

## **Not My Fault: The cost of quakes, tsunamis and other natural disasters in 2018**

Lori Dengler/For the Times-Standard

Posted: January 9, 2019

Natural disasters impact human societies in many ways. There are the obvious - lives lost, injuries, and damage. But disasters don't only affect individual livelihoods and businesses. Impacts can cascade regionally and, in some cases, affect the gross domestic product of entire nations. Disaster and disaster recovery is also an industry. From reconstruction, to insurance and reinsurance corporations and international relief organizations, disasters fuel a significant sector of the economy.

Putting the natural disasters of 2018 into perspective requires data. My go-to sources for international disaster data are EM-DAT and Munich RE. My guess is that you have never heard of either one of them.

EM-DAT is the disasters database compiled by the Centre for Research on the Epidemiology of Disasters at the Université catholique de Louvain in Brussels. For over thirty years, they have compiled statistics on the impacts of disasters including casualties, number of people impacted and financial cost. It's a difficult task, as many countries don't have the capacity to provide such data themselves and the EM-DAT researchers need to scour multiple sources to estimate the what happened during a West African drought, South American flood or other global event. Researchers, non-governmental organizations, economists, and political planners use the information to understand trends and vulnerabilities to inform governments and other organizations how to reduce losses.

EM-DAT classifies most disasters into five groups: earthquakes, floods, storms, drought and epidemics. Over the past twenty years, EM-DAT data shows an average of 68,000 lives lost and 218 million people affected from natural disasters every year. Floods are the most frequent, droughts affect the most people and the deadliest changes from year to year, but earthquakes most often head the list.

Munich Re is the largest reinsurance company in the world. Reinsurance companies are the folks that insure insurers. Lloyd's of London may be the most well known

member of the group, but Munich Re premium holdings are more than twice as high as Lloyds. Why would a reinsurer care anything about natural disasters? Because they are the ones who end up reimbursing the regional insurance companies when a flood ravages central Europe, a landslide wipes out a community in Washington State or a wildfire destroys a California city. It's in the interest of their bottom line and in setting rates to understand the risks associated with disasters and forecast future trends.

I became aware of Munich Re in 1999 when I began teaching a Natural Disasters class at HSU. The company puts out an annual Topics Report on Natural Disasters that became an essential class resource. From Munich Re, I learned that annual economic cost of natural disasters is about \$140 billion (US dollars) per year, and that the number has been steadily rising since 1950. According to Munich RE, there are three primary reasons for the increase, the value of stuff (particularly technology), the increased exposure caused by population growth and more people living in vulnerable places, and climate change. The data is undeniable – there are more climate-related disasters (droughts, floods, storms, landslides) now than there were seventy years ago.

How does 2018 stack up and what types of disasters were the most costly? Floods and storms lead the pack in numbers, earthquakes and tsunamis were the most deadly, and wildfires and storms were the most costly in terms of economic losses. And as in previous years, the majority of the losses were caused by just a few events.

Munich Re listed 850 natural disasters for the year, up from 740 last year. Of these, nearly 25% were weather related. EM-DAT lists 203 flooding and storm disasters in 2018, the worst in terms of casualties was the August flooding in India that claimed 361 and the six floods in China that affected more than 4 billion people.

According to Munich RE, 10,400 lives were lost to disasters in 2018, below last year's 13,000 and well below the EM-DAT average of 68,000. Geophysical events claimed the top four slots in terms of lives lost. The top three were in Indonesia: the Sulawesi earthquake and tsunami in September that claimed at least 2,256 lives, the Lombok earthquake (468) and the Sunda Strait tsunami in late December (430). Number four was the June eruption of Fuego volcano in Guatemala claimed another 425 lives.

Munich RE lists the economic losses in 2018 at \$160 (billion US), well below 2017 with its more costly

hurricanes and typhoons (\$340 billion), but still above the 30-year average losses of \$150 billion. A third of the economic cost was in the United States with hurricanes Florence and Michael racking up a \$30 billion price tag and the California wildfires with a cost of \$24 billion. What was unusual this year is that about half of the loss was insured, the highest percentage since Munich RE has been keeping records. Insurance is one way to mitigate disaster losses and facilitate recovery.

If these disaster statistics have put you in a glum mood, I have an antidote. This Saturday, the second in the Eureka Library's movie series Dumb Movies with Smart People airs at 1 pm in the main library. This week's feature is one of my favorites, The Core, and I have been asked to portray the smart person. So please join me for some laughs and a little clarification on the earth's core and why in this case, the facts are more interesting than fiction.

Next week – the 2018 earthquake wrap for the US.

-----  
Lori Dengler, PhD, is an emeritus professor of geology at Humboldt State University, and an expert in tsunami and earthquake hazards. For questions or comments about this column and requests for free copies of the preparedness magazine "Living on Shaky Ground," leave a message at (707) 826-6019 or email [Kamome@humboldt.edu](mailto:Kamome@humboldt.edu)

<https://www.times-standard.com/2019/01/10/lori-dengler-the-cost-of-quakes-tsunamis-and-other-natural-disasters-in-2018/>