

INTRODUCTION

Since the 2010 Safeguards Symposium, the IAEA's Department of Safeguards has published its Long-Term Research and Development Plan, 2012–2023. The objective of the 2014 Symposium is to foster dialogue, exchange information and promote cooperation with IAEA stakeholders using this R&D plan to make progress towards achieving the Department's strategic objectives.

STRUCTURE

Continuing from the R&D Plan, the symposium will hold forward looking safeguard sessions with oral and poster presentations, discussions and exhibitions. It will be held over five days at the Vienna International Centre — the IAEA's headquarters.

TOPICS

CONCEPTS AND APPROACHES

- Strategic planning;
- Keeping abreast and making use of scientific and technological innovation;
- Further evolving safeguards implementation;
- Developing approaches to fully utilize State and regional authority data;
- Expanding implementation and development support.

COOPERATION WITH STATES

- Strengthening State and regional systems of accounting and control;
- Enhancing IAEA and State cooperation;
- Promoting the interface between nuclear safety, security and safeguards.

DETECTION OF UNDECLARED NUCLEAR MATERIAL AND ACTIVITIES

- Identifying appropriate signatures and indicators;
- Increasing the ability to detect undeclared nuclear material and activities;
- Developing instruments and associated techniques to detect the establishment and operation of nuclear fuel cycle activities.

SAFEGUARDS EQUIPMENT AND COMMUNICATION

- Developing and deploying improved tools for measurements of nuclear material at enrichment and reprocessing plants;
- Developing and deploying tools and techniques to enable timely detection of HEU production in LEU enrichment facilities;
- Developing more sensitive and less intrusive alternatives to existing NDA instruments;
- Deploying secure and authenticated communications for safeguards equipment;
- Developing 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;
- Developing software tools for use by State and regional authorities in creating and submitting accountancy reports and additional protocol declarations;
- Integrating information sources to detect inconsistencies;
- Recovering from an IT failure.

ANALYTICAL SERVICES

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

SAFEGUARDING FUTURE NUCLEAR FUEL CYCLES

- Safeguarding advanced nuclear facilities and innovative fuel cycles;
- Encouraging proliferation resistance and safeguards by design;
- Conducting further nuclear verification missions.

TRAINING

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

EXHIBITS

Equipment and services, including commercially available products will be exhibited during the symposium. Enquires should be addressed to the exhibit coordinator.

