## **Forensics in Nuclear Security**

At the Nuclear Security Summit in Washington in 2010 and in Seoul in 2012 States stressed the importance of forensic investigation in the event of a nuclear security incident. The use of nuclear forensics as an effective tool in determining the origin of detected nuclear and other radioactive materials and in providing evidence for the prosecution of acts of illicit trafficking and malicious uses was widely recognised. States were encouraged to work with one another, as well as with the IAEA, to develop and enhance nuclear forensics capabilities.

Since the early nineties efforts have been made to develop nuclear forensics as an instrument to categorise and characterise nuclear materials and relate them to a possible source. However, its link with traditional forensic methods e.g. DNA-profiling, latent fingerprints, retrieving digital data on nuclear materials or evidence contaminated with radioactive materials, was still weak. Also, there was no mutual awareness between experts from the nuclear and the forensic science domain and the definitions used in these specific science areas were not mutually used or could be interpreted differently.

With this in mind, cooperation between the two science areas was deemed necessary, in order to share knowledge and build a collaborative capacity for investigating nuclear security incidents for law enforcement purposes.

At an NSS preparatory meeting in Vienna in March 2011, the Netherlands Forensic Institute (NFI), together with the Netherlands Ministry of Foreign Affairs, presented a white paper on "Nuclear Forensics", which aimed to strengthen the links between traditional and nuclear forensics through the development of a common set of definitions and standards, undertake research and share information and best practices. The white paper proposed a set of deliverables for the NSS, which would take developments in nuclear forensics a step further. Since the presentation of the white paper, a large number of States have contributed to these developments.

The States that have subscribed to this Joint Statement\*, support or have contributed to:

- a knowledge platform to enhance the discussion and commitment amongst experts and policymakers;
- a survey of good practices to investigate nuclear security incidents;
- a nuclear forensics lexicon;
- an education and training curriculum for experts, responders and policy makers that deal with nuclear security incidents.

The knowledge platform and the survey will be used in the cooperation between our experts, the lexicon and the curriculum will be publicly available.

The States that have subscribed to this Joint Statement are convinced of the usefulness of the instruments that have been developed, and intend to continue the work in the field of nuclear forensics, as the investigation of nuclear security incidents requires innovations and the development of new examination methods.

\* The following countries are signatories to this Joint Statement: Algeria, Australia, Canada, Chile, Czech Republic, Finland, France, Georgia, Hungary, Indonesia, Italy, Japan, Kazakhstan, Malaysia, Morocco, the Netherlands, Republic of Korea, Romania, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States of America.

\* The following organisation also supports this Joint Statement: Interpol