

Volcano Monitoring and Warning System in Hokkaido, Japan

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In order to mitigate volcanic disasters, Sapporo Volcanic Observations and Information Center (VOIC) has responsibility for conducting constant watch for volcanic activities in Hokkaido and issuing Volcanic Warnings and Volcanic Forecasts.

In recent years, our volcanic observation networks for nine volcanoes have been improved. These volcanoes are supposed that the possibility of eruption within 100 years is high. For example, in Mt. Tokachidake, various types of equipments (seismometers, tiltmeters, infrasonic microphones and GPSs) were additionally installed. Using these improved networks, nine volcanoes in Hokkaido have been under constant watch by Sapporo VOIC.

We began issuing Volcanic Warnings and Volcanic Forecasts from Dec. 1st, 2007 to mitigate volcanic disasters. These are issued in relation to expected volcanic disasters, and detail the target areas and explanation of precaution.

We also began issuing Volcanic Alert Levels with Volcanic Warnings and Volcanic Forecasts. Volcanic Alert Levels are classified into five levels in terms of the target areas and action to be taken. They are described with action summary keywords: "Evacuate", "Prepare to evacuate", "Do not approach the volcano", "Do not approach the crater", and "Normal". These descriptions enable residents and climbers to take quick and appropriate action against disasters. Volcanic Alert Levels have been applied to five most active volcanoes in Hokkaido by Sapporo VOIC.

In this presentation, we will introduce about the observation networks in Hokkaido, current Volcanic Alert Levels applied to five volcanoes, and recent volcanic activities. (i.e. minor eruptions at Mt. Meakandake in 2008, thermal and crustal activities in Mt. Tarumae and Mt. Tokachidake.)

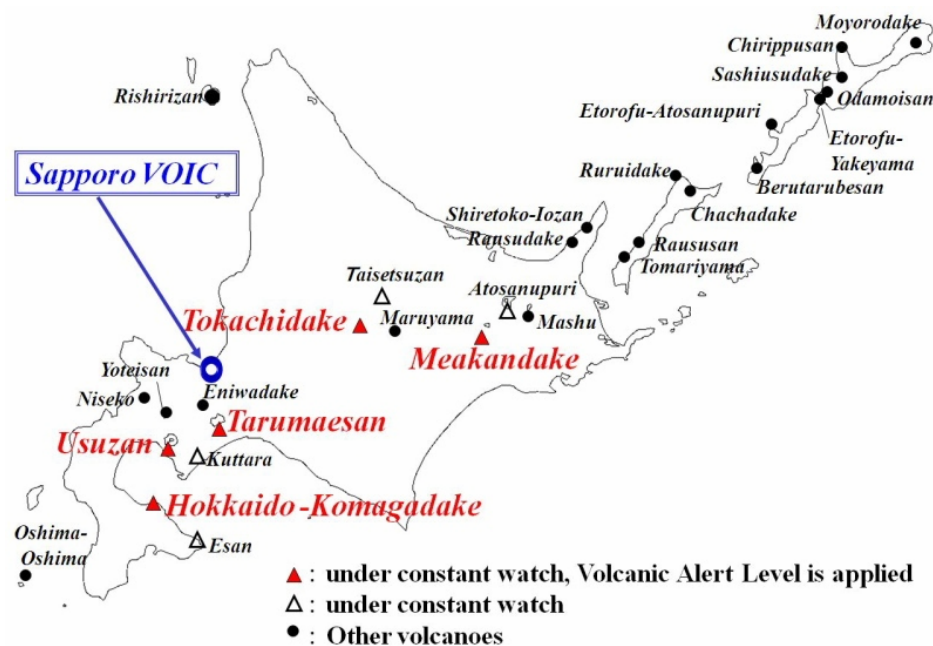


Fig1. Distribution of active volcanoes in Hokkaido.



Fig2. Minor eruption at Mt.Meakandake in Nov. 2008.
(Courtesy of Hokkaido Government.)



Fig3. Weak-glows on high-sensitive camera in Mt. Tarumae in 2011.
Changes in thermal activities have been observed in recent years.