

## **Press Release**

Geophysics Section,  
School of Cosmic Physics,  
Dublin Institute for Advanced Studies,  
5 Merrion Square  
Dublin 2

This morning March 11<sup>th</sup>, at 05:46(GMT) a M 8.9 earthquake struck off the North East Coast of Japan. It has caused fatalities and there is widespread flooding in the coastal regions. It has also caused large fires at sites near Tokyo, particularly at the oil refinery in nearby Lichihara. It occurred as a result of thrust faulting on or near the subduction zone interface between the Pacific and Eurasian plates. The March 11 earthquake was preceded by a series of large foreshocks over the previous two days, beginning on March 9th with an M 7.2 event approximately 40 km from the March 11 earthquake, and continuing with a further 3 earthquakes greater than M 6 on the same day. The Japan Trench subduction zone has hosted 9 events of magnitude 7 or greater since 1973. The largest of these was an M 7.8 earthquake approximately 260 km to the north of the March 11 event, in December 1994, which caused 3 fatalities and almost 700 injuries. In June of 1978, an M 7.7 earthquake 35 km to the southwest caused 22 fatalities and over 400 injuries.

The seismic waves generated by this super earthquake were recorded by the Irish National Seismic Network, at our stations in Donegal, Galway, Kerry and Dublin, twelve minutes later as the earthquake energy passed through the earth. Because the focus of the earthquake was shallow, 25 km, it generated a tsunami, with waves of 4 - 10m in height, and a Pacific wide tsunami alert has been put in place. Already the tsunami has caused major destruction in the coastal areas of NE Japan. Several strong aftershocks continue to be felt in the region.

Japan experiences hundreds of earthquakes each year and is the best prepared country in the world to deal with such disasters in terms of both its building code and disaster response preparedness.

The earthquake has also been recorded by over 50 schools in the Seismology in Schools Project, in Ireland, which is part of the DIAS outreach programme.

Tom Blake  
Director  
Irish National Seismic Network.