

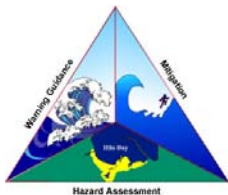
TsuInfo Alert



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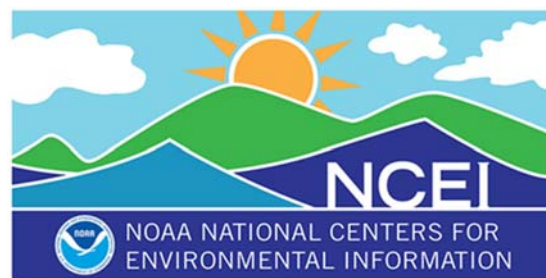
NOAA forms National Centers for Environmental Information

By Kelly Stroker, NOAA National Centers for Environmental Information

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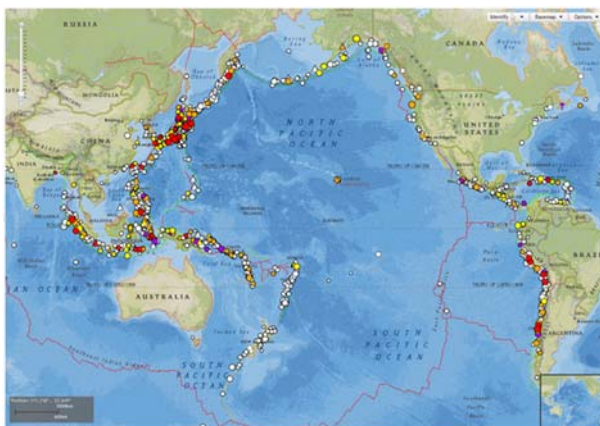
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The demand for high-value environmental data and information has dramatically increased in recent years. To improve our ability to meet that demand, NOAA's existing three National Data Centers—the National Climatic Data Center, the National Geophysical Data Center, and the National Oceanographic Data Center, which includes the National Coastal Data Development Center, have merged into the National Centers for Environmental Information (NCEI). NCEI is



responsible for hosting and providing access to one of the most significant archives on Earth, with comprehensive oceanic, atmospheric, and geophysical data. From the depths of the ocean to the surface of the sun and from million-year-old sediment records to near real-time satellite images, NCEI will be the Nation's leading authority for environmental information.

The former National Geophysical Data Center has managed global tsunami data since the establishment of the World Data Center for Tsunami in 1957. The services that the Tsunami Community have come to rely on - the Global Historical Tsunami Events and Runups



Tsunami Source events from the NCEI and World Data Service Historical Tsunami Events Database

Database, the archive of coastal and deep-ocean water level, the creation of digital elevation models to support real-time forecasts and warnings, will all continue as they have and will be enhanced due to the merger. The former NGDC and NODC are now part of the NCEI Center for Coasts, Oceans, and Geophysics (CCOG). This merger will allow for all of NOAA's ocean and coastal data to be archived and managed with consistent data stewardship tools.

Over time, we anticipate enhancements in archive, access, and new scientific products and services supporting the global tsunami community. For more information, please visit www.ncei.noaa.gov.



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This publication is free upon request and is available in print by mail and online at:

<http://www.dnr.wa.gov/researchscience/topics/geologypublicationslibrary/pages/tsuinfo.aspx>



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NATIONAL TSUNAMI HAZARD MITIGATION PROGRAM LIBRARY CATALOG:

<http://d92019.eos-intl.net/D92019/OPAC/Index.aspx>

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Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS)

Tenth Session, Philipsburg, Saint Martin 19–21 May 2015

By Intergovernmental Oceanographic Commission

The Tenth Session of the Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS-X) was held in Philipsburg, Sint Maarten, from 19 to 21 May 2015, hosted by the Government of Sint Maarten. The meeting was attended by 56 participants from 19 Caribbean countries and territories and four organizations: Caribbean Tsunami Information Center (CTIC), Puerto Rico Seismic Network (PRSN), UNAVCO, and the University of the West Indies Seismic Research Centre (SRC);



The ICG recognized the Caribbean Tsunami Information Center (CTIC) essential function in the region and its potential to attract funding for preparedness projects and acknowledged the contribution of Barbados to host CTIC, and the continuing efforts of Venezuela and France to realize the support as promised;

