

# Mt. Kujū Eruption Warning Levels.

Level (Keyword)	Volcanic activity status	Action of residents etc. and measures regarding mountain climbers and visitors to the mountains etc.	Regulations and disaster prevention actions to be enforced.
<b>Level 5 Evacuate.</b>	An eruption that will cause a large amount of damage to residential areas has occurred or is imminent.	Evacuate etc. from dangerous residential areas.	<ul style="list-style-type: none"> <li>• Regulation area for roads is the same as Level 3.</li> <li>• Asebi-koya, Bogatsuru Campground, and Akagawa Onsen Akagawa-sou must evacuate.</li> </ul>
<b>Level 4 Evacuation of the Elderly, Etc.</b>	It is expected that an eruption will occur that will cause a large amount of damage to residential areas.	For residential areas that require extra precaution, evacuation of the elderly and other persons requiring special assistance, as well as preparation for the evacuation of other residents.	<ul style="list-style-type: none"> <li>• Regulation area for roads is the same as Level 3.</li> <li>• Asebi-koya, Bogatsuru Campground, and Akagawa Onsen Akagawa-sou must prepare to evacuate.</li> </ul>
<b>Level 3 Do not approach the volcano.</b>	An eruption has occurred or is predicted to occur that has the potential to cause great nearby to residential areas.	<p>Access regulations on the area from the crater to near residential areas, etc. Preparation for the evacuation of the elderly and other persons requiring special assistance, etc. Evacuation from specified areas.</p> <p>※ Specified areas being defined as areas closer to the estimated crater zone than residential areas, that would require evacuation or other measures at an early stage.</p>	<p>(Within 2 km)</p> <ul style="list-style-type: none"> <li>• No entrance into areas within ~2 km of the center of the estimated area for the volcano crater, depending on the volcano's current status.</li> <li>• Hokkein Onsen and Kuju Hütte must evacuate.</li> <li>• Prefectural Route 11 (Yamanami Highway) will be closed for traffic from Chōjabaru to Maki-no-to.</li> <li>• Signs will be placed at major trailheads to indicate mountain trails that cannot be hiked.</li> </ul>
<b>Level 2 Do not approach the crater.</b>	An eruption that will affect areas near the crater has occurred or is predicted to occur.	Residents should continue their daily lives as normal. Entrance to areas near the crater is regulated etc.	<p>(Within 1.5 km)</p> <ul style="list-style-type: none"> <li>• No entrance into areas within ~1.5 km of the center of the estimated area for the volcano crater.</li> <li>• Hokkein Onsen and Kuju Hütte will be put on alert.</li> <li>• Signs will be placed at major trailheads to indicate mountain trails that cannot be hiked.</li> </ul>
<b>Level 1 Be aware that this is an active volcano.</b>	Volcanic activity is calm. Depending on the conditions of volcanic activity, eruptions of volcanic ash etc. are visible within the crater.	Depending on the situation, entry to the crater area may be restricted.	<ul style="list-style-type: none"> <li>• Regulations on entrance to the estimated crater zone, etc., depending on the situation.</li> <li>• The estimated crater zone is an area 500 m in radius including the fumarole field of Mt. Iouzan.</li> </ul>

Be alert!

## Inquiries

### ◆Inquiries regarding volcanic activity:

- Oita Region Meteorological Observatory TEL097-532-0644
- Fukuoka District Meteorological Observatory Regional Volcano Observation and Warning Center TEL092-725-3606

### ◆Inquiries regarding disaster prevention methods:

- Kokonoe Town Crisis Management Information Promotion Division TEL0973-76-3801
- Taketa City General Affairs Division, Disaster Crisis Management Office TEL0974-63-4800
- Yufu City Disaster Crisis Management Division TEL097-582-1111

### ◆Inquiries regarding this guide:

- Oita Prefecture Disaster Management Policy Planning Division TEL097-506-3139

## Features of Mt. Kujū

Mt. Kujū refers to a group of over 20 volcanoes that are distributed 15 kilometres east to west between the southern part of Kusu-gun, Kokonoe Town (Oita Prefecture) and the northern part of Taketa City, with a 1,700m class volcano towering over the group.

This region was designated as a part of the Aso- Kujū National Park, and we can enjoy the beautiful scenery of each season here, such as the blooming azaleas in spring.

Furthermore, precious nature remains in the area, such as the Kujū Bogatsuru and Tadewara Wetlands, which in 2005 were recorded as internationally important wetlands in the Ramsar Convention on Wetlands.

