

Researchers: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

## Devastation in Japan



Photo: Recovery is under way after a deadly earthquake and tsunami destroyed parts of Japan on Friday.

By Zach Jones I  
March 14 , 2011

Japan is beginning recovery after one of the strongest earthquakes ever measured hit the country on Friday. The powerful quake began in the ocean off Japan's east coast, creating a series of enormous waves known as a tsunami.

There are currently more than 1,800 people confirmed dead and almost 2,300 have been reported missing. But police fear the numbers are much higher. They estimate that more than 10,000 have died.

Officials are also worried about nuclear power stations that may have been damaged by the tsunami. Nuclear power can safely create electricity, but damaged power stations may poison the air.



The government is now trying to understand how much the stations have been damaged. To keep people safe, officials are removing people from areas that could be affected. Doctors are also testing people to see if anyone has been poisoned by leaks from the damaged power stations.

Researchers: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

## Devastation in Japan



Photo: Police search for survivors in a city in northern Japan. (Yuriko Nakao/Reuters)

### WIDESPREAD DESTRUCTION

The earthquake struck Japan around 2:46 p.m. local time. Many adults were busy at work, and young people were still in school. Scientists measured the quake's magnitude at 9.0, using a system that rates an earthquake's severity from 0 to 10.

Based on that measurement, this earthquake was 8,000 times more powerful than the 6.7 quake that devastated Christchurch, New Zealand, two weeks ago.

The tsunami's first wave to crash against the shore near Sendai was more than 33 feet high. Entire towns have been washed away by the tsunami. Cities close to the earthquake's epicenter (the place where a quake starts) were demolished by the waves. Newspapers report that by the time rescue workers got to Natori, there were few people left to rescue.

Around 350,000 people are now homeless because of the disaster. Highways, airports, and train transportation have been shut down across the country. Many buildings caught fire after gas pipelines exploded upon the tsunami's impact.

During the disaster, local news reports showed waves smashing trucks into bridges like toys, and enormous whirlpools pulling boats under the sea. One ship with more than 100 people on board was swept away by the powerful waves.

Governments across the globe have reached out to help Japan after news of the quake spread. President Obama said the U.S. was standing ready. "Michelle and I send our deepest condolences to the people of Japan," the President said.

Researchers: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

## Devastation in Japan



**Photo:** The earthquake started near Sendai, Japan. After the quake, tsunami warnings were issued for all countries near the Pacific Ocean. (Jim McMahon)

### WAVES WITHIN THE RING OF FIRE

After the earthquake, tsunami warnings were issued across most of the Pacific Ocean. Tsunamis this big can send smaller waves all over the world, like aftershocks that often follow an earthquake. The effects of this tsunami reached as far as Russia, Canada, and the U.S. within hours.

On Friday, 4-foot-high waves had reached Hawaii. Smaller waves hit California and the continental U.S. West Coast a few hours later.

Luckily, many buildings in Japan have been built to withstand strong earthquakes. The country has a long history of powerful quakes. But no one could have prepared for this much damage.

Japan sits atop the Ring of Fire, an area of the Pacific Ocean where several tectonic plates meet. Tectonic plates are huge slabs of rock that make up the Earth's crust. Earthquakes and tsunamis can occur when tectonic plates move up and down.