

## Contributing to Disarmament

**On Wednesday, State Secretary Bård Glad Pedersen opened NORSAR's infrasound station in Bardufoss. The station is Norway's final contribution to the global network of stations which monitor nuclear tests.**

In the pine woods near Bardufoss in Troms in northern Norway, 960 "ears" are deployed in the field. They are listening out for infrasound, which propagates through the atmosphere. These small «ears» sense tiny vibrations – rapidly fluctuating changes in the air pressure – caused by infrasound waves. The station has been designed and deployed by NORSAR's technical and scientific staff in close collaboration with the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) in Vienna.

### Further Development

In addition to the State Secretary, participants at the opening included Patrick Grenard, Director of the International Monitoring System at the CTBTO, Helene Rognli, Mayor of the Målselv Municipality, and several representatives from other research institutes. The guests found it very interesting to see the installation and learn both about the international network and the other possible civil applications of the data. This information was new for many participants, says CEO Anne Strømme Lycke of NORSAR.

Director Patrick Grenard from the CTBTO emphasized in his speech NORSAR's position as a Center of Excellence with respect to the building and operation of such installations, and the importance of exploiting the data in new applications in order that infrasound technology can advance.

### Global Network

All 6 of the monitoring stations on Norwegian territory are now performing their task in the CTBT verification regime. The other five Norwegian stations are in Hedmark (southern Norway), Karasjok (northern Norway), Adventdalen on Svalbard, on Jan Mayen, and on Platåberget on Svalbard.

The CTBT verification regime includes a global monitoring system consisting of 321 stations and 16 laboratories in 89 nations. With this control system in place, nowhere on Earth could a nuclear explosion take place without it leaving indelible evidence.

"We are proud to be the National Data Center for technical issues related to the CTBT. An important task here is to be able to provide technical and scientific advice to the Norwegian authorities should we identify signals that could indicate a violation of the treaty", says Anne Strømme Lycke, CEO of NORSAR.

### New applications

Infrasound technology can be used to provide information on extreme events such as volcanic eruptions, large meteors that enter the atmosphere, industrial and mining accidents, aviation and nautical accidents, and explosions. The data can in addition be used to provide more accurate long-term weather forecasts. The data can, for example, provide information on extreme weather and polar lows.

**Caption:** State Secretary Bård Glad Pedersen opened the infrasound station in Bardufoss, together with CEO Anne Strømme Lycke of NORSAR. "Norway has now completed an important contribution to the system for monitoring compliance with the ban on nuclear tests. This will contribute to the momentum for entry into force of the treaty" said Bård Glad Pedersen.

**Caption:** (from left) Patrick Grenard, Director of the International Monitoring System Division at the CTBTO, CEO Anne Strømme Lycke of NORSAR, Mayor of the Målselv municipality Helene Rognli, and State Secretary Bård Glad Pedersen.

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