The ICG encouraged Member States to have this priority addressed by the Director General during the UNESCO General Conference and recommended the U.S. contribution of the Caribbean Tsunami Warning Program (CTWP) be recognized as a formal component of CTIC; fulfilling parts of the ToR that the CTIC is currently unable to accomplish with its resource constraints;

The ICG recognized the efforts of the Continuously Operating Caribbean GPS Observational Network (COCONet) and the Trans-boundary, Land and Atmosphere Longterm Observational and Collaborative Network (TLALOCNet) projects to deploy continuous GPS networks and the installation of three GNSS data centres in the region, and encouraged GNSS network operators to contribute continuous data to COCONet and help COCONet to maintain an inventory of the existing continuous real-time GNSS stations in the region;

(Continued on Page 3)

PROJECT UPDATES

Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS)

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By Intergovernmental Oceanographic Commission

(Continued from Page 2)

The ICG endorsed NASA's and NOAA's exploration of a GNSS-based tsunami early warning capability throughout the Caribbean and Adjacent Regions;

The ICG requested the CTWP to continue producing monthly maps and reports based on current CARIBE-EWS sea-level and seismic stations and available real-time stations in the region, and acknowledged the effort of Aruba for offering to host a sea-level data center for the region;

The ICG urged Member States that do not have tsunami evacuation maps to develop a preliminary tsunami evacuation map based on a fixed-height in accordance to the guidelines. It also recommended Member States with tsunami inundation maps and no tsunami evacuation maps to continue the efforts underway to keep working towards the development of tsunami evacuation maps;

The ICG decided that Exercise Caribe Wave 16 will have two scenarios, a Northern Hispaniola and a Northern Venezuela event and further decided that the exercise takes place on Thursday, 17 March 2016 and commences at 1500 UTC and 1400 UTC for the Hispaniola and Venezuelan scenarios, respectively. The ICG also recommended that the Task Team Caribe Wave 16 begin to consider volcanic or landslide tsunami sources as potential scenarios for future exercises;



The ICG acknowledged the scientific and technological advances that have been made since the formation of the CARIBE-EWS to better forecast tsunami impacts in real time and to present forecast information graphically; and accepted that the Enhanced Products do not contain alert levels and that Member States will now be fully responsible for tsunami alerts in their own countries and territories according to their Standard Operating Procedures (SOPs);

The ICG agreed with the Pacific Tsunami Warning Center (PTWC) proposed implementation schedule that begins issuance of the Enhanced Products in parallel with current products on 1 October 2015 and fully transitions to the new products on 1 March 2016, as indicated under Recommendation ICG/CARIBE-EWS-X.5;

The ICG recommended the approval of the guidelines for the Community Performance Based Tsunami Recognition Programme for the Caribbean and Adjacent Regions as outlined in Appendix I of Recommendation ICG/CARIBE-EWS-X.6, for implementation on a pilot basis; it also recommended consultation with the US regarding the adoption of the name "Tsunami Ready" with the corresponding French, Spanish and Dutch translations and other relevant languages as the official name for the Community Performance Based Tsunami Recognition Programme for the Caribbean and Adjacent Regions;

The ICG invited Member States and donor agencies to support pilot projects under the Community Performance Based Tsunami Recognition Programme for the Caribbean and Adjacent Regions;

The ICG accepted Nicaragua's offer to host and develop the Central America Tsunami Advisory Center (CATAC) as a sub-regional Tsunami Service Provider (TSP) under the guidance of the PTWS Regional Working Group for Central America Pacific Coast and within the framework of ICG/PTWS, ICG/CARIBE-EWS and TOWS-WG;

The ICG accepted the offer from Colombia to host the Eleventh Session of ICG/CARIBEEWS in May 2016 and acknowledged the offer of Costa Rica to host the Twelfth Session in 2017.

See full report here: http://www.ioc-unesco.org/index.php?option=com_oe&task=viewEventRecord&eventID=1634

PROJECT UPDATES

The U.S. Tsunami Program: A brief overview

By Peter Folger, Congressional Research Service

The National Oceanic and Atmospheric Administration's (NOAA's) National Weather Service (NWS) manages two tsunami warning centers that monitor, detect, and issue warnings for tsunamis. The NWS operates the Pacific Tsunami Warning Center (PTWC) at Ewa Beach, Hawaii, and the National Tsunami Warning Center (NTWC) at Palmer, Alaska.



