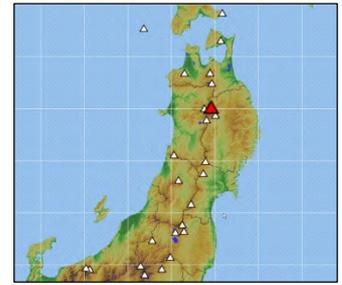


26. Hachimantai

Latitude: 39°57'28" N, Longitude: 140°51'15" E, Elevation: 1,613 m
(Hachimantai) (Triangulation Point)



Overview of Hachimantai, taken from the Hachimantai City Hall on February, 2002 by the Japan Meteorological Agency.

Summary

Hachimantai is a group of mainly andesitic stratovolcanoes, with a plateau at its summit. There are many small lakes and marshes, such as Lake Kako and the Hachiman Swamp within this volcanic area. At the foot of the volcano are many fumes, hot springs, and mud volcanoes. In the past, sulfur excavation was carried out (the Matsuo mine). The SiO₂ content is between 50.7 and 68.6 wt %.

Photo



Hachimantai summit area, taken from the east side on October 23, 1997. Courtesy of T. Chiba

Red Relief Image Map

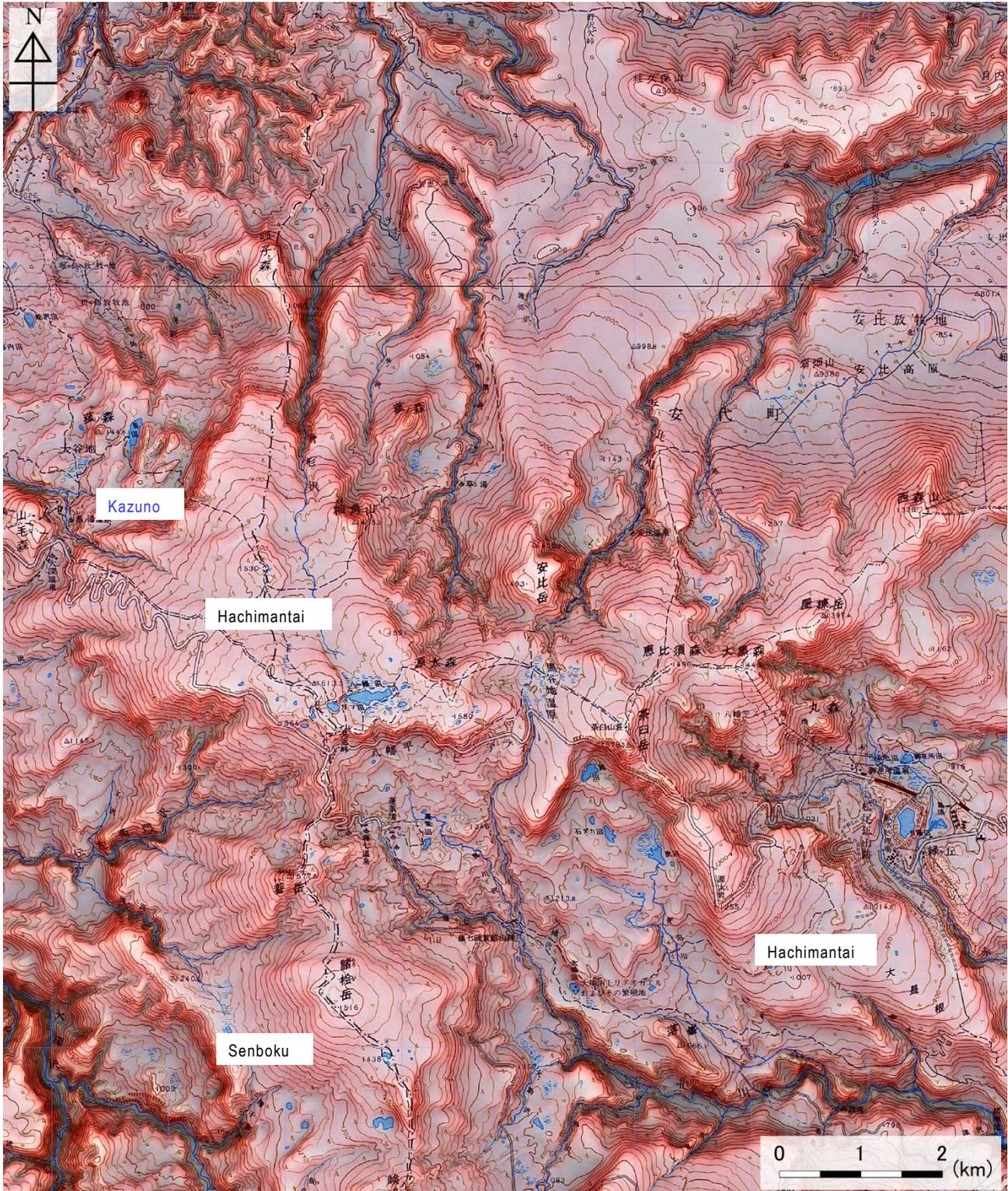


Figure 26-1 Topography of Hachimantai.

1:50,000 scale topographic maps (Hachimantai and Tayama) and digital map 50 m grid (elevation) published by the Geospatial Information Authority of Japan were used.

Chronology of Eruptions

▪ Volcanic Activity in the Past 10,000 Years

The peat deposit at the summit includes, at least, three layers of air-fall volcanic ash from Hachimantai volcano. The upper two layers are considered to be younger than 10,000 years ago. They were erupted approximately 7,300 years ago and between 9,800 and 10,000 years ago, respectively.

Period	Area of Activity	Eruption Type	Main Phenomena / Volume of Magma
