NATIONAL COMMISSIONER OF THE ICELANDIC POLICE

DEPARTMENT OF CIVIL PROTECTION AND EMERGENCY MANAGEMENT

THE SCIENTIFIC ADVISORY BOARD OF THE ICELANDIC CIVIL PROTECTION

Date: 30.12.2014	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 Environment Agency of Iceland and the Directorate of Health.

Main points

- **Volcanic eruption in Holuhraun**
- **Air quality**
- **Scenarios**

Notes

- Insubstantial changes have been in the volcanic eruption in Holuhraun over the last few weeks. The lava is now flowing inside a closed channel to the eastern edge of the lava field, about 15 km from the crater. Lava is also running to the north.
- Seismic activity in Bardarbunga continues to be strong, but it has though somewhat decreased. The strongest earthquake over the last two days was detected tonight, 30. December, was magnitude M5,3 at 00:11. Eleven earthquakes larger then M3,0 were detected since noon on Sunday and in total around 100 earthquakes were detected in Bardarbunga since noon on Sunday.
- GPS measurements near northern Vatnajokull glacier show continuing slow deflation towards Bardarbunga.
- Telecommunications with the GPS station in Bardarbunga caldera have not been established yet.

Air quality:

- Tonight gas pollution can be expected northeast of the eruption site. Tomorrow (Tuesday) gas pollution is expected to the east of Holuhraun but also to the west in the evening.
- The Icelandic Met Office provides two-day forecasts on gas dispersion from the eruptive site in Holuhraun. Most reliable are the forecast maps approved my meteorologist on duty, see Gas forecast. And although still being developed further, an automatic forecast, see Gas model, is also available (trial run, see disclaimer).
- 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

- 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 over three months, the lava flow is still great in Holuhraun and the rate of the subsidence of the Bardarbunga caldera is still significant. Three scenarios are considered most likely:
  - The eruption in Holuhraun continues until the subsidence of the Bardarbunga caldera stops. The eruption can still go on for many months.
  - The volcanic fissure may lengthen southwards under Dyngjujokull, resulting in a jokulhlaup 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 Bardarbunga caldera. Such an eruption would melt large quantities of ice, leading to a major jokulhlaup, accompanied by ash fall.

Other scenarios cannot be excluded.

- **From the Icelandic Met Office:** The Aviation Colour Code for Bardarbunga remains at 'orange'.
- The next meeting will be held on Tuesday 6 of January 2015.