



INTERNATIONAL ASSOCIATION FOR EARTHQUAKE ENGINEERING (IAEE)

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STATEMENT BY OFFICERS AND DIRECTORS OF IAEE ON THE CHRISTCHURCH, NEW ZEALAND (FEBRUARY 22, 2011) AND OFF-TOHOKU, JAPAN (MARCH 11, 2011) EARTHQUAKES

During the last several weeks the world has witnessed through vivid images provided by the global news media the terrible human loss and material destruction that these two recent earthquakes have caused. The International Association for Earthquake Engineering, representing the global community of earthquake scientists and practitioners in the world, expresses its deep sorrow for the unparalleled scale of loss of lives that New Zealand and Japan have suffered.

Christchurch had been visited by an M7.1 earthquake on September 4, 2010 that caused minor structural damage but no fatalities. Conventional thinking would have taught us that the release of seismic energy then implied a relatively non-seismic period of many years in the city during which further measures would have been put in place to improve its demonstrated earthquake resilience. The smaller magnitude (M6.3) but closer-situated earthquake on February 22 caused very high accelerations and unexpectedly severe structural damage in and around Christchurch. Unfortunately, close to 200 people have lost their lives as a result of this unexpected recurrence. The scale of the material loss appears likely to be significant for the New Zealand economy.

Just as we were attempting to understand the implications of the earthquake in Christchurch, a gigantic M9.0 earthquake has struck off the coast of Japan, some 125 km away from the city of Sendai on Honshu Island. Shortly after the occurrence of the earthquake itself a series of very high tsunami waves have struck various coastal towns and settlements, reducing to nonexistence many lives and societal assets. The effects of this earthquake have unfortunately transcended all superlatives that describe the scale of natural disasters. Its destructive power has far eclipsed those of many previous earthquakes. The technological disaster triggered by earthquake effects at the Fukushima nuclear plant has added a terrible new dimension to the deep turmoil created by the earthquake. The true scale of the scientific, technological and economic implications of the earthquake and its outcome will become better understood over time through the collective work of many individuals. We all learn through our collective experiences.

Earthquake engineers serve humanity by providing rational and affordable tools for protection from the seismic peril, but these tools are in constant need of being refined. The mission of

IAEE is to facilitate the achievement of global earthquake safety through the exchange of information, knowledge and experience among earthquake professionals. We do this primarily by means of organizing the World Conference on Earthquake Engineering, a quadrennial event that has been ongoing since 1956. The next World Conference is planned to be held in Lisbon, Portugal, during 24-28 September, 2012.

But it is now a time for expressing our collective sympathies and feelings of sadness for the people of New Zealand and Japan who have been engulfed by the consequences of two terrible earthquakes that struck within weeks of one another. We bow our heads for those who have lost their lives, and convey our sorrow for their loved ones. We feel humbled by the sheer amount of new challenges that these earthquakes have revealed for us to resolve. Once the pressing needs of people who have been left homeless have been met, the global community of earthquake engineers will begin to examine every facet of the February 22 and March 11, 2011 earthquakes at two different locations on the Pacific Basin. They will become threshold events of reference in the future. Both earthquakes will leave a lasting imprint on the practice of earthquake safety, and will likely teach us to seek ways of achieving enhanced freedom from the seismic peril of the communities that we serve.

IAEE is not structured to send out reconnaissance teams to earthquake sites, maintain data sources for dissemination or serve as primary facilitator for public information. These are tasks that are traditionally undertaken by our member national associations or other international or professional organizations. We have identified a few web sites listed below that may prove to be of use for individuals who wish to obtain more information about the earthquakes.

<http://www.eqclearinghouse.org/2011-02-22-christchurch/>

<http://www.christchurchquake.co.nz/>

http://www.jma.go.jp/jma/en/News/2011_Earthquake_04.html

<http://www.k-net.bosai.go.jp/>

<http://iisee.kenken.go.jp/special2/20110311tohoku.htm>

<http://ptwc.weather.gov/ptwc/?region=1&id=pacific.2011.03.12.063606>

<http://www.iaea.org/newscenter/news/tsunamiupdate01.html>

<http://www.reliefweb.int/rw/dbc.nsf/doc108?OpenForm&emid=EQ-2011-000028-JPN&rc=3>

<http://www.emsc-csem.org/Page/index.php?id=196>

<http://earthquake.usgs.gov/earthquakes/eqinthenews/2011/usc0001xgp/>

http://www.agu.org/news/features/2011-03-11_JapaniEQ.shtml

http://seismology.harvard.edu/research_japan.html

<http://scrippsnews.ucsd.edu/Releases/?releaseID=1146>

<http://www.eeri.org/site/reconnaissance-activities/70-japan/1020-m89-sendai-japan-march-11-2011-054623-utc->

<http://peer.berkeley.edu/news/2011/03/japan-march-11-quake/>

http://www.gfz-potsdam.de/portal/gfz/Public+Relations/M40-Bildarchiv/001_+Japan

<http://www.ifrc.org/news-and-media/news-stories/asia-pacific/japan/japan-a-shattered-community-struggles-to-survive/>

<http://www.trust.org/alertnet/news/workers-briefly-abandon-japan-nuclear-plant-crisis-worsening/>

<http://www.unisdr.org/news/v.php?id=18399>