



**Asia-Pacific  
Economic Cooperation**

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## **ShakeCast for APEC**

Submitted by: United States



**Workshop on Improving Global Supply Chain  
Resilience: Advancing the Seven APEC  
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# ShakeCast for APEC

'**ShakeCast** is a freely available, post-earthquake situational awareness application that automatically retrieves earthquake shaking data from **ShakeMap**, compares intensity measures against users' facilities, and generates potential damage assessment notifications, facility damage maps, and other Web-based products for emergency managers and responders.'

'**PAGER** (Prompt Assessment of Global Earthquakes for Response) is an automated system that produces content concerning the impact of significant earthquakes around the world, informing emergency responders, government and aid agencies, and the media of the scope of the potential disaster.'

Emergency Managers in **APEC** Countries can sign up to receive email, PDA and/or cell (PAGER) earthquake notifications through Kristin Marano at [kmarano@usgs.gov](mailto:kmarano@usgs.gov).

Red Cross, Red Crescent and USAID are PAGER recipients. There is direct notification going out to the Chinese Urban Search and Rescue (USAR) command, and other USAR teams around the globe.

## **Does the notification happen all at once?**

All PAGER alerts are queued up and delivered in sequence. There are some top priority internal recipients at the top of the list but mostly it is random and rather quick.

## **Are there any dead spots in countries where sensors are needed?**

Stations are sufficient (for the most part) for locating all earthquakes globally, but recording the shaking is only done with sufficient density in some US States, Japan, Taiwan, New Zealand, Iran, Italy, and perhaps a few others. MOST countries have either no stations for this purpose, or very few. Some of the countries with data are not available to USGS in a timely fashion, again, to varying degrees.

Where the priorities lie is a complex question. There are cost/benefits that need to be considered based on population density, construction type, and earthquake hazards likelihoods. These can be addressed with some proper scientific attention.

## **What is the standard time for a ShakeMap to be produced and paged out?**

15-20 minutes is the approximate amount of time (globally) for the ShakeMap to be sent out. If the initial earthquake alert is Orange or Red on the **Earthquake Impact Scale**, a PENDING ALERT message goes out whilst the information is checked. The Orange or Red alerts can thus delay the time, though all recipients should be aware that this action is pending.

## **Earthquake Impact Scale:**

Alert Level and Color	Estimated Fatalities	Estimated Losses (USD)
Red	1,000+	\$1 billion+
Orange	100 - 999	\$100 million - \$1 billion
Yellow	1 - 99	\$1 million - \$100 million
Green	0	< \$1 million