

The Japan Quake: Could It Happen Here, and Is Your Organization Prepared?



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The recent events in Japan have transformed idle thoughts of earthquakes and tsunamis into real-life manifestations of our worst nightmares. If you had strong information of when a disaster would strike, you could make many critical decisions, such as where to locate a home or business or whether escape or evacuation plans are needed. While an insurance company scrutinizes actuarial tables before underwriting a policy, noted author and technical futurist Leo Wrobel explains how these same kinds of tools are available to the contingency planner if one knows where to look

If you live in a place like California, earthquakes, wildfires, mudslides, and even the possibility of a tsunami have from time to time crossed your thoughts. The recent events in Japan, however, have transformed these idle thoughts into real-life manifestations of our worst nightmares. We all know that on Friday, March 11, 2011, Japan was struck by the most powerful earthquake in its history, generating a 30-foot tsunami that swept away entire villages. Modern technology being what it is today, the world was able to see and hear the event as it happened. Videos depicting the unfolding drama can be found on numerous news feeds as well as YouTube

The U.S. Geological Survey reported the 9.0 scale earthquake struck near the east coast of Honshu (Japan's main island) about 231 miles northeast of Tokyo. It churned up a devastating tsunami that swept over villages and farms setting off warnings as far away as the west coast of South America. As Japanese authorities struggled with the rescue effort, they also faced the worst nuclear emergency since Chernobyl when three reactors at the Fukushima Daiichi Nuclear Power Station suffered partial meltdowns, explosions, and leaks of radioactive gas. Spent fuel rods at another reactor overheated and caught fire as well, releasing radioactive material directly into the atmosphere. Japanese officials turned to increasingly desperate measures, as traces of radiation were found in water pouring from the reactors into the Pacific Ocean and even detected in Tokyo's water supply. A month after the quake, nuclear officials still classified the nuclear crisis in the same category of severity as the Chernobyl disaster.

As of late April 2011, the official death toll had risen to 14,133, with more than 3,346 people listed as missing. The final toll is expected to reach 20,000-25,000. As of this date, more than 130,000 people remain housed in temporary shelters, and tens of thousands more have been forced from their homes to evacuation centers due to the nuclear threat from the crippled power plants

Can It Happen Here?

One of the most difficult tasks that face the recovery planner is calculating the odds that a disaster will strike. If you had this information, you could make many critical decisions, such as where to locate a home or business, what type of materials to build it out of, whether escape or evacuation plans are needed, and how often on average you would need them. What a lot of people do not realize is that just as an insurance company scrutinizes actuarial tables before underwriting a policy, the same kinds of tools are available to the contingency planner if one knows where to look

Even then accidents can happen quite literally. Some disasters such as earthquakes and tsunamis happen so infrequently that not a lot of data is available. Yet just such an event could happen in Seattle, for example. Or consider the possibility of an earthquake in California. It is a virtual certainty that one of these will happen in a lifetime¹. It's been so long, in fact, since one occurred that it is often only guesswork that is used to determine how today's modern infrastructure would stand up to it. Sure, buildings are constructed a lot better today, but there are also a lot more people. Factors like these can change the whole equation for today's contingency planner studying yesterday's events.

Where Can You Get Real-Time Information?

So where can you get much needed real-time information? For starters, you can consider sources like the following:

- The National Oceanic and Atmospheric Administration (NOAA) for one, forwards valuable information regarding climate changes on to the general public
- On a global scale, there is the Emergency Disasters Data Base (EM-DAT).
- Last but not least one of our favorites: The Pacific Disaster Center (PDC) in Kihei, on the Hawaiian island of Maui.

It's been a couple of years, but you may remember the PDC from some of our earlier articles. The PDC offers a hard-core scientific approach that allows contingency planners to strengthen their case for presentation to policy makers, thereby enabling those who set policy to *proactively* manage and sometimes even prevent catastrophic disasters. In this regard, the PDC watches, learns, analyzes and then models various disaster scenarios bringing awareness into diverse communities. As a quasi-federal agency, they have *lots* of free information in fact, *terabytes* of it, all in a format that allows one to manipulate risk data and draw some fast and accurate conclusions. In the words of the PDC:

The ability of the Pacific Disaster Center (PDC) to quickly respond to emergency management requests for strategic maps, mitigation tools, online data and information is a prime example of how our effective knowledge sharing, applied information research and analysis capabilities help support today's diverse global community.

