

Disaster in Japan highlights need for improved warning system

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(PhysOrg.com) -- As the world tried to make sense of the massive earthquake and subsequent tsunamis that rocked Japan on Friday, University of Rhode Island Professor of Ocean Engineering Stephan Grilli spoke with CNN's John King about the need for improved warning systems in regions of the world that could be impacted by severe weather events.

With a known death toll of more than 1,600 – a figure expected to top 10,000 – Japanese Prime Minister Naoto Kan called the events of the last several days the “biggest crisis Japan has encountered in the 65 years since the end of World War II.” It started Friday with an earthquake that registered a 9.0 on the Richter magnitude scale and left more than two million homes without power, and 1.4 million without running water.

On Friday evening, King asked Grilli what questions would be asked moving forward, and what needed to be learned from the disaster.

“What we need to do is increase the level of warning, and that means looking at a lot of scenarios and also being ready to redesign as soon as possible and put in those scenarios – by scenario I mean computer models that can quickly make an assessment and issue a prediction,” Grilli said.

There was only about 15 minutes between when the earthquake and [tsunami](#) hit on Friday, leaving very little time for reaction.

“Today despite this kind of tragedy, I think the warning system showed a great success in warning a lot of areas ahead of time and saving people from danger and saving a lot of lives,” Grilli said. “I think, unfortunately, for the highly populated area very close to the epicenter, the warning was very short, and we've heard about the death toll, and that is a tragedy for [Japan](#).”

Grilli and fellow URI researcher Yang Shen, a professor of seismology and marine geophysics in the Graduate School of Oceanography, spoke at length with Providence Journal reporter Gina Macris about the advances in earthquake and tsunami prediction that have been made in recent years.

While appearing on CNN, Grilli was asked by anchor Kristie Lu Stout if the tsunami was more devastating because the [earthquake](#) hit the water at a shallow depth.

“Yes, of course,” Grilli said. “The closer to the sea floor, the more shaking you will have and the more water motion above the sea floor.”

Provided by University of Rhode Island

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