

Public's cognition and support toward seismology

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After experiencing the vast destruction by the 2011 Tohoku Earthquake, how Japanese people are recognizing seismology as an ology, and whether they are supportive or not is an arising question.

We conducted a nationwide survey utilizing a representative sample selected randomly from the Japanese public. Based on its result, we discuss the public cognition of seismology and their support of the investment on research of seismology (budget, human-resources and facility). Moreover, we empirically examine whether the seismology is taken as a "Science" or as "Disaster Prevention". It is expected that the public cognition relates to their opinion of supporting the investment to seismology or not. The result may become basic information to provide better understanding for the seismologist to recognize the position of seismology in the society, and to discuss the cognition gap between the seismologists and the public on what the seismology is.

The brief overview of the survey is as follows:

Sampling: The representative samples were gained by a stratified two-step random sampling method which selects the area and respondents randomly. For the surveying area, we divided Japan into 5 different category: "Tokyo's 23 wards", "government-decreed city", "city with population more than 100,000 people", "city with population less than 100,000 people", "rural district". Then we set the number of extraction from each of the areas according to the resident ratio, and selected the investigation spots randomly. Then, assigned number of adults over 20 years old were randomly selected from the residents' basic register in each spot. The breakdown is : 7 investigation spots from Tokyo's 23 wards (140people), 23 investigation spots from government-decreed city (407people), 45investigation spots from city with population more than 100,000 people, 27 investigation spots from city with population less than 100,000 people(431people), 13 investigation spots from rural district (191people). Total: 115 investigation spots with 2000 respondents.

Period of investigation: Held between mid Januarys to mid February 2012.

Method: Surveyor visiting and collecting from each respondent, after sending survey request via post card.

Questions: The data we are reporting in this study is collected as part of the investigation project on measuring the anxiousness of the Japanese residence, toward 51 hazards, including earthquake. The respondent was required to answer on the six-point Likert scales: 0 as "not agree at all" and 5 as "strongly agree" to the 9 questions about seismology. Question no.1 to 3 asks to evaluate about seismology as a "Science", and the following 3 questions no.4 to 6 is about evaluating seismology as "Disaster Prevention". The last 3 questions from no.7 to 9 asks to judge about investment for seismology.

1. The aim of seismology is clarification of the natural phenomenon.
2. Seismologist has interest in earthquake as a physical phenomenon.
3. Theoretical development of seismology is meaningful for its own sake.
4. The aim of seismology is disaster prevention.
5. Seismologist has interest in social impact of the earthquake.
6. Seismology becomes meaningful by utilizing their findings.
7. A large amount of budget should be allotted to seismological research.
8. Outstanding human-resources should be recruited for seismology.
9. The facilities for seismological research should be improved.

From each of these average values, we can figure out the general cognition of the public toward seismology, especially whether they are taking it as a "Science" or as a "Disaster Prevention". Moreover, by comparing the correlation of the composite of evaluation as "Science" and investigation judgment, and the correlation of the evaluation as "Disaster Prevention" and investigation judgment, we may be able to discuss in what way the resource allocation to seismology is judged as appropriate by the public.

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