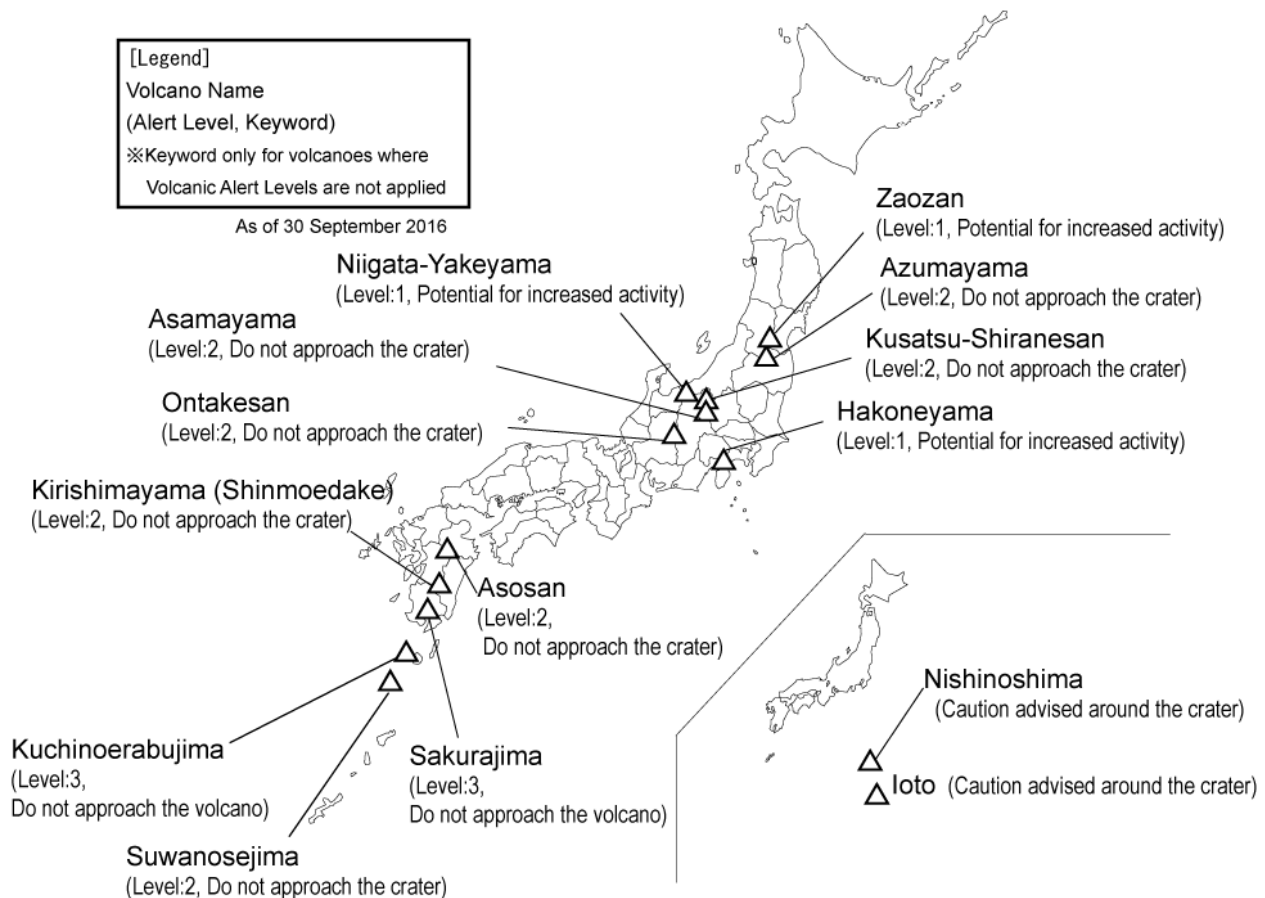


# Monthly Volcanic Activity Report (September 2016)

Japan Meteorological Agency



## Zaozan (Alert Level: 1)

Three volcanic tremors occurred from 22 to 25 September. However, according to field survey conducted on 23 September, no anomalies were seen in the situations in or around Okama and Furikosawa, or fumes from Maruyamasawa.

Volcanic activity increased between 2013 and 2015. Volcanic earthquakes and tremors occasionally occurred thereafter.

## Azumayama (Alert Level: 2)

Geothermal activity in and around the Oana crater has continued.

The potential for small eruptions around the Oana crater remains.

## Kusatsu-Shiranesan (Alert Level: 2)

Thermal activity on the northeastern side and the northern wall of the Yugama crater and on the north-to-northeastern slope of the Mizugama crater, and fumarolic activity on the fumarolic area around the northern part of Yugama remain high. According to the Tokyo Institute of Technology, compositions of gas in a fumarolic area to the north of the Yugama crater and the chemical composition of water in the crater have shown changes indicating ongoing increased volcanic activity, and the water temperature in the crater has remained higher than normal.