The tsunami warning centers monitor and evaluate data from seismic networks and determine if a tsunami is likely based on the location, magnitude, and depth of an earthquake. The centers monitor coastal water-level data, typically with tide-level gauges, and data from NOAA's network of Deep-ocean Assessment and Reporting of Tsunamis (DART) detection buoys to confirm that a tsunami has been generated or to cancel any warnings if no tsunami is detected. As of January 20, 2015, 12 of the United States' 39 DART buoys were not operational. According to NOAA, the inoperable stations would not prevent the issuance of tsunami warnings, which are primarily a function of seismic data from an earthquake or landslide, combined with location information about the event. However, lacking these stations could mean the warnings encompass a larger area than would be the case if all stations were operating, and it could lengthen the time a warning remains in effect.

See full report: <https://www.fas.org/sgp/crs/misc/R41686.pdf>

PTWS 50th - International Tsunami Symposium 2015 Making the Pacific ready for the tsunami threat

April 20-21, 2015 O'ahu, Hawaii

By International Tsunami Information Center (ITIC)

To commemorate the 50th anniversary of the International Tsunami Warning System in the Pacific, the IOC of UNESCO, International Union of Geodesy and Geophysics (IUGG) and its Tsunami Commission, and the U.S. National Oceanic and Atmospheric Administration (NOAA) organized the Symposium "Making the Pacific Ready for the Tsunami Threat" to recognize the achievements of the last 50 years, review the current state of the System, and identify practical and tangible next steps, desirable partnerships, and necessary commitments needed to sustain and evolve the PTWS for the future.

Altogether, 150 participants from 30 countries attended. Over 40 speakers representing 19 countries recounted the achievements of the last 50 years, stated and reviewed the current state of the System, and identified and recommended practical and tangible next steps, desirable partnerships, and necessary commitments needed to sustain and evolve the PTWS for the future. The goal of the Symposium was to "look back so we can look forward." Sessions featured keynotes from long-standing countries, the history of the PTWS, and the PTWS Medium-Term Strategy (MTS) themes of Risk Assessment and Reduction, Event Detection, Warning, and Dissemination, and Awareness and Response. Thematic sessions consisted of speakers and panels representing decision-makers, planning and policy, science, warning, and/or emergency operations practitioners.



Photo by ITIC

See full article and event documents: <http://tinyurl.com/itic50thsymposium>

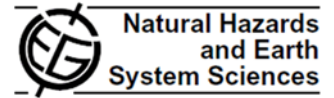
TSUNAMI RESEARCH

Scenario-based numerical modelling and the palaeo-historic record of tsunamis in Wallis and Futuna, Southwest Pacific

By G. Lamarche, S. Popinet, B. Pelletier, J. Mountjoy, J. Goff, S. Delaux, and J. Bind

From: Natural Hazards and Earth System Sciences, April 2015

Abstract: We investigated the tsunami hazard in the remote French territory of Wallis and Futuna, Southwest Pacific, using the Gerris flow solver to produce numerical models of tsunami generation, propagation and inundation. Wallis consists of the inhabited volcanic island of Uvéa that is surrounded by a lagoon delimited by a barrier reef. Futuna and the island of Alofi forms the Horn Archipelago located ca. 240 km east of Wallis. They are surrounded by a narrow fringing reef. Futuna and Alofi emerge from the North Fiji Transform Fault that marks the seismically active Pacific-Australia plate boundary. We generated fifteen tsunami scenarios. For each, we calculated maximum wave elevation (MWE), inundation distance, and Expected Time of Arrival (ETA). The tsunami sources were local, regional and distant earthquake faults located along the Pacific Rim. In Wallis, the outer reef may experience 6.8 m-high MWE. Uvéa is protected by the barrier reef and the lagoon, but inundation depths of 2–3 m occur in several coastal areas. In Futuna, flow depths exceeding 2 m are modelled in several populated areas, and have been confirmed by a post-September 2009 South Pacific tsunami survey. The channel between the islands of Futuna and Alofi amplified the 2009 tsunami, which resulted in inundation distance of almost 100 m and MWE of 4.4 m. This first-ever tsunami hazard modelling study of Wallis and Futuna compares well with palaeotsunamis recognised on both islands and observation of the impact of the 2009 South Pacific tsunami. The study provides evidence for the mitigating effect of barrier and fringing reefs from tsunamis.



