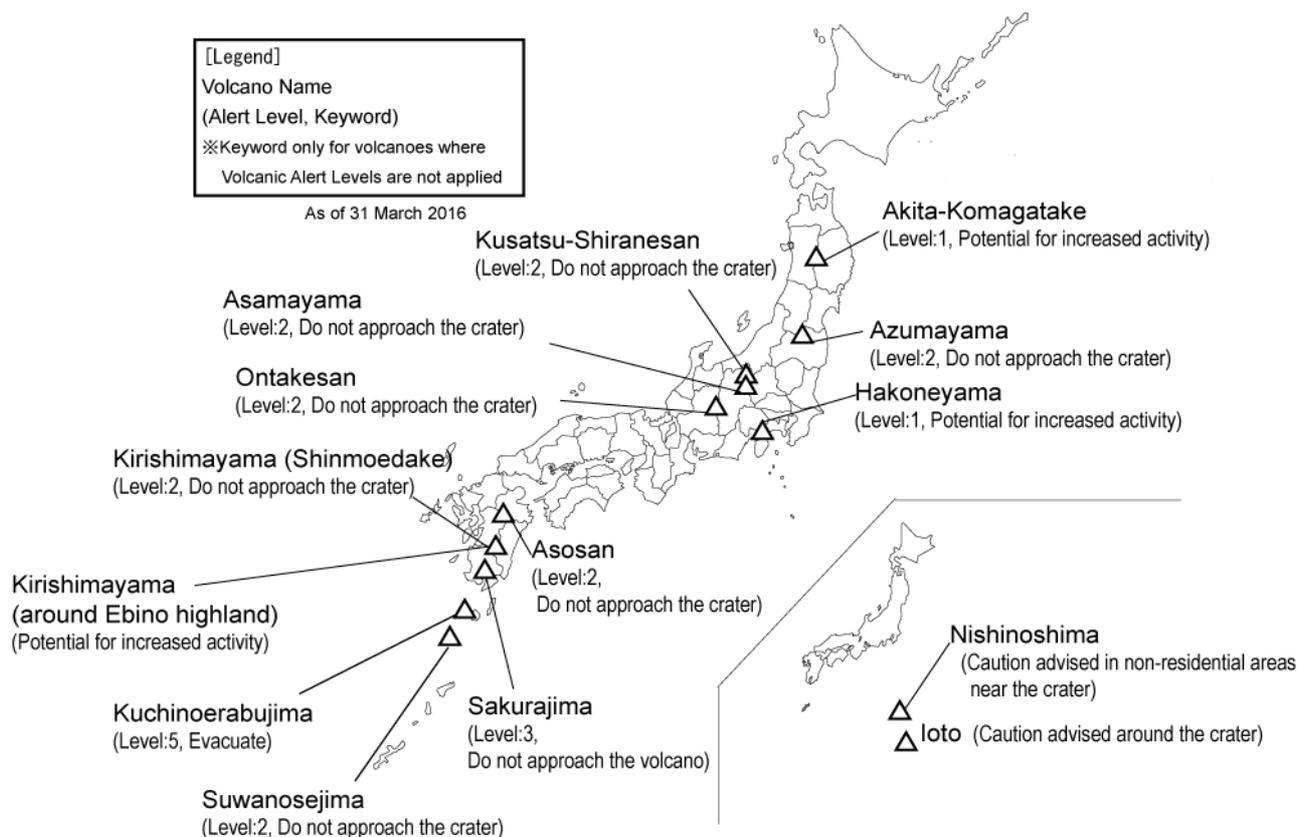


Monthly Volcanic Activity Report (March 2016)

Japan Meteorological Agency



Akita-Komagatake (Alert Level: 1)

Volcanic seismicity showed a slight increasing from 12 to 14 March. No remarkable changes were seen in other volcanic activity and no signs of high volcanic activity were observed.

Aerial observation conducted in collaboration with the Japan Ground Self-Defense Force (JGSDF) on 18 March revealed no remarkable changes in the extent of the geothermal field in the northern part, on the northern slope, on the northeastern slope or in the southeastern crater of the Medake summit, compared to observation made during the last survey (21 January 2015), and no remarkable change in fumarolic activity was seen.

