Preface

Volcanic hazard is a unique natural hazard. Volcanic eruptions have a much longer warning phase before the onset of eruption, and eruptions can last much longer than other natural hazards. Unlike most other natural disasters such as earthquakes, floods, and typhoons, volcanic eruptions are usually preceded by weeks to months of precursory unrest, which manifests as ground deformation, earthquake swarms, and gas emission. Volcanic hazards continue from days to months, sometimes years, while the durations of other natural disasters are days and, at their longest, months. Evacuation from volcanic hazardous areas lasts from several months to years and is much longer than evacuation periods for other natural hazards. This longer duration can tax emergency response and recovery efforts.

An explosive eruption occurred at the Shindake crater on Kuchinoerabujima Island, southwest Japan on May 29, 2015, which followed the explosive eruption on August 3, 2014 for the first time in 34 years since the last eruption. The plume height of the 2015 eruption reached a height of 9 km above the crater and pyroclastic flows reached the coastline of the island. Immediately after identifying the 2015 eruption, the Japan Metrological Agency issued a volcano alert of "Level 5 (evacuate)." And all residents on the island then evacuated safely immediately after the 2015 eruption.

This special issue, entitled "The 2014 and 2015 Kuchinoerabujima eruptions" covers a range of topics, such as elucidation of the long-lasting preparatory process of the eruption and the eruption process, investigations into debris flows after the occurrence of pyroclastic flows, numerical simulations of volcanic ash plume dispersal, preparation and process of evacuation of people on the island, and evaluation of the trend of volcanic activity and decision on returning to the island. How can all these topics be addressed by volcanology? They are partially addressed by the papers of the special issue, which are to be published in December 2016 (this issue) and June 2017 (the next issue).

We sincerely hope that the special issue will be of interest to broad professional readers and will stimulate further discussions and collaborations on these topics. Finally, we are grateful to Editor-in-Chief Muneta Yokomatsu of the *Journal of Natural Disaster Science*, Secretary Tomoko Himuro, and all reviewers of the contributions to the special issue. The contributions to the special issue are supported by a Grant-in-Aid for Special Purposes (Grant number: 15H05794) of the Ministry of Education, Culture, Sports, Science and Technology Japan (MEXT).

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