

INDONESIA

Role of Science and Technology Communication in Disaster Risk Reduction and Awareness

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2004 Sumatera Andaman Tsunami Earthquake is one of the most devastating earthquake and tsunami disaster in the world. More than two hundred thousand peoples died in Aceh, West part of Indonesia. Learning from that disaster, Indonesia has intensively starting to build Ina-TEWS (Indonesia Tsunami Warning Centre). The centre enhanced the capabilities of infrastructure for earthquake and tsunami detection, data center, sirens, and warning dissemination system.

Since then, Indonesia gives more focus on disaster management and risk reduction. There are some achievements in research and development activities, instruments utilization, and qualified human resources development such as in BPPT, LIPI, ITB and UI. The national and local agencies related to disaster management and risk reduction have also been built to accommodate public inquiries in distribution of infrastructure, information, coordination, as well as funding for such cases. For example, BNPB, BPBD and BMKG try to develop the appropriate end to end chain for tsunami early warning system.

Intensive exercises or drills are carried out every year along the coastal line from Sumatra to East Nusa Tenggara, in order to educate people and give more understanding about earthquake by responsible government agencies. Local and foreign NGOs also participate to contribute public awareness and education.

Meanwhile, the governments supported by foreign organizations have built shelters, evacuation signs and sirens for public needs. Local agencies for disaster management as well as broadcasting media have been provided with devices which should receive direct information of earthquake and tsunami from BMKG.

West Sumatra area including Mentawai Island is one of the areas predicted by scientists that has potential big earthquake. Several earthquake models in the area are recently developed by our researchers. The knowledge deriving from those models are implemented to educate people in those area in order to get more understanding to potential hazard of earthquake.

The 2012 and 2016 Sumatra earthquakes are evaluated in the area of end to end chain for warning system, where multidisciplinary project has being implementing continuously. However, the results derived from the evaluation are still far from satisfactory integrated chain system. It was found that some media broadcasted the warning after the time limit, the siren system did not work well and most people did not do self-evacuation due to many reasons.

It is therefore, important to realize that while scientists try to get the best understanding and solution about seismic activities in order to inform the hazard to public, there must be knowledge to transform the seismic science and technology information that should be disseminated and understandable by public. This is why public communication on science and technology is the important key point to be considered to make a successful evacuation process. The awareness relating to accountability from each person and agency responsible for disaster management and risk reduction should be included in the success of end to end chain of warning system.