Access full article: <http://www.nat-hazards-earth-syst-sci-discuss.net/3/2283/2015/nhessd-3-2283-2015.html>

Land evaluation suitability for settlement based on soil permeability, topography and geology ten years after tsunami in Banda Aceh, Indonesia

By Muhammad Rusdi, Ruhizal Roosli, and Mohd Sanusi S. Ahamad

From: The Egyptian Journal of Remote Sensing and Space Science, May 2015

Abstract: Years after the tragedy of the tsunami in Banda Aceh researchers are still saddled with the problem of water permeability, slope and geology suitability for settlements. Social and ecological vulnerability to disasters and outcomes of Oceanic earthquakes causing tsunamis remain an indelible phobia to potential residents at the western coast of Sumatra upto the northern part of Indonesia. Ten years after the disaster, this study evaluates the topography of the area to determine the level of suitability of the area for human habitat. This article examines the concept of land suitability evaluation and its potential as a tool of determining appropriateness of a settlement. The focus of the study centered on the application of geographic information systems GIS in handling spatial data permeability, slope and geology of the land in accordance with the FAO land suitability standard. To ensure that the application works, it requires geospatial analysis compiled based on the permeability, slope and geology that can be observed and measured for the residential requirements. Results showed that almost all the cities within Banda Aceh are suitable for residency (Ordos).



Access full article: <http://www.sciencedirect.com/science/article/pii/S1110982315000113>

Turkey's \$22B nuclear plant to be tsunami, quake proof

By Anadolu Agency, April 2015

Building nuclear power plants does not mean Turkey will ignore renewable and other local sources of energy, Turkish energy minister said Tuesday.

Turkey's Energy and Natural Resources Minister Taner Yildiz made the remarks at the groundbreaking ceremony for the Akkuyu nuclear power plant's "marine hydro-technical structures," which will be built in southern Mersin province. The structure will be built as part of the main plant to provide necessary cooling infrastructure and avoid wastage; it also includes a port connected to the main plant.



"If it was operational today, the Akkuyu Nuclear Power Plant could have met the electricity needs of Istanbul which has a 15 million population. It is a \$22 billion investment in a relatively small area," Yildiz said at the ceremony.

Access full article: <http://www.aa.com.tr/en/economy/493722--turkeys-22b-nuclear-plant-to-be-tsunami-quake-proof>

Tsunami traces from hundreds of years ago found near 'safe' Takahama nuclear plant

By Kyodo

Source: The Japan Times

A group of researchers has found tsunami traces believed to date back to between the 14th to 16th centuries near the Takahama nuclear power plant in Fukui Prefecture.

The plant's operator, Kansai Electric Power Co., said the finding does not affect its tsunami risk evaluation of the plant or its countermeasures, but the Nuclear Regulation Authority said it plans to ask the utility to look into the research.

Idled reactors 3 and 4 at the Takahama plant obtained safety clearance from the regulator in February, clearing a key hurdle toward resuming operations.

"We will examine the information without preconceptions, and will note whether it may relate to a threat to safety," an official from the regulator said of the finding.

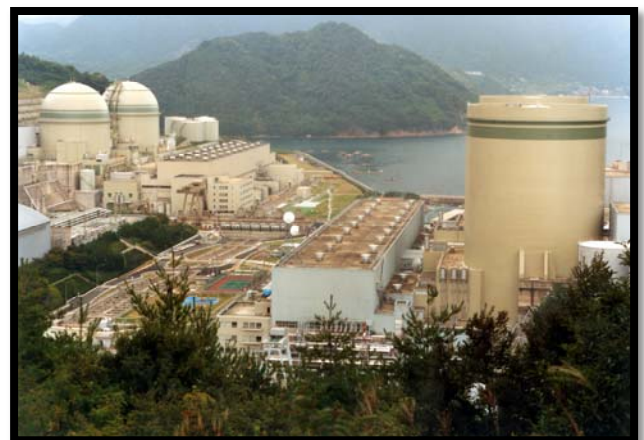


Photo from IAEA Imagebank (CC)

<https://flic.kr/p/drRGE6>

Hirofumi Yamamoto, a professor of geology at Fukui University, and other researchers in the group found a layer of sand containing seashells in shallow ground at a location more than 500 meters from the shore of the bay. Carbon-dating analysis puts the formation of the layer at between the 14th and 16th centuries.

Access full article: <http://tinyurl.com/takahama-historic-tsunami>