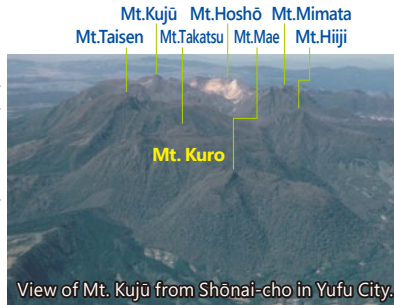


Miyama-Kirishima azaleas blooming in Kita-Taisen.

## Mt. Kujū's Volcanic Activity Until Now

Volcanic activity in the Mt. Kujū region began approximately 150,000 years ago, and there have been repeated eruptions causing large amounts of lava flow, volcanic ash, and pyroclastic flow.

Over the last 5,000 years, every 1,000 years, the Komekubo crater etc. located near Mt. Taisen has erupted. The lava flow eruption of Mt. Kuro approximately 1,600 years ago was the last large-scale magma eruption.



View of Mt. Kujū from Shōnai-cho in Yufu City.

Furthermore, on the mountainside to the north east of Mt. Hoshō, there is a group of active fumaroles.

In recent years, there was an eruption on Mt. Iō (Mt. Sulfur) on the eastern mountainside of Mt. Hoshō on October 11th 1995. Fist-sized volcanic cinders erupted into the air landing in a 100m sphere around the crater. An avalanche was caused by the hot water exiting the crater during the initial period of the eruption, falling 100m alongside the valley.



Eruption on Mt. Iō in 1995.

# Volcano Disaster Prevention Guide

## Oita Prefecture's Active Volcanoes

# Mt. Kujū

For mountain climbers and tourists



Kokonoe Town • Taketa City • Yufu City

Oita Prefecture



The Oita Prefecture Cheer Squad "Bird" Mejiron



日本一のおんせん県おおいた

# Climbing or Sightseeing on Active Volcanoes

When entering areas with active volcanoes to go climbing or sightseeing, you must do some important preparation beforehand so that you can evacuate properly should volcanic activity occur.

Proper preparation is required in order to enter areas with active volcanoes according to the Act on Special Measures for Active Volcanoes, revised July 2015. (Article 11 Paragraph 2)

## Look Up Information

If you plan on going climbing in any volcanic areas, please check the volcanic disaster prevention map and the latest volcanic activity beforehand.

### Japan Meteorological Agency Website (Japanese & English)

Volcanic Information for Mountaineers (English)

volcano mountaineers jma



QR Code

### Oita Prefecture Website (Japanese)

Volcano Disaster Prevention Guide (English, Chinese, Korean)

oita pref volcano



QR Code

## For Visitors Going Sightseeing

If you are going sightseeing in the area surrounding the crater of the volcano, please do not enter any restricted areas. If there should be any unusual events in volcanic activity, please conduct yourself in accordance to the rules set by the facility's management.



Depending on the volcano, you may be able to access the area surrounding the volcano's crater via cable car or private car.

## For Mountain Climbers

Mountain climbing allows you to enjoy a magnificent environment and feel a sense of accomplishment upon arriving at your destination. On the other hand, accidents and falls carry risk of being life endangering, and when climbing an active volcano, another dangerous factor, the "fear of an eruption," is added to that. When mountain climbing, you must prepare yourself properly.

### ◆Equipment

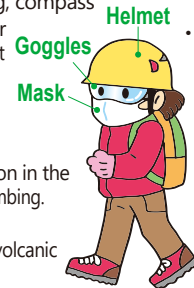
Based on the condition and specifics of the volcano you're going to climb, please prepare these essential items from the list below before embarking on a mountain climb.

#### 【Items to Always Bring】

- Cell phone or other communication device
  - ※Try not to turn off its power
  - ※Keep in mind there will be areas without radio signals
- Map of the mountain you're climbing, compass
- Emergency food rations, drinking water
- Other critical mountain climbing equipment

#### 【Items to Bring Depending on the State of Volcanic Activity】

- Volcanic Disaster Prevention Map
  - ※Make sure to look over the information in the volcanic disaster prevention map prior to climbing.
- Helmet, goggles, mask
  - ※Equipment to protect your body from volcanic debris and ash



### ◆Hiking Registration

Make sure to submit hiking registration forms when going mountain climbing.

In order to be able to perform search and rescue operations should a mountaineering accident strike, the Oita Prefecture Liaison Council for Mountaineering Accident Prevention as well as all police stations are accepting hiking registration forms.

