

Message from the Winner



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A volcanic eruption is a phenomenon in which ballistic bombs, lapilli, volcanic ash, lava, and gas are discharged. Volcanic ash and gas are carried by the wind, and pyroclastic flows and lava flows are carried away by the force of gravity. These cause disasters of various forms in the areas around volcanoes, sometimes far from eruptive center. Accordingly, volcanic countries, particularly Asian countries such as Japan, Indonesia, and the Philippines, have been the scenes of volcanic disasters. We conducted the research project “Integrated study on mitigation of multimodal disasters caused by the ejection of volcanic products” with the Center for Volcanology and Geological Hazard Mitigation and other institutes in Indonesia under the SATREPS project from FY2013 to 2018. The aim of the project was to advance volcanic hazard mitigation, and I served as the guest editor of “Special Issue on Integrated Study on Mitigation of Multimodal Disasters Caused by Ejection of Volcanic Products” (2016) and “Special Issue on Integrated Study on Mitigation of Multimodal Disasters Caused by Ejection of Volcanic Products: Part 2” (2019) of the Journal of Disaster Research. The articles in the Special Issues have been downloaded by many researchers. The Special Issues cover many topics related to volcanic disasters, but the main theme is how to forecast real-time volcanic hazards using data monitoring, since it is this monitoring that triggers the issuing of warnings.

I have studied the volcanic activity of Sakurajima, the most active volcano in Japan, for 40 years, primarily to forecast its eruptions. Forecasting the eruptions is not as important as forecasting the hazards and risks posed by volcanic actions. Research done on the mitigation of the volcanic hazards of Sakurajima as well as Indonesian volcanoes has been enhanced by interaction. The cumulative volume of magma stored in the past 100 years indicates that Sakurajima has the potential for a large-scale eruption (VEI > 4). An eruption and its dispersal of volcanic ash in particular would cause a variety of disasters over a wide area, as described in the other issues of Journal of Disaster Research. I hope that the research results will be utilized for hazard mitigation in the event of future large-scale eruptions. The research could be advanced through collaboration with studies aimed at the enhancement of resilience and recovery.

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