



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



THE SCIENTIFIC ADVISORY BOARD OF THE ICELANDIC CIVIL PROTECTION

Date: 17.09.2014 **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 Directorate of Health.

Main points

- Volcanic eruption in Holuhraun
- Air quality
- Scenarios

Notes

- Measurements show that the lava field in Holuhraun continues to expand. There are no signs of decreasing lava production.
- The subsidence of the Bardarbunga caldera continues with the rate of about 50 cm over the last 24 hours.
- Seismic activity has been rather intensive over the last 24 hours. Yesterday 7 earthquakes larger than M3,0 were detected in Bardarbunga. The biggest were M5,4 and M4,8 last night. Smaller earthquakes were detected in Dyngjajokull glacier and in north part of the dyke.
- GPS monitoring show irregularity in in the crustal movements over the last few days. This sign could indicate that the magma movement under Bardarbunga is changing.
- No change has been detected in water measurement.

Air quality:

- A prediction from the Icelandic Met Office: Easterly winds with the polluted area to the west and southwest, marked by Langjokull glacier in the west and Tindfjoll in the south. Valid until noon tomorrow, Thursday.
- 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. Measurements of air quality can be found on the webpage www.loftgaedi.is The Meteorological Office issues forecast on its web-page and warnings if conditions change to the worse.
 - Instructions from the office of the Chief Epidemiologist and The Environment Agency can be found on their web-sites www.ust.is and www.landlaeknir.is
 - The Icelandic Met Office will publish forecasts for sulphuric gases dispersion on the web and in the national radio. It will also be endeavored/seeked to broadcast the forecasts on national television.
 - The Environment Agency is working on getting more measuring equipment to better monitor the gases coming from the volcanic eruption.
 - 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



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looked (colour and thickness of the cloud) and how they were affected by it. In the near future, there will be a page on the IMO's webpage for this type of information.

- Three scenarios are considered most likely:
 - The eruption on Holuhraun declines gradually and subsidence of the Bardarbunga caldera stops.
 - Large-scale subsidence of the caldera occurs, prolonging or strengthening the eruption on Holuhraun. In this situation, it is likely that the eruptive fissure would lengthen southwards under Dyngjajokull, resulting in a jokulhlaup and an ash-producing eruption. It is also possible that eruptive fissures could develop in another location under the glacier.
 - Large-scale subsidence of the caldera occurs, causing an eruption at the edge of the caldera. Such an eruption would melt large quantities of ice, leading to a major jokulhlaup, accompanied by ashfall.

Other scenarios cannot be excluded.

From the Icelandic Met Office:

The Aviation Colour Code for Bardarbunga remains at 'orange'.

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

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