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'Understanding volcanoes and society: the key for risk mitigation'



Long run communication support based on diagnostic symptom to the eruption as key roles of volcanologists toward sleeping giant - Case studies from Bandai, Usu and Azores

Jun Okada¹, Hiroshi Sato², Saburo Mimatsu³, João Fontiela⁴, and Hiromu Okada⁵

¹Japan Meteorological Agency, Japan

²Museum of the Mount Bandai Eruption, Japan

³Mimatsu Masao Memorial Museum, Japan

⁴Department of Physics & Institute of Earth Sciences, University of Évora, Portugal

⁵Crisis and Environment Management Policy Institute, Japan

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Volcanic eruptions can occur after decades-centuries long dormancy as has been seen from the recent examples: Mount St. Helens 1980, Pinatubo 1991, Unzen 1991, Soufrière Hills volcano 1995, Chaitén 2008, and Eyjafjallajökull 2010. Bandai volcano, NE Japan experienced a large scale sector collapse in 1888 which killed 477 people. We study how this catastrophic event is looked back by scientists, government and the local people. During the recent decades, the cultural and educational activities led by the Bandai Volcano Eruption Memorial Museum play an important role in disseminating hazard knowledge to the local people. Many outreach activities have been carried out at schools and/or in the volcano as well as the delivery of the volcanic hazard map. The regional headquarters of JMA in Sendai is in charge of monitoring 18 active volcanoes in Tohoku district. The area has not experienced major eruptions for long time, however the high potentiality for the large-scale eruption above VEI 4-5 is remarked such as Chokai B.C. 466 and Towada 915. The last four eruption crisis of Usu volcano, northern Japan were advised always by a couple of geophysicists and volcanologists through face-to-face communication with local town officers and the residents. Fogo volcano, Azores, shows 452 years of eruption dormancy whereas the recent geophysical studies have revealed repeated intrusion episodes during the last decades. We study how the information flows from scientific community to the public in case of volcanic crisis. It is a very challenging task how to deal with sleeping giants. Facilitating awareness of volcanic risks by maintaining long run communication among scientists, local authority and residents/tourists is the key for mitigating large volcanic hazards with low probabilities. Scientific support should be aimed at building community where “the local residents could make their own contingency and evacuation plans (Surono, 2013)”.