## 17. Niseko

Latitude: 42°53'07" N, Longitude: 140°38'26" E, Elevation: 1,116 m (Iwaonupuri) (Elevation Point - measured by JMA) Latitude: 42°52'30" N, Longitude: 140°39'32" E, Elevation: 1,308 m (Niseko Annupuri) (Triangulation Point - Niseko Andake)





From Front to Back: Iwaonupuri, Niseko Annupuri, Yoteizan, taken from northwest side on June 28, 2012 Courtesy of Ministry of Land, Infrastructure, Transport and Tourism Hokkaido Development Office

#### Summary

The Niseko volcano group is located in the southwest of Hokkaido, stretching 25 km east-west and 15 km north-south. It is composed of the greatly eroded Raiden volcano, Waisuhorun volcano, Mekunnaidake volcano, and Iwanaidake volcano, and the volcanic cone shaped Shirakaba volcano, Shakunagedake volcano, Niseko Annupuri volcano, Chisenupuri volcano, Nitonupuri volcano, and Iwaonupuri volcano (Hirokawa and Murayama, 1955; Saito et al., 1956; Oba, 1960). Niseko's volcanic activity began approximately 2 million years ago, consisting mainly of andesite lava flows and lava domes (The SiO<sub>2</sub> content is between 53.0 and 62.2 wt.%), but pyroclastic flow deposits and debris avalanche deposits is also identified at the foot of the volcanoes (Hori et al., 1986; Nakagawa et al., 2010). The most recent volcanic activity occurred at the Iwaonupuri volcano, with lava flows, lava domes, pyroclastic flow deposits, and air-fall pyroclastic deposits (Nakagawa et al., 2010).

### Photos



Crater at the Summit of Iwaonupuri ,taken from southwest side on June 28, 2012 Courtesy of Ministry of Land, Infrastructure, Transport and Tourism Hokkaido Development Office



From Front to Back: Goshiki Onsen and Iwaonupuri, taken from south side on June 28, 2012 Courtesy of Ministry of Land, Infrastructure, Transport and Tourism Hokkaido Development Office

## Red Relief Image Map



Figure 17-1 Topography of Niseko.

1:50,000 scale topographic map (Iwanai) 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 Chisenupuri, Nitonupuri, and Iwaonupuri volcanoes still retain a distinct volcano shape, so the possibility of their being Holocene volcanoes has been pointed out. However, the radiometric age values are not available for Chisenupuri or Nitonupuri. The Iwaonupuri volcano was formed during the last period of volcanic activity, and there are records of fumarolic activity at its summit during the late Edo period and the early 20<sup>th</sup> century (Tanakadate, 1918; Oikawa, 2011).

The eruption period has been determined to be approximately 7,000 years ago, based on the soil found below the air-fall pyroclastic deposits from the Iwaonupuri volcano, but the amount of carbon in measured samples is low, which indicates that the activity is apparently younger than actual age (Okuno, 2003).

Period	Area of Activity	Eruption Type	Main Phenomena / Volume of Magma
7←→6.8ka	lwaonupuri volcano	Phreatic eruption → phreatomagmatic eruption	Niseko / Iwaonupuri 1 tephra eruption: Age of humus below NsIw-1 (Okuno, 2003). Okuno (2003) pointed out that, because of the quite low carbon content in the humus, it is possible that the volcano appears younger than its actual age.

\* 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.

 $A \leftarrow \rightarrow B$ : Eruption events taking place at some point between year A and year B

#### Historical Activity

There are no records of volcanic activity.

#### **Recent Volcanic Activity**

See Yoteizan Seismic Activity

#### Information on Disaster Prevention

# ①Hazard Map

None

Social Circumstances	
①Populations	
Kutchan Town:15,354	Niseko Town: 4,709
Rankoshi Town: 5,332	Iwanai Town: 4,743
Kyowa Town: 6,561	(as of October 31, 2011)
②National Parks, Quasi-N	ational Parks, Number of Climbers
Quasi-National Park (Niseko	o-Shakotan-Otaru Kaigan Quasi-National Park)
• Kutchan Town: 1,499,800	• Niseko Town: 1,457,600
• Rankoshi Town: 817,100	• Iwanai Town: 49,200
• Kyowa Town: 196,700	
(According to 2010	Bureau of Tourism Department of Economic Affairs Hokkaido Government Hokkaido sightseeing
	estimate study)
Number of mountain-climbe	rs per year: Iwaonupuri: 3,551, Annupuri: 5,364, Total: 8,915
	(From number of registered climbers in 2010)
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③Facilities

None

#### **Monitoring Network**

See the Yoteizan

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