

Ex. 4 Volcano Disaster and Volcanic Area Sabo Course (Participants: 20)

This excursion may be cancelled if there are few participants.

1. Overview of the Inspection Course

The geology of the Takahara River basin is fragile. The ground in the North Japan Alps is said to upheave 4 to 5 mm every year by orogeny. Because of this unstable geologic structure, the river basin is characterized by its remarkable production of sediment. One of the major focuses of this course is the Hirayu River basin, where denuded land is formed by thick deposits of volcanic ejecta from active volcanoes including Mt. Yakedake. The course includes study of this condition from topographic and geologic viewpoints.

Mt. Yakedake is still an active volcano that has been exhibiting volcanic activity recently, including steam explosions. The Mt. Yakedake Eruption Control Measures Council conducts observation and measurement, and reviews various measures for eruption disaster management. The focus of inspection is the Council's swift and effective implementation of urgent measures, including both structural and nonstructural measures against sediment disasters following volcanic eruption to mitigate disaster damage.

This course also includes an explanation to participants on parameters including the rate of flow, sediment discharge, and sediment production continuously observed by the Hodaka Sedimentation Observatory, Research Center for Fluvial and Coastal Disasters, Disaster Prevention Research Institute, Kyoto University; a visit to the observatory of the Shin-Hodaka Ropeway for sightseeing in the mountain area, including a panoramic view of the Hidaka Mountain Range (North Japan Alps); and the opportunity to experience the blessings of the volcano (hot spring footbaths).

2. Visit Locations

(1) Major visit locations

- Okuhida Sabo Juku (Jinzu Sabo Reference Library): The participants will hear an overview of the sabo projects in the upstream reaches of the Takahara River, which specifically includes the roles of sabo facilities and how sediment control work has been conducted in faraway areas in mountains with fragile volcanic geology. They will also be shown tools used for such work to illustrate this explanation. Participants will be given explanation on the formation of the North Japan Alps (Mt. Yakedake) and the current volcanic control measures (such as active volcano monitoring, observation equipment, information provided to the Volcano Disaster Management Conference, and the Mt. Yakedake hazard map). Also covered are the rate of flow, sediment discharge, and sediment production, continuously measured by the Hodaka Sedimentation Observatory, Research Center for Fluvial and Coastal Disasters, Disaster Prevention Research Institute, Kyoto University.
- Shiratani Sabo Dams: An explanation of sabo facility development to capture sediment and debris flows that are generated from fragile volcanic soil.
- Hirayu Falls: An explanation of the remnants of geophysical activities, such as repeated eruptions of the volcanoes of Mt. Yakedake, and the lifestyle of the Okuhida hot spring community that utilizes the natural resources of the volcano.

- Shin-Hodaka Ropeway Observatory: Participants will visit the observatory to see the active volcano of Mt. Yakedake and given an explanation on the formation of the North Japan Alps (Mt. Yakedake), the status of volcanic smoke, and the Kasagatake Cauldron.

(2) Other

- Shin-Hodaka Ropeway Observatory: Japan's only two-storied ropeway. This observatory has a pleasant view of a world above the clouds, 2,000 m above sea level.

3. Notes

- The course includes rough unpaved roads, so participants should wear appropriate clothing and shoes.
- For the Shiratani Sabo Dams, one of the scheduled visit locations, the destination may be changed to another place depending on the status of sabo work.



Mt. Yakedake (active volcano)



Series of Sabo dams in Shiratani Valley



Hirayu Falls



Shinhotaka Ropeway