10 to 9.8ka	Summit crater group	Phreatic eruption	Tephra fall.
7.3ka	Summit crater group	Phreatic eruption	Tephra fall.

* Reference documents have been appended with reference to the catalog of eruptive events during the last 10,000 years in Japan, database of Japanese active volcanoes, and AIST (Kudo and Hoshizumi, 2006) for eruptive period, area of activity and eruption type. All years are noted in calendar years. "ka" within the table indicates "1000 years ago", with the year 2000 set as 0 ka.

▪ Historical Activity

Year	Phenomenon	Activity Sequence, Damages, etc.
1973 (Showa 48)	Earthquake swarm, rumbling, fumarolic activity	In mid- to late-October, several felt-earthquakes accompanied by rumbling occurred at locations like Onuma Onsen, Obuka Onsen, Fukenoyu, and Goshogake Onsen. Mud eruption activity increased at the old mud volcano and Yunuma site. Fumarolic activity increased near Onuma Onsen.
1996 (Heisei 8)	Earthquake swarm	From December 21 to 22, a small-scale earthquake swarm activity occurred approximately 6 km south of the summit. On December 31, another small-scale seismic activity occurred approximately 3 km south of the summit.

* Reference documents have been appended with reference to the catalog of eruptive events during the last 10,000 years in Japan, database of Japanese active volcanoes, and AIST (Kudo and Hoshizumi, 2006) for eruptive period, area of activity and eruption type.

