

## **Not My Fault: A tsunami of tsunamis: Mark your calendar, World Tsunami Awareness Day is coming**

Lori Dengler/For the Times-Standard  
Posted November 1, 2020

Thursday November 5th is World Tsunami Awareness Day. As an exercise, I did a search for the word tsunami in the news. The posts fell into three categories: recent tsunamis, potentially catastrophic future tsunamis, and what I call tsunami misnomers.

I'll take these in reverse order. Ever since the 2004, "tsunami" has been applied to all sorts of things that have nothing to do with the surges of water produced by earthquakes, submarine landslides or other sea floor disturbances. I am part of the silver tsunami that is about to overwhelm Social Security and the health care system. A global recession threatens a tsunami of job losses. There is a tsunami of misinformation that threatens the election, fraudulent ballot tsunamis, and the third tsunami wave of COVID.

I object to the casual use of tsunami to slap onto anything huge and unpleasant. Tsunami has a very specific meaning – the water surges caused by seafloor displacement. In a typical year, about ten tsunamis are recorded worldwide. Most of these are only observed on tide gauges and less than a foot high. In the last decade, NOAA's National Centers for Environmental Information reports 161 tsunamis, 70% with peak water height of less than three feet. Only 15 caused deaths or injuries.

Tsunami is a relatively new word in the English language. My trusty 1952 Webster's New World Dictionary doesn't mention the term. The first tsunami warning center was established in 1949 and used the name tsunami, but many scientists continued to use "seismic sea wave" well into the 1980s when international tsunami studies, often led by Japanese scientists, became much more common.

I'm fighting a losing battle on this one. All dictionaries now include a second meaning of tsunami as "an arrival or occurrence of something in overwhelming quantities or amounts." And I am gritting my teeth in expectation of numerous tsunamis from commentators and politicians on Tuesday. It's more than a pet peeve on my part. The downside to dramatizing the word is that people make

the association that it takes Herculean efforts to prepare for tsunamis and isn't worth making an individual effort.

Category two, the mega-tsunami. Google mega-tsunami and you will always come up with something. The most common story this week was something new to me and quite interesting. The setting is Barry Arm, a narrow inlet about 60 miles east of Anchorage where glacial retreat has exposed fractures in the steep fjord walls. The USGS and the State of Alaska published alerts in August that one or two landslides, destabilized by the retreating glacier, could plummet into the fjord near its head. This isn't just conjecture. It's happened several times in Lituya Bay, including a 1959 landslide that caused the highest tsunami ever recorded – over 1700 feet above sea level. Scientists estimate the volume of debris in a Barry Arm landslide could be even larger.

I have a personal connection to this study. Valisa Higman was the first person to notice the fractures on the steep fjord walls in June 2019. Her brother is Bretwood Higman, a tsunami sediments expert who I spent two weeks with mapping tsunami deposits in Indonesia after the Indian Ocean tsunami. No one knows when the Barry Arm landslide might happen, but an expert consensus is anytime in the next two decades and the region needs to prepare now. More about the Barry Arm landslide potential at <https://earthobservatory.nasa.gov/images/147345/the-specter-of-a-mega-tsunami-in-alaska>.

Finally to recent tsunamis – two in the past two weeks. Last week, I wrote about the tsunami caused by Alaska's M7.6 earthquake), and two days ago, a M7.0 in the Aegean produced a small tsunami that was observed in Western Turkey and as far away as Heraklion in Greece, 200 miles from the epicenter. Shaking damage from Friday's earthquake was significant. Dozens of buildings were damaged or collapsed and, as I write, the death toll stands at 28, making it the second deadliest earthquake of 2020. The tsunami appears to have been small but did account for one of the reported deaths. A video shared on twitter shows localized flooding (<https://twitter.com/hayrisenkali/status/1322158228545949696>) in the coastal town of Seferihisar, Turkey about 20 miles north of the epicenter.

Nine tsunamis have been recorded to date in 2020, the largest only slightly higher than two feet. But not all are modest, and even small ones can be deadly. The purpose of World Tsunami Awareness Day is to be forward looking and remember knowing what to do means you can survive even a really big one.

World Tsunami Awareness Day was first recognized by the General Assembly of the United Nations in 2015 to promote a global culture of tsunami awareness. November 5th was proposed by the Japanese delegation in remembrance of the Rice Sheaf Fire and Tsunami of 1854. After the earthquake, an elder in the village of Hiro, Japan set fire to the newly harvested rice crop to draw villagers up the hill to fight the fire. Because of his actions, the people were saved. Yuki Matsuoka, head of the UN Office for Disaster Risk Reduction, explained rather than commemorating the deadliest tsunami, November 5th was chosen as a day when many lives were saved due to proactive actions.

In the spirit of World Tsunami Awareness Day, I invite you and your family to enjoy an animated version of the story of the old grandfather Ojiisan and his grandson Tada and the Great Rice Sheaf Fire. Where? At our virtual fair of course, the Kids Corner at Balloon #6 - <https://rctwg.humboldt.edu/home>. And while you are there, reread the story of Kamome and how kindness in a time of tragedy brings everyone together.

-----  
Lori Dengler is an emeritus professor of geology at Humboldt State University, an expert in tsunami and earthquake hazards. All Not My Fault columns are archived at <https://www2.humboldt.edu/kamome/resources> and may be reused for educational purposes. Leave a message at (707) 826-6019 or email [Kamome@humboldt.edu](mailto:Kamome@humboldt.edu) for questions/comments about this column, or to request a free copy of the North Coast preparedness magazine "Living on Shaky Ground."  
<https://www.times-standard.com/2020/11/01/lori-dengler-world-tsunami-awareness-day-2020/>