

T1.5-O5. Recent developments of the national seismic and infrasound networks to monitor natural hazards in Iceland

The Icelandic Meteorological Office (IMO) is responsible for monitoring natural hazards in Iceland and operates real-time monitoring systems including the SIL seismic network, since 1991 and together with the University of Florence an infrasound network since 2010. IMO is the station operator for one seismic (IDA) station for CTBTO IMS. The SIL network covers the volcanic zones and seismically active transforms with over 70 stations; short-, broadband and accelerometers. Magnitude of completeness for all of Iceland ranges from M0 to M3. As a part of the FUTUREVOLC project, four infrasound arrays, are used to monitor volcanic eruptive activity, but have also proven useful to monitor landslides and rock fall. The arrays include four elements in a triangular geometry, with an aperture of 120 m where each element has a differential pressure transducer with a sensitivity of 25 mV/Pa in the frequency band 0.001-50 Hz and a noise level of 10⁻² Pa. Three arrays are installed in South Iceland and the latest addition is collocated with a seismic station in close proximity to the Bárðarbunga eruption, north of Vatnajökull. These places were chosen with the aim to optimize wind noise reduction (on-site bushes and trees) and close proximity to volcanoes.

Primary author: JONSDOTTIR, Kristin (Icelandic Meteorological Office)

Presenter: JONSDOTTIR, Kristin (Icelandic Meteorological Office)

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