#### Submitting Hiker Registration

- Register at any police station
- Complete the forms at registration stands located at major trailheads and mail them via the registration mailbox
- Register online (Oita Prefectural Police, Compass, YAMAP)

oita pref report climbing



▼Oita Prefectural Police



▼Compass



▼YAMAP



Photo of a Hiker Registration Stand

## In Case of Emergency

If entering the area of the volcano becomes restricted due to abnormal volcanic activity or if sudden eruptions should occur, please take appropriate disaster prevention action as follows.

### ◆If entering the area of the volcano becomes restricted due to abnormalities in volcanic activity (Prior to Eruption)

After acquiring information regarding the restrictions on entering the area of the volcano, avoid the crater in question and quickly move to outside of the restricted area.

If fear of an eruption grows and entering the area becomes restricted, an evacuation may be called for via emergency alert messages on your cell phone.



### ◆If a sudden eruption occurs

#### Protecting Your Body from Volcanic Debris

The method of disaster prevention differs depending on the explosive eruption and the size of the volcanic debris ejected from the crater.

#### ◀Large Volcanic Debris (Generally 20-30 cm or Above)※▶

- These areas must be evacuated from prior to eruption.

#### ◀Small Volcanic Debris (Several cm in Diameter)※▶

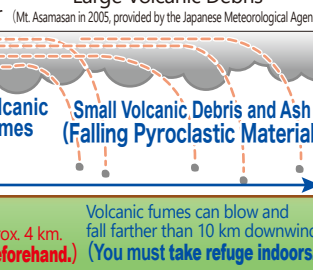
- Take refuge indoors and ensure your safety.
- If there are no areas to take cover at in your vicinity, put on your

helmet and continue to move until you find an area where you can take cover.

※Even if you do not have a helmet with you, cover your head with your belongings, such as your backpack, or your arm. Make sure to protect your head with whatever is available in your current location.



"Large Volcanic Debris"



※According to the "List of Terminology for Volcanic Debris" as found on the Japan Meteorological Agency Website

#### Protecting Your Body from Volcanic Ash

Wear a mask and goggles to prevent volcanic ash from entering your body.

Volcanic ash can cause itchy eyes, pain, and hyperemia, and inhaling ash can lead to coughing and difficulty breathing as well as other effects on the respiratory system.

#### Protecting Your Body from Volcanic Gas

If you feel anything abnormal, such as increased difficulty breathing, move away from low lying areas and valleys immediately. Volcanic gas has the property of being able to absorb into water easily, so covering your mouth with a wet towel is also effective.

Volcanic gas has toxic components, so depending on how concentrated it is it can potentially be life threatening. Volcanic gas is heavier than air, so it can gather in the low lying areas and valleys surrounding the volcano.



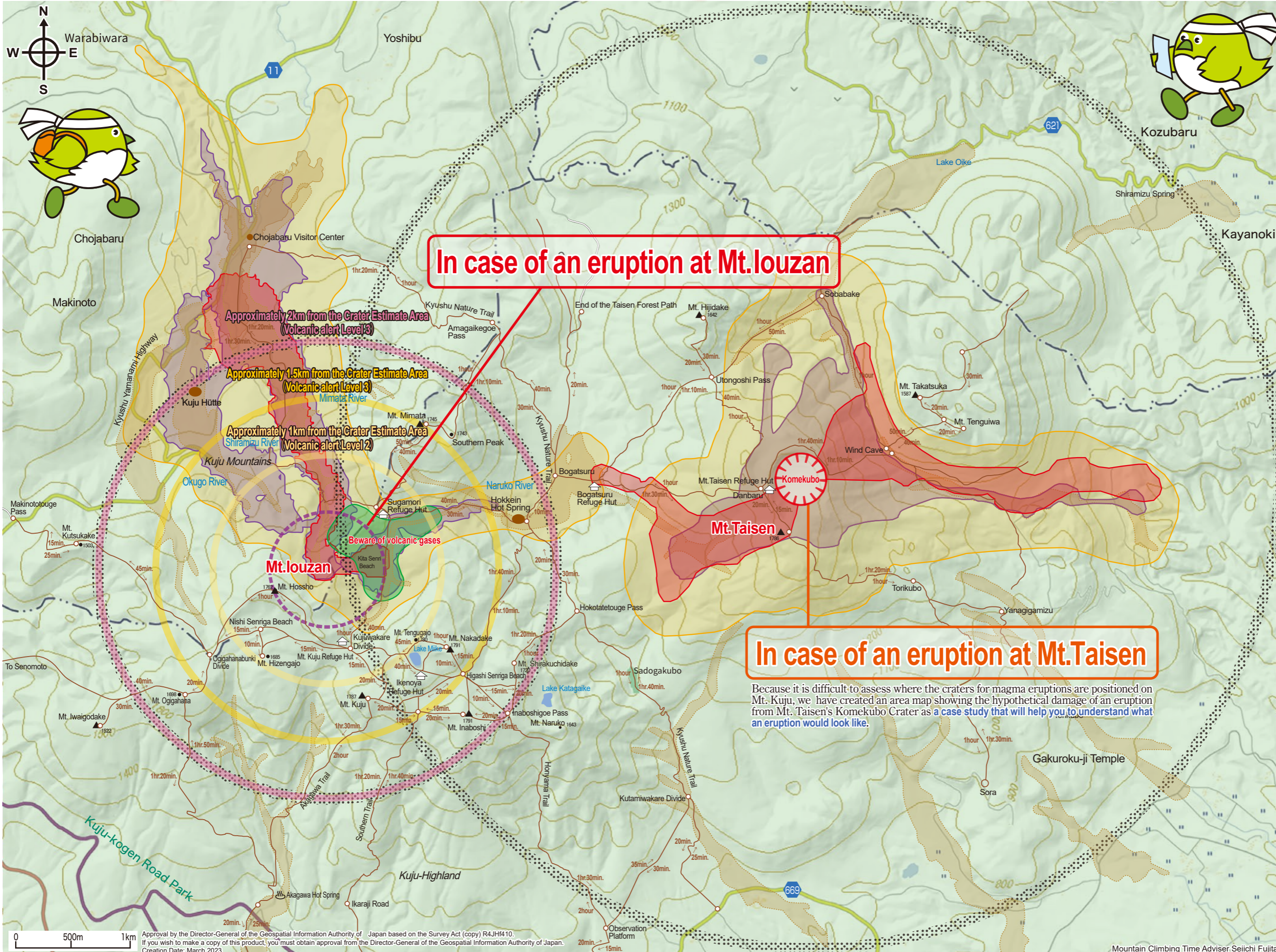
# Mt. Kuju Volcanic Disaster Prevention Map