Recent Volcanic Activity

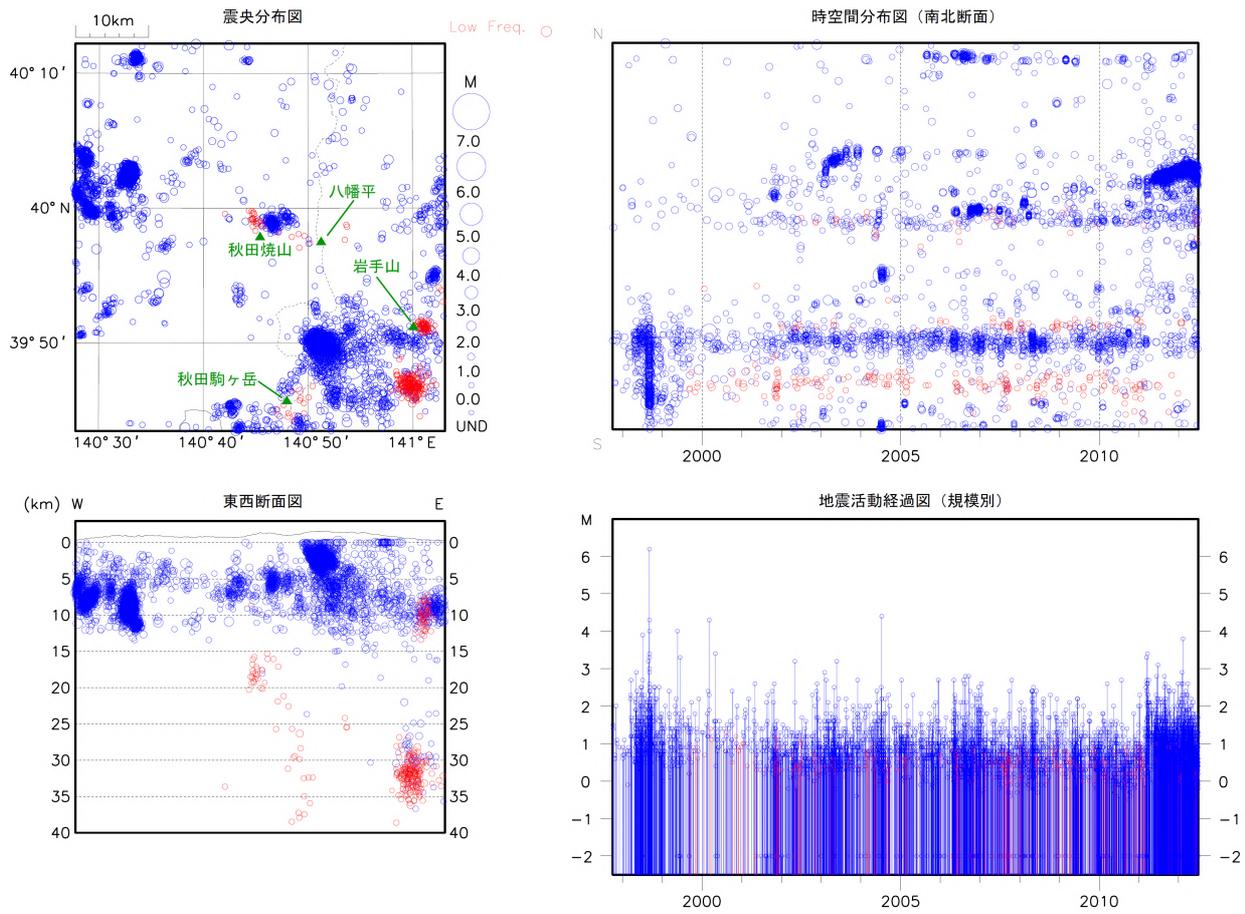


Figure 26-2 Activity of shallow VT earthquakes (blue circles) and deep low-frequency earthquakes (red circles) observed by a regional seismometer network (October 1, 1997 to June 30, 2012). Epicenter distribution (upper left), space-time plot (N-S cross-section) (upper right), E-W cross -section (lower left) and magnitude-time diagram (lower right).

Information on Disaster Prevention

① Hazard Map

None

Social Circumstances

① Populations

- Iwate Prefecture

Hachimantai City: 28,532 (as of June 30, 2012, according to the Hachimantai City website)

- Akita Prefecture

Kazuno City: 34,440 (as of June 30, 2012, according to the Kazuno City website)

② National Parks, Quasi-National Parks, Number of Climbers

- Towada Hachimantai National Park (Hachimantai)

Number of sightseers per year: 1,275,212 (according to the "Table of Estimated Numbers of Sightseeing Location Visitors", 2009 sightseeing statistic summary, Iwate Prefecture)

ditto : Approximately 1,650,000 (according to the 2010 Akita Prefecture sightseeing statistics)

③ Facilities

- Hachimantai City, Iwate Prefecture

Matsuo Hachimantai Visitor Center

- Kazuno City, Akita Prefecture

Hachimantai Visitor Center

Monitoring Network

See Akita-Yakeyama

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Watch, T. et al. (2002): Abstract, Ann. Meet. JpGU 2002, V32-P005 (in Japanese with English Abstract).

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