The geothermal field at Medake that had been expanding since 2009 remained unchanged.

Volcanic seismicity remained at low levels, and no remarkable changes in ground deformation or fumarolic activity were observed. However, geothermal activity continued.

Azumayama (Alert Level: 2)

Volcanic seismicity began to increase on 28 March 2016 and remained at high levels thereafter. Fumarolic activity at the Oana crater has remained at relatively high levels.

According to field survey conducted on 31 March 2016, no remarkable changes were observed in the characteristics of fumes and in the extent of geothermal area on and around the Oana crater.

The potential for small eruptions around the Oana crater remains.

Kusatsu-Shiranesan (Alert Level: 2)

Thermal activity remains high on the northeastern side and the northern wall of the Yugama crater and on the north-to-northeastern slope of the Mizugama crater. According to the Tokyo Institute of Technology, compositions of gas in a fumarolic area to the north of Yugama crater and chemical compositions of water in the Yugama crater

have shown the changes indicating increased volcanic activity as before.

Asamayama (Alert Level: 2)

No eruption has been recorded since the eruption on 19 June 2015.

White plume rose at 300 m or lower above the crater rim. During this reporting period, no volcanic glows have been recorded.

According to field surveys conducted on 2, 16 and 29 March, amount of volcanic gas (SO₂) emissions have remained at relatively low levels at 200 – 300 tons a day (300 tons on 18 February).

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.

Ontakesan (Alert Level: 2)

White plume emissions have remained ongoing at 600 m or lower above the crater rim according to visual observation data.

Volcanic seismicity has remained at low levels, but has not yet returned to the levels before August 2014. No low-frequency earthquakes or volcanic tremors have been recorded. No changes indicating increased volcanic activity were seen in data on tiltmeter and continuous GNSS measurement.

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)

Violent emissions of steam were observed as before at the 15-1 crater, fumaroles and the nearby Owakudani hot spring supply facilities in visual observations. Fume heights have remained up to 500 m in the area around Owakudani.

Volcanic seismicity has remained at low levels. No volcanic tremors have been recorded.

No remarkable changes have been seen in data from continuous GNSS measurement, JMA/Hot Springs Research Institute of Kanagawa Prefecture tiltmeter data or JMA volumetric strainmeter observation at Yugawara-Kajiya.

Nishinoshima (Near-crater Warning)

No eruptions or fumes were identified during aerial observation conducted by the Japan Coast Guard on 5 and 29 March.

According to observation conducted on 5 March, the newly formed land covered around 1,940 m east-west and 1,930 m north-south. The total area was around 2.63 km², which was almost the same as that measured during the previous observation conducted on 3 February.

Eruptions with projectile ejections and lava flows occurred frequently from November 2013 onward, but no eruptions or lava flows have been observed since late November 2015. Ground surface temperature has remained low since December 2015.

Ioto (Near-crater Warning)

Volcanic seismicity has remained at relatively low levels. A total of 2 volcanic tremors occurred. No anomalies were observed in data during the period in which volcanic tremors were recorded.

Continuous GNSS measurement showed repeated rising trend and static state. The rising trend has been larger in the northern area of the island since 2014.

Asosan (Alert Level: 2)

An eruption occurred at the Nakadake No. 1 crater at 06:56 on 4 March 2016. Milk-white plumes rose as high as 1,000 m above the crater rim. A field survey conducted on 4 March revealed slight ash fall over the area from the east-northeast to east side of the Nakadake No. 1 crater. Field surveys conducted during this month by the

National Institute of Advanced Industrial Science and Technology (AIST) and JMA revealed a crater lake in the Nakadake No. 1 crater. Amounts of volcanic gas (SO₂) emissions have been large at 1,400 – 2,500 tons a day (300 – 1,500 tons a day in February).

Amplitudes of volcanic tremors fluctuated and remained large, but have been small since 16 March.

Small eruptions were occasionally observed at the Nakadake No. 1 crater. Accordingly, the potential for small eruptions affecting areas around the crater remains.

