

## Future Earth and Volcanology

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We cannot avoid meeting natural hazards as far as we live in dynamically moving terrain like Japan Islands. How to maintain our safe lives and peaceful society in coexistence with natural hazards, depends largely on Earth Science's development and its contribution to society. Forecasting the future natural hazards is fate of Earth Science.

Understanding natural hazards does not lead directly to minimizing damages from natural disasters. The worse example was the eruption at Ontake volcano on September 27, 2014. Irrespective of its small scale, it resulted in large damages under the worst scenario. Even if monitoring instrument had been set densely near the crater, it would be impossible to forecast the event like that in Ontake. However, we should interdisciplinarily challenge to forecast less-frequent large-scale natural hazards, including understanding their generation mechanisms. Eruption of Mount Fuji and caldera-forming eruptions are the latter examples.

Irrespective of its occurrence frequency, great losses would be induced from natural hazards in the worst case. Most important is preparedness for disasters by people who live in the possible areas, paying their attentions to the future disasters. Earth Science can give them wisdom for the preparedness from various points. It becomes possible even by providing our present knowledge to society. Our advanced understanding of natural hazards with new scientific observations will increase the opportunity where society can be escaped from the future natural disasters, if it is informed effectively to society.

Experiencing the Ontake volcanic disaster, the Volcanic Disaster Committee of the Volcanological Society of Japan inspected the related volcanological issues, and discussed with members about how to contribute for minimizing the future risks from the future similar hazards. In relation to re-opening of the nuclear power plants in Japan, new committee on the nuclear power issue was established within the VSJ, which officially commented on less-frequent large-scale eruptions in the volcanological points of view. VSJ supported the activity of Geoparks, which has the same concept with Future Earth, through the members' contribution in Geoparks. Thus, the aim of Future Earth is compatible with VSJ, where the trans-disciplinal issues are solved together with society.

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