

Overview of Integrated Operational Exercise conducted under CTBT national operational system in Japan.

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1. Japan Weather Association

Japan Weather Association (JWA) is working as the Comprehensive Nuclear-Test-Ban Treaty (CTBT) National Data Centre-1 (NDC-1) of Japan. JWA is in charge of analysis on waveform data, operation and maintenance of seismic and infrasound stations in Japan as for Station Operator (SO).

NDC-1 has two main roles of 1: Collect and analyze waveform data related to seismic and infrasound waves and provide advice from a technical perspective and 2: Operation and maintenance of monitoring facilities of the International Monitoring System (IMS) (8 sites in Japan)

As a part of the provisional operation at NDC-1, in cooperation with the Secretariat and NDC-2, integrated operation exercises with continuous monitoring for one week are conducted a few times per a year. The purpose of these exercises is to contribute to the training of analysts, as well as to catch up issues and problems in automatic seismic wave monitoring system operation and manual analysis operation. It also aims to verify the analysis results by an automatic system and by analysts.

Assuming a nuclear test monitoring activity during the full operation of NDC-1, the test operation of the automatic seismic wave monitoring system is performed, and if the occurrence of an event is suggested within the preset monitoring target areas, the analyst conducts a detailed analysis and closely examines the location and characteristics of the event (whether or not it is an explosion event). In addition, we summarize exercises results, verify analysis results, and extract issues after ending integrated operational exercise.

Furthermore, in order to address the issues and problems that became apparent through the integrated operation exercises, monitoring techniques and analysis methods have been improved. The results of studies on improvement and advancement of monitoring technology and analysis methods will be reflected in the various systems in operation. It will be verified through the next integrated operation exercise.

In this presentation, we will also introduce the approaches including cooperation with the Secretariat and NDC-2.

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