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 but it stopped in around October 2015.

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

Kirishimayama (around Ebino Highland) (Potential for increased activity)

Warning downgrade on 29 March

Volcanic seismicity near the Ebino highland increased, with 53 seismic events recorded on 28 February. After that, seismic activity remained at a low level with 0 – 5 volcanic seismic events observed per day. No volcanic tremors have been recorded since 11 February 2016.

The height of fumes has remained at approximately 20 m based on visual observation. There were no remarkable changes.

A field survey conducted on 24 March revealed new fumarolic areas in the southeastern part of the fumarolic areas around the Ioyama crater that was observed as before. Thermal infrared observation indicated expansion of geothermal anomalies around a new fumarole area. The trend of expansion of the fumarolic area around the crater near Ioyama has remained. No remarkable changes in terms of temperature and amounts of fumes were observed.

In response to the decline in volcanic activity around the Ebino highland area and the absence of precursors to any eruption that would affect areas around Ioyama, JMA issued a Warning downgrade at 10:00 on 29 March.

Sakurajima (Alert Level: 3)

At the Showa crater, active eruptions have remained. During this period, eight eruptions were observed (approx. 55 in February), five of which were explosive (approx. 22 in February). The maximum plume height was 2,700 m above the crater rim. Six eruptions were observed at the Minamidake summit crater and the maximum plume height was 2,000 m above the crater rim. This was the first time that more than six eruptions per month were observed at the Minamidake summit crater since June 2009, when 10 eruptions were observed.

Aerial observation conducted in collaboration with the Japan Ground Self-Defense Force (JGSDF) and the Kagoshima Prefectural Government on 11 March revealed no remarkable change in and around the Showa crater from the last survey (6 February). The inside of the Minamidake summit crater could not be observed due to a plume.

According to field survey conducted 24 March, amounts of volcanic gas (SO₂) emissions have been small at 100 tons a day (100 – 500 tons a day in February).

Data from tiltmeter and strainmeter observation conducted on the island show no remarkable ground deformation indicating the expansion of the volcano since the rapid change in August 2015. However, Data from strainmeter on the island showed ground deformation with extension trend was observed before explosive eruption and with contracting trend after the eruption.

Data from continuous GNSS observation show that extension of the baseline across the Aira Caldera (in the inner part of Kagoshima Bay) has continued. The contracting trend of the volcano observed after the rapid expansion in August 2015 stopped around January 2016.

Kuchinoerabujima (Alert Level: 5)

No eruption has been observed at the Shindake crater after the eruption on 19 June 2015.

White plume emissions have remained at 400 m or less above the crater rim in visual observation.

A field survey revealed no remarkable changes in geographical features around the crater or fume emissions. Thermal infrared observation showed that the temperature around a fissure to the west of the Shindake crater

remained low, having previously risen from around March until 29 May 2015 before the eruption.

According to field surveys conducted on 4 and 20 March by JMA, and on 25 and 27 March by the Graduate School of Science at The University of Tokyo, DPRI at Kyoto University and Yakushima Town, amounts of volcanic gas (SO₂) emissions have remained generally at low levels at 80 – 100 tons a day (50 – 100 tons a day in February).

Volcanic seismicity remained at low levels. No volcanic tremors have been recorded.

No remarkable changes have been seen in ground deformation observation since the eruption on 29 May.

The potential for eruption on the scale of the one that occurred on 29 May 2015 is low, but there remains a potential for eruptions.

An eruption may affect areas within 1.4 nautical miles from the Shindake crater.

Suwanosejima (Alert Level: 2)

Volcanic activity has remained at high levels with 13 explosive eruptions recorded at the Otake crater.

Volcanic glows were occasionally observed in the crater at night with a high-sensitivity camera.

The Suwanosejima branch of the Toshima Village administration reported ash fall in the village (located around 4 km SSW of Otake) on 7, 20 and 21 March. Air shock was observed in association with the explosive eruptions on 20 and 21 March and rumbling was also heard on the island.

The potential for eruptions affecting areas around the crater remains.