI, formerly National Geophysical Data Center) hosts the World Data Service for Geophysics (replaces former World Data Centers for Geophysics and Marine Geology and Solar-Terrestrial Physics). The solar data are not described.

Maintained by: U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA). The WDS for Geophysics, Boulder, is operated by, and collocated with, the NCEI.

Summary of Data Held: WDS for Geophysics, Boulder manages geophysical data as well as marine geological data. This includes global gravity and magnetism, global relief (bathymetry and topography), data from the ocean floor, and global natural hazards. Data include descriptions, analyses, and images of sea floor samples, deep drilling data, underway, downhole and airborne geophysical measurements, natural hazards data, and derived gridded data sets.

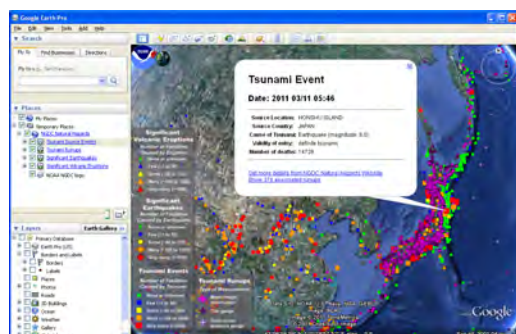
The WDS for Geophysics Global Natural Hazards data include global tsunami event and runup data, significant earthquake and volcanic eruption data, tsunami deposits and proxies, and sea level (coastal tide gauge and deep-ocean tsunameter) data. Historical tsunami data include the location, date, and description of the event generating a tsunami as well as location, date, description, maximum wave height, deaths, damage, and photographic evidence of coastal impacts. Significant earthquakes and significant volcanic eruptions data include descriptions of events that caused death, \$1 Million in damage, or generated a tsunami. The global tsunami deposits and proxies data include descriptions of tsunami deposits for locations all over the world, extracted from published sources. The WDS-Geophysics also stewards the U.S. coastal and deep-ocean sea level data as well as over 5000 images of damage from past hazard events.

Data are contributed by sources from around the world and were originally collected for a variety of purposes, including academic research, international and interdisciplinary scientific projects, commercial mineral resource evaluations, defense, and government environmental baseline studies.

Data Access: The WDS for Geophysics natural hazards data or inventories are all stored and integrated in a relational database management system (RDBMS). The data are available on-line and can be searched by attribute (e.g. event, runup, location, date, deaths). The search results link to additional information, sources, imagery, plots and download screens for the Deep-ocean Assessment and Reporting of Tsunamis (DART™) buoys (if triggered), and tide-gauge data (where available).

All of the natural hazards data are accessible via Open Geospatial Consortium (OGC) Web Map Services which allows any OGC-enabled client to incorporate a map image of the data. The Web maps operate off the same RDBMS. They provide limited GIS capability and are linked to photos, additional event information, and references.



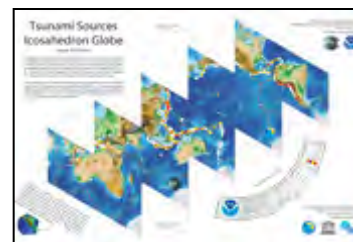


The NCEI/WDS website provides a Keyhole Markup Language (KML) file containing tsunami sources and runups, significant earthquakes, and volcanic eruptions. Many applications display KML, including *Google Earth*, *Google Maps*, *NASA WorldWind*, and *ESRI ArcGIS Explorer*. The KML file provides basic information on each event (date, magnitude, death, damage), updated nightly, and links to the NGDC database for the full content.

User Services: The WDS for Geophysics is located in the David Skaggs Building at 325 Broadway, Boulder, Colorado. Visitors are welcome during normal working hours; advance notice is required. A visiting scientist program exists. Data processing, copying, and analysis facilities are available. Data are available on most media including DVD, via Internet, and other media on request. On-line access via Worldwide Web (URL <http://www.ngdc.noaa.gov/>) WDS for Geophysics inventories are fully searchable via the WWW and much of the data is available for download.

Publications: WDS for Geophysics includes the publication series for the WDC-SEG and WDS for Geophysics. This includes color images, data reports, and scientific reports of interest to the GMG community.

Posters and Icosahedrons: WDS for Geophysics in collaboration with the UNESCO/IOC – NOAA International Tsunami Information Center produced a global map showing tsunami sources and a global cut-out and fold-up model of the Earth displaying global relief in full color overlaid with tsunami sources.



Special Projects: WDS for Geophysics participates in the Intergovernmental Oceanographic Commission (IOC) technical committee on International Oceanographic Data and Information Exchange (IODE), Intergovernmental Coordination Groups for Tsunamis (ICG Pacific and CARIB), the General Bathymetric Chart of the Oceans (GEBCO), regional IOC international mapping projects, and cooperates extensively with the International Ocean Drilling Program (ODP), for which it operates a parallel data archive. The WDS for Geophysics is also active in the International Association of Geomagnetism and Aeronomy (IAGA) Division V and the World Digital Magnetic Anomaly Map Project. Special emphasis is given to data supporting IUGG, IOC, and UNEP programs.

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