

Mock drill of Earthquake Early Warning and its benefits

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Background: An earthquake early warning system fulfills its purpose only if the residents follow the lifesaving practices after either hearing of blow of sirens, receiving of mobile messages, listening to radio alerts or watching alert message on television. An Earthquake Early Warning (EEW) system has been developed for Northern India by Centre of Excellence in Disaster Mitigation & Management at Indian Institute of Technology Roorkee, India. Himalaya is most tectonically active region in the world. It has seen many great earthquakes in the past. Therefore, in this EEW system, ground motion recording sensors have been installed in Uttarakhand, a state of India. This state is considered as a seismic gap for large earthquakes in the Himalaya. These sensors send the data to the central server through Private Internet Network. Data is processed at the server. Only in case of a destructive event ($M_w > 6$), a warning is issued to public.

Method: As of now, Sirens have been installed in all the district headquarters of Uttarakhand, a state of India. These sirens are connected through dedicated Private Internet Network. When a destructive earthquake occurs in the instrumented region, the EEW system automatically issues alert and sirens are blown. For mock drill purpose, past event is fed into the system at predefined time and alert is sent to sirens to blow.

Results: The mock drill practice imitates the real-time like scenario of earthquake event. All stake holders (i.e. Disaster management authority, Fire department, emergency operation center, Police and NGOs etc.) who deal with disaster response operations can rehearse their preparation and improve their standard operating procedures.

Benefits: Inhabitants get first hand scenario to respond during earthquake. This is alike a real-time experience for them. This can help them change their wrong practices to respond during earthquake. They can improve their preparation to respond during real-time earthquake.

Conclusion: Mock-drill provides an opportunity to all stake holders to manage post-disaster operations. It also helps to revise and improve their existing standard operating procedures. It changes the behavior of residents, and compels them to respond quickly in the real-time earthquake event.

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