

A proposal to the community of earthquake researcher - overcoming the crisis of confidence -

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It is needless to say that the 11 March 2012 Tohoku-Oki earthquake (Mw9.0) created a serious issue for the community of earthquake researchers. Here, we define "community of earthquake researchers" by collective body of researchers related to earthquake, which is mostly the same as the body of the Seismological Society of Japan, but is used in a little broader sense. Though some researchers might claim that the earthquake had been anticipated before its occurrence, the earthquake may be said as an unexpected one.

Given that the earthquake is the largest one in the history of Japan, and such large earthquake was not anticipated previously, lots of criticisms were directed to the community. Though this kind of criticism is brought mostly from outside of the community, some criticisms or reflective comments were brought within the community; "What was wrong in our study?", etc. Considering these voices, the SSJ established an ad-hoc committee to discuss and report the action plans to SSJ. The committee convened a symposium in the occasion of the fall meeting of the SSJ for discussing the issue.

On the other hand, some big questions are raised: "Is the earthquake prediction research meaningless?", "Is the outcome of earthquake studies properly disseminated to the society?". These criticisms were also raised after the Kobe earthquake of 1995. A series of furor that followed a media article in late January 2012 that titles "M7 earthquake chance of 70% within coming 4 years beneath the metropolitan area of Tokyo" would be one of such typical reactions from the public society. We should not dismiss this kind of reaction as just a sad news, but should take it seriously as a representation of crisis of confidence of the society against earthquake studies.

In this era of crisis of confidence, how should we face to the society? There is no simple solution for this problem. At least, the situation will be worse if we do nothing.

The Seismological Society of Japan took some countermeasure after the 1995 Kobe earthquake to tackle these problems; Open seminar for the public in the occasion of the fall meeting of SSJ, publication for public relations "Naifuru", production and distribution of advertisement of video, maintenance of publicly open mailing list, etc. These activities may have contributed to the community for familiarizing seismology to the public. However, it may be still premature for people to apply their knowledge of earthquake to their countermeasure against earthquake. Considering that the study of earthquake is mostly done by tax, it is indispensable for researchers to achieve accountability and to try more to contribute to build a safer society. It is necessary for the SSJ to tackle this problem and work together with the public people. These kinds of activities are said as "science communication". We may have to try to implement the technique of science communication. The most important subject of science communication in the field of earthquake would be "earthquake prediction". I would try to dissert some thoughts about this problem in my presentation.

In order to overcome the present crisis of confidence in earthquake study and make the study more reliable to the society, researchers themselves may have to change their mind for tackling this problem.

Keywords: earthquake study, Tohoku-Oki earthquake, Seismological Society of Japan