Volcanic activity was relatively high from March 2014. Observations of volcanic seismicity, ground deformation and geomagnetic total intensity have shown data indicating decline of volcanic activity since 2015. Compositions of gas and water in the Yugama crater continue to indicate increasing volcanic activity.

### **Asamayama (Alert Level: 2)**

The number of imperceptible volcanic earthquakes in very shallow parts immediately under the summit crater has remained relatively high, and volcanic activity is now quite high as a result.

The potential for small eruptions affecting areas around the crater remains.

### **Niigata-Yakeyama (Alert Level: 1)**

Plume height from the fumarole on the eastern slope of summit has relatively high since summer 2015 and the volume of plume has shown an increasing trend since late December 2015. Volcanic ash fall associated with very small eruptions were revealed on May and July. Continuous GNSS observation data has showed the extension of the baseline across Niigata-Yakeyama from January 2016.

Volcanic seismicity showed a slight increasing since 2015. After increasing on 1 May volcanic seismicity has declined since 2 May, but has remained at relatively higher level than those observed before 2014.

### **Ontakesan (Alert Level: 2)**

No eruptions have been recorded since October 2014, indicating a declining trend in volcanic activity. However, the potential for small eruptions remains as plume activity from a line of craters and seismic activity have been ongoing.

### **Hakoneyama (Alert Level: 1)**

Volcanic seismicity has remained at low levels. No remarkable changes have been seen in data of ground deformation.

However, fumarolic activity on some fumaroles around the Owakudani has remained at high levels.

### **Nishinoshima (Near-crater Warning)**

Although volcanic activity is declining, thermal areas near the crater has been observed. The potential for small eruptions caused by sea water flowing into the volcanic vent cannot be eliminated.

### **Ioto (Near-crater Warning)**

Volcanic seismicity has remained at relatively low levels.

Continuous GNSS measurement showed repeated rising trend and static state.

### **Asosan (Alert Level: 2)**

A field survey revealed that hot water covered 70 percent of the Nakadake No.1 crater and very small sediment blowouts were observed in the crater lake this month in addition to those seen in the previous month.

Amplitudes of volcanic tremors remained relatively small from 13 September.

The results of continuous GNSS measurement showed a slight extension of the baseline across Kusasenri, where a magma chamber is considered to be present in deeper parts, from around July 2016 onward. The extension was considered to indicate deeper magma chamber inflation.

Amounts of volcanic gas (SO<sub>2</sub>) emissions have remained high.

### **Kirishimayama (Shinmoedake) (Alert Level: 2)**

Volcanic earthquakes occasionally occurred around Shinmoedake.

According to continuous GNSS measurement data, ground deformation indicating deeper magma chamber inflation at several kilometers northwest of Shinmoedake stopped around January 2015. A slight extension had been observed along some baselines around Shinmoedake since May 2015, but it stopped in around October 2015.

Small eruptions may occur at the Shinmoedake crater affecting the area around the crater.

### **Sakurajima (Alert Level: 3)**

At the Showa crater, explosive eruptions were observed on 26 July 2016, but no eruptions including very small ones were observed after that. At the Minamidake summit crater, very small eruptions were occasionally observed

until August 2016, but no one was observed from September 2016. Volcanic seismicity remained at low levels and no volcanic tremors have been recorded. Amounts of volcanic gas (SO<sub>2</sub>) emissions have been low.

Volcanic activity at the Showa crater and the Minamidake summit crater has declined to low levels since August 2016. However, data from ground deformation observation show that magma chamber inflation under the Aira Caldera is ongoing. The data collected may indicate the potential for further volcanic activity at high levels. The rate of the inflation trend has been increasing since around January 2015.

### **Kuchinoerabujima (Alert Level: 3)**

No eruption has been observed after the very small eruption on 19 June 2015.

No volcanic glows were observed. Thermal infrared observation showed that the temperature around a fissure to the west of the Shindake crater remained low.

A small-amplitude short-duration volcanic tremor was observed on 27 September 2016.

Amounts of volcanic gas (SO<sub>2</sub>) emissions have been at 100 – 400 tons a day.

The potential for eruptions on the scale of the one that occurred on 29 May 2015 is low, but the potential for eruptions remains as amounts of volcanic gas (SO<sub>2</sub>) emissions have been at relatively higher levels than that of before the eruption on August 2014.

### **Suwanosejima (Alert Level: 2)**

During this reporting period, one of the three eruptions at the Otake crater observed were explosive.

The potential for eruptions affecting areas around the crater remains.