



NATIONAL COMMISSIONER OF THE ICELANDIC POLICE
DEPARTMENT OF CIVIL PROTECTION AND EMERGENCY MANAGEMENT



THE SCIENTIFIC ADVISORY BOARD OF THE ICELANDIC CIVIL PROTECTION

Date: 27.02.2015 **Time:** 09:30 **Location:** Crisis Coordination Centre, Skogarhlid.

Regarding: Volcanic activity in the Bardarbunga system.

Attending: Scientists from Icelandic Met Office and the Institute of Earth Sciences University of Iceland along with representatives from the Icelandic Civil Protection, The Environmental Agency of Iceland and The Directorate of Health.

Main points

- Volcanic eruption in Holuhraun
- Air quality
- Scenarios

Notes

- For the last few days there has been very poor visibility of the eruption in Holuhraun due to bad weather. Satellite images do confirm that the eruption is still on going.
- Seismic activity in Bárðarbunga continues to diminish. The strongest earthquake since Tuesday was measured M2.5 yesterday, 26th of February, at 01:59. Other earthquakes were all smaller than magnitudes M2.0. In total around 50 earthquakes were detected around the caldera since last Tuesday. No earthquake stronger than magnitude M3.0 has been detected since February 21st and no earthquake over M5.0 since January 8th.
- Around 60 earthquakes were detected in the dyke during the same period. The strongest ones were measured M1.4 and M1.3. It is worth to mention that bad weather does affect the number of small earthquakes detected.
- The rate of the subsidence in Bárðarbunga caldera last week was about 5 cm per day in light of the ice subsidence into the caldera.
- GPS measurements near Vatnajökull glacier show continuing slow deflation towards Bárðarbunga, indicating a flow of magma from under the volcano.
- Five earthquakes were detected around Tungnafellsjökul glacier, the strongest was magnitude M1.7. About 25 earthquakes were detected around Askja and Herðubreið since last Tuesday. The strongest, magnitude M2.3 was detected in Askja yesterday at 05:42.
- Automatic gas detector measured SO₂ concentration on 500 µg/m³ in Blönduós yesterday.

Air quality:

- Today (Friday) there are chances of gas pollution from the Holuhraun eruption in the areas southeast of the volcano early on in the day, but also west and southwest of it in the afternoon. Tomorrow (Saturday) the pollution (if any) will be carried towards southwest and south.
- Gas forecast can be found on The Icelandic Met Office web site. On the one hand a text on: see [Gas forecast](#) and on the other hand an automatic forecast, see [Gas model](#).
- Measurements of air quality can be found on the webpage www.airquality.is Data from handheld gas monitors, spread around the country, can also be found on that page



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- Instructions:
 - People who feel discomfort are advised to stay indoors, close their windows, turn up the heat and turn off air conditioning. Use periods of good air quality to ventilate the house. People experiencing adverse effects should be in immediate contact with their healthcare centre. Measurements of air quality can be found on the webpage www.airquality.is The Meteorological Office issues forecast on its web-page and warnings if conditions change to the worse.
 - Instructions from [The Environment Agency of Iceland](#) and [Chief Epidemiologist](#) can be found on their web-sites.
 - Check the Icelandic Met Office forecasts for sulphuric gas dispersion on the web as described above.
 - Handheld meters have been distributed around the country for SO₂ measurements three times a day.
 - Information and any questions on air pollution can be sent to The Environment Agency through the email gos@ust.is. The Environment Agency is especially looking for information from people who have been in contact with high concentrations of gas; where they were, at what time it happened, how the gas cloud looked (colour and thickness of the cloud) and how they were affected by it.
- The volcanic eruption has now been going on for almost half a year. The lava flow has decreased substantially in Holuhraun and the rate of the subsidence of the Bárðarbunga caldera has also decreased substantially. Three scenarios are considered most likely:
 - The eruption in Holuhraun continues until the subsidence of the Bárðarbunga caldera stops. The eruption could come to an end in the next few weeks but it cannot be ruled out that a small eruption could go on for many months.
 - The volcanic fissure may lengthen southwards under Dyngjujökull, resulting in a jökulhlaup and an ash-producing eruption. It is also possible that eruptive fissures could develop in another location under the glacier. If such an eruption would be prolonged it could eventually produce a lava flow.
 - Volcanic eruption in the Bárðarbunga caldera. Such an eruption would melt large quantities of ice, leading to a major jökulhlaup, accompanied by ash fall.

Other scenarios cannot be excluded.

- **From the Icelandic Met Office:** The Aviation Colour Code for Bárðarbunga remains at 'orange'.
- The next meeting will be held on Tuesday 3rd of March 2015.

The National Commissioner of the Icelandic Police, Department of Civil Protection and Emergency Management
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