## Phreatic (Steam-Blast) Eruptions (near Mt. Iouzan)

Volcanic activity as caused by phreatic (steam-blast) explosions has been seen for at least the past 1,700 years at Mt. Iouzan and its surrounding environs. Due to this, it can be thought that the possibility of a phreatic eruption occurring over the long term in the area of the volcano is quite high.

## Magma Eruptions (all of Mt. Kuju)

Eruptive activity as a result of magma eruptions in the Kuju mountain range has been migrating over a long period of time from the west of Mt. Kuju to the east. The most recent magma eruption was lava and pyroclastic flow (a dense, fast-moving mix of hot rock and gas) from Mt. Kurodake around 1,600 years ago, when considering possible long-term volcanic activity from here into the future, the position of the crater cannot currently be determined.



### Map Legend

#### Regulations based on the volcanic alert level in the event of an eruption

The volcanic alert level is determined on the state of volcanic activity. The entrances to areas where large volcanic debris (larger than 20~30cm) might be dispersed is regulated. Even outside of the area where large volcanic debris may be ejected, there is a possibility that small volcanic debris (several cm in diameter) may be carried by the wind and scattered.

- Approximately 2km from the Crater Estimate Area (Volcanic alert Level 3)
- Approximately 1.5km from the Crater Estimate Area (Volcanic alert Level 3)
- Approximately 1km from the Crater Estimate Area (Volcanic alert Level 2)



**Trail Routes**  
(time required is approximate)

**Rest Huts**  
(cannot be used during eruptions)

**Crater Estimate**

**Crater Estimate Area**

**Main Section of Pyroclastic Flow**

**Pyroclastic Surge**  
(Part of the hot air current from the pyroclastic flow)

Area where debris avalanches are anticipated to occur due to rain after an accumulation of volcanic ash

After volcanic ash accumulates, it is anticipated that debris avalanches caused by rain will affect these areas. Debris avalanches would flow into the low-lying areas near the riverside.

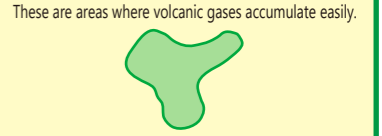


**Downstream Area of Lava Flow**  
(See diagram to the left)

**Volcanic Debris**  
This is the area in danger of having "fist-sized" volcanic debris flying around.

Areas where volcanic gases easily accumulate

**Caution is always necessary**



Approval by the Director-General of the Geospatial Information Authority of Japan based on the Survey Act (copy) R4.JHf410. If you wish to make a copy of this product, you must obtain approval from the Director-General of the Geospatial Information Authority of Japan. Creation Date: March 2023

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