

## Inspection equipment provided as contribution in kind for the Integrated Field Exercise IFE14

Contributing Member State	Description of equipment provided	Approx. Value
Canada	<ul style="list-style-type: none"> <li>▪ Air-borne gamma spectrometer and on-board processing system and auxiliaries</li> </ul> <p>The system is used to search for and identify radiation anomalies in the inspection area. During IFE14, the equipment is available for use on board of a helicopter.</p>	USD 700.000
China	<ul style="list-style-type: none"> <li>▪ XESPM Radioxenon sampling, separation and measurement system</li> <li>▪ Moveable Argon-37 rapid detection system 'MARDS'</li> </ul> <p>These systems items are used for the processing and analysis of samples from the atmosphere or soil-gas for noble gases (Radioxenon and Argon) which are strong indicators of a nuclear explosion.</p>	USD 2.900.000 USD 350.000
Czech Republic	<ul style="list-style-type: none"> <li>▪ Thermal imaging infrared camera</li> <li>▪ Air-borne/car-borne gamma spectrometer</li> </ul> <p>The thermal imaging infrared camera is used airborne or ground-based for detecting thermal signatures which in the context of the geological features may point to subsurface anomalies. The gamma spectrometer is used to search for and identify radiation anomalies in the inspection area. During IFE14, the equipment is available for ground-based use and as a back-up for use on board of a helicopter.</p>	USD 15.000 USD 300.000
Hungary	<ul style="list-style-type: none"> <li>▪ Hyperspectral sensor incl. accessories</li> <li>▪ Active seismic system</li> </ul> <p>The hyperspectral sensor is used during overflights to search for spectral signatures (visible to short-wave infrared) such as from recent exposure of rock or ground disturbances. The active seismic equipment is used during the continuation period of an OSI to detect long-life underground features such as an explosion induced cavity, chimney and/or rubble zone.</p>	USD 400.000 USD 50.000
Italy	<ul style="list-style-type: none"> <li>▪ HPGe handheld detector</li> <li>▪ Geoelectric system</li> <li>▪ Proton magnetometer</li> <li>▪ Aeromagnetic platform with magnetometer and on-board processing unit</li> </ul> <p>The detector is used for in-situ measurements to search radiation anomalies and identify relevant radionuclides. The geophysical equipment (ground-based and airborne) is used to detect anomalies or artifacts that could be associated with a nuclear explosion.</p>	USD 150.000 USD 120.000 USD 25.000 USD 180.000

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Japan	<ul style="list-style-type: none"> <li>▪ HPGe handheld detector</li> </ul> <p>The detector is used for in-situ measurements to search radiation anomalies and identify relevant radionuclides.</p>	USD 200.000
Sweden	<ul style="list-style-type: none"> <li>▪ NaI detector</li> <li>▪ Gas injection manifolds incl. gas injection mechanisms, vacuum pumps and tubing</li> <li>▪ Heating oven, spare parts and tools</li> </ul> <p>This equipment is used during IFE14 to facilitate the implementation of a scientifically credible scenario by control team.</p>	USD 50.000
United Kingdom	<ul style="list-style-type: none"> <li>▪ Mobile field laboratory (containerized) fully equipped including HPGe detectors, lab support equipment and auxiliaries</li> </ul> <p>The field laboratory is used to conduct analysis of environmental samples (solids, liquids and gases) collected in the inspection area.</p>	USD 400.000
United States	<ul style="list-style-type: none"> <li>▪ Subsurface augering systems</li> <li>▪ Transportable OSI laboratory containers (TOSIL)</li> <li>▪ Transportable Xenon detection system laboratory (TXL)</li> <li>▪ Photomultiplier tube base</li> <li>▪ Subsurface gas samplers</li> <li>▪ Sodium iodide crystals</li> <li>▪ HPGe detector</li> <li>▪ HPGe handheld detector</li> <li>▪ High volume air samplers</li> <li>▪ Auxiliary items including tablet computer</li> </ul> <p>The transportable OSI laboratory containers are used to house the noble gas processing and analysis systems. The other equipment is used to conduct collect and analyze environmental samples (solids, liquids and gases) collected in the inspection area including analysis of radon xenon noble gas (TXL) during an OSI.</p>	USD 100.000 USD 280.000 USD 850.000  USD 10.000 USD 75.000 USD 10.000 USD 140.000 USD 90.000 USD 35.000 USD 15.000
European Union (through Council Decision 2010/461/CFSP of 26 July 2010)	<ul style="list-style-type: none"> <li>▪ Radon xenon field detection system (SAUNA)</li> </ul> <p>The equipment is used to detect radon xenon noble gas isotopes that may be released as a result of a nuclear explosion. It is a field tailored and improved version of the radon xenon system used at IMS.</p>	USD 2.000.000
European Union (through Council Decision 2012/699/CFSP of 13 November 2012)	<ul style="list-style-type: none"> <li>▪ Multispectral imaging array</li> </ul> <p>The equipment is used in combination with other CiK equipment to acquire information in different parts of the spectrum, primarily in the visible and thermal regions for identifying observables related to preparatory activities related to an underground nuclear explosion or features related to a detonation itself.</p>	USD 500.000