

A review of volcanic phenomena caused by phreatic eruption in Japan

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We reviewed volcanic phenomena caused by phreatic eruption. Pyroclastic flow by phreatic eruption occurred in Tarumaesan 1978 eruption, Asozan 1979 eruption, Miyakejima 2000 eruption and Ontakesan 2014 eruption. Mud flow by phreatic eruption occurred in Yakedake 1915 eruption, Niigatayakeyama 1974 eruption, Meakandake 2006 eruption and Ontakesan 2014 eruption. Only 40% of maps of the phreatic eruption are made with the volcano hazard map in Japan. Ballistic projectiles, ash falls and debris flows are often displayed to a hazard map. It is a problem that a hazard map has few mentions of pyroclastic flow and the mud flow. We think that the revision such as volcano hazard map and disaster prevention plans is necessary.

Keywords: phreatic eruption, ballistic projectiles, pyroclastic flow, mud flow, hazard map