The PDC played an active role in the Japan earthquake, particularly with regard to tsunami warnings. One story from *USA Today* featured a quote from Ray Shirkhodai, executive director of the PDC. In addition to all of the magnificent work the PDC did for emergency services and governments surrounding the quake, it seems that Ray also received at least one noteworthy call from a happy Hawaiian resident. You see, the PDC now has a free iPhone application that places the power of its emergency warning systems in a person's vest pocket. This particular resident claims he got a tsunami warning 30 minutes before the mainline media even knew there was a problem allowing him to fill his gas tank before the rush!

Is Your Organization Prepared?

In any event, have you ever wondered what the effect would be of an earthquake, tsunami, volcano, or other event on the assets of your organization? To us, one of the most remarkable things about the Japan quake was the attitude of the Japanese people. Thousands dead. Thousands missing. Thousands in immediate need of assistance. Infrastructure crushed. What's more, the most remarkable of all *no looting*. We were not sure that some elements of the U.S. population would exercise the same restraint regarding the looting issue. This means security is one more thing to add to the list when planning in this country.

For that matter, do you know what an earthquake can do to an undersea telephone cable? (Where are your call centers located these days? India? England?) Consider where your *people* live and whether they can (or will) return to work after a disaster to help you recover or go AWOL to protect their property. Where are the airports, railroads, and harbors? How often do natural disasters strike all of these modes of transportation?

Organizations like the PDC can give you the best possible picture *before* you move a business, build a factory, or invest in a specific locale that could be disaster-prone. First, the PDC has access to literally hundreds of years' worth of historical data. More importantly, they provide an intuitive user-driven interface to that data that allows the user to input problems and draw conclusions based on hard data. That part is largely free if consulting support is required however, the modeling team of the PDC can actually recreate disaster scenarios so that one can actually *see* the disaster as it unfolds demonstrating the full magnitude of the ultimate damage.

The Pacific Disaster Center also supports communities and first responders through

- Support of humanitarian organizations at every level
- Response teams that go out into the field
- Mock tabletop disaster exercises
- Tsunami awareness
- First alert procedures

- Advanced computer modeling and probability analysis:

Although the focus of the PDC rests firmly on preserving human life and economic livelihood through preparation education, and revitalization, the PDC also reaches out to many nations worldwide. DC works alongside public officials in public and private sectors as well as with other experts worldwide in determining infrastructure vulnerabilities, conducting planning workshops, and in providing support. Mock tabletop exercises, for example, and annual disaster drills help communities to work together by being freshly prepared to spring into action when disaster does strike.

Summary

So, how about something right now for our loyal readers for *free*, which will improve your disaster response in minutes? Sound too good to be true? Then have a look

- [Download the PDC iPhone/iPad application](#). This application allows you to have disaster alerts delivered directly to your iPhone or iPad (Android version coming soon). It was featured in the [USA Today article](#) mentioned earlier.
- In addition to this little morsel, check out the [PDC's Vulnerabilities Atlas](#) also for free. We set up this link sometime back for a major trade publication, but the PDC allowed us to keep it up for interested parties. The level of detail and information here is astounding and best of all, it's free.

Disaster. Can it happen to you? Sure. When? We don't know. What we do know is there is a lot of information out there to keep you apprised of current situations. It is up to you to prepare. In the words of a nineteenth-century German field marshal named Helmuth von Moltke: "No battle plan survives contact with the enemy." How well your plan survives contact with its enemy depends in large measure on intelligent forethought, thorough testing, and broad awareness of potential threats.

Good luck and happy planning

Endnotes

¹ Sources place the odds of a catastrophic earthquake on the San Andreas fault line in Southern California (affecting the Los Angeles metro area, the second-largest city in the U.S.) at 99 percent over the next 30 years. Southern California has a history of earthquakes about every 200 years. The last major quake in this area, however, was recorded in the early 1700s. The area is long overdue.
