

Symposium on International Safeguards: Linking Strategy, Implementation and People - IAEA CN-220



Monday 20 October 2014 - Friday 24 October 2014

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Scientific Scope

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Scientific Scope

The purpose of the symposium is to foster constructive dialogue and information exchange between the IAEA Secretariat, IAEA Member States, nuclear industry representatives and technical experts (in particular, those involved in nuclear non-proliferation matters), with a view to exploring jointly the strategic issues faced by the IAEA and to discussing the implementation of possible solutions by the safeguards community as a whole.

Continuing from IAEA Department of Safeguards Long-Term R&D Plan, 2012-2023, the symposium will hold forward looking safeguard sessions with oral and poster presentations, discussions and exhibitions on the topics listed below. </div>

Concepts and Approaches

- Strategic planning
- Keeping abreast and making use of scientific and technological innovations
- Further evolution of safeguards implementation
- Developing approaches to fully utilize State/regional authority data
- Further expanding implementation and development support

Cooperation with States

- Strengthening State and regional systems of accounting and control
- Enhancing IAEA–State cooperation
- Building synergies between safety, security and safeguards regimes

Detection of Undeclared Nuclear Material and Activities

- Identifying appropriate signatures and indicators
- Increasing the ability to detect undeclared nuclear materials and activities
- Development of instruments and associated techniques to detect the establishment and operation of nuclear fuel cycle activities

Safeguards Equipment and Communication

- Development and deployment of improved tools for measurements of nuclear material at enrichment and reprocessing plants
- Development and deployment of tools and techniques to enable timely detection of high enriched uranium production in low enriched uranium enrichment facilities
- Development of more sensitive and less intrusive alternatives to existing non-destructive assay (NDA) instruments
- Identification of alternative NDA instruments
- Deployment of secure and authenticated communications for safeguards equipment

- Development of secure and authenticated techniques to enable the use of operator systems

Information Technology, Collection, Analysis and Security

- Using safeguards information in a fully integrated and secure environment
- Development of software tools for use by State/regional authorities in creating and submitting accountancy reports and additional protocol declarations
- Integration of information sources to detect inconsistencies
- Recovering from an information technology failure

Analytical Services

- Expanding the use of the Network of Analytical Laboratories
- Development of elemental and isotopic signatures of fuel cycle activities and their application to environmental sampling and nuclear material analysis
- Development of techniques, methods and equipment to detect signatures of nuclear activities in environmental samples
- Improved capabilities to characterize nuclear material and determine its origin

Safeguarding Future Nuclear Fuel Cycles

- Safeguarding advanced nuclear facilities and innovative fuel cycles
- Encouraging proliferation resistance and safeguards by design
- Taking on further nuclear verification mission

Training

- Developing and maintaining the expertise of safeguards professionals
- Development of training to reflect new facilities and technologies
- Deployment of new training tools using advanced methods such as virtual reality, immersive learning and web-based training