

2.2-O2. Improving nuclear verification technologies and regional cooperation using a hypothetical event: A common exercise in the 2014 East Asia Regional NDC Workshop

The East Asia Regional NDC Workshop (EARNW) has been held every year since 2012 for the purpose of capacity development and cooperation of the NDCs in the East Asian region. Using a hypothetical event of interest, a common exercise on waveform (SHI) and radionuclide (RN) data analyses in conjunction with atmospheric transport modelling (ATM) was conducted prior to and results discussed at the workshop. The authors designed and organized the common exercises for the EARNW 2014 held from 29 July to 1 August, 2014 in Ulaanbaatar. A real chemical explosion at a mine in North Korea in 2011 was used to construct the hypothetical event scenario. The participating NDCs had to identify this explosion by estimating the release time and the possible source region of fictitious RN observations. This was done with isotopic ratios and ATM backward tracking. Real noble gas data observed at the IMS stations and artificially prepared particulate data were combined and distributed as the fictitious RN data for this exercise. Seismological analysis of the real event was carried out by the SHI experts – either subsequent or in parallel to the radionuclide analysis.

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Track Classification: 2. Events and their characterization