

WINS Virtual Roundtable on Strengthening the Coordination of International Programmes and Organisations involved in the Adoption of Alternative Technologies to Radioactive Sources in Support to Radiological Security

Thursday 10 December 2020, 16:00 – 18:30 CET

Background

Developing a comprehensive and sustainable approach to radioactive source security requires the proper management of these sources and their protection by adequate security arrangements throughout their lifecycle—from the moment the sources are considered to proper disposal at the end of their lifecycle. To increase security resilience, the total amount of radioactive material in circulation must be decreased, strict control over the radioactive sources in use must be enforced, a strong security culture must be fostered, and careful planning and exercising must take place to ensure the response is effective should a security event occur.

An important way to reduce radioactive material in circulation is to replace radioactive sources, if possible, with non-isotopic alternative technologies. If properly implemented, the transition towards alternative technologies has a significant impact on radiological security matters. Radioactive sources are replaced by equipment that is far less attractive for malicious use and cannot be used, for instance, in a radiological dispersal device. Ensuring this benefit requires that replaced sources are then repatriated to their supplier or enter a proper disposal pathway.

A large group of stakeholders is involved in the decision-making process about which kind of radiation-generating devices, radioactive source-based or not, are selected and operated. Decisions about which device to use are based on various factors such as available resources, technical requirements and user preference. Stakeholders outside the operating organisation – such as those in government agencies (the ministry of health, for example) or financing organisations, including international programmes, are also an integral part of the process.

Experience has shown that some end users may select a device without full prior knowledge of all related opportunities and challenges (e.g. lack of understanding about long-term costs associated with certain devices; lack of knowledge of the existence of a funding opportunity for a specific technology; lack of anticipation of the need for managing disused sources when switching to alternative technologies; etc.). In many cases, the assessment of radiological security concerns come as a secondary review after the technology has been selected or is being readied for operation and licensing.

At the international level, multiple efforts support the safe and secure use of radioactive sources through a range of activities aiming at strengthening the competencies of the people using or regulating these sources. International efforts also include programmes, especially in the healthcare sector, that support the purchase, delivery and commissioning of sources and associated devices and technologies to less developed countries. These international initiatives have more recently included programmes to support the development of non-isotopic alternative technologies to radioactive sources, to incentivise countries and users to adopt such technologies and to ensure the proper disposal of disused sources.

However, experience also shows that international efforts might not yet be fully coordinated and that some overlap, duplication of efforts or conflicting priorities exist. In some cases a sponsor has funded the replacement of radioactive sources and associated devices by an alternative technology, while another sponsor was funding the purchase of a new similar source-based device in the very same country. In addition, at the request of its Member States, the IAEA is still providing high activity sources through its technical cooperation programme while some other IAEA activities are clearly encouraging the adoption of alternative technologies.

Objectives of the Roundtable

WINS will identify and reach out to the most influential international stakeholders involved in the development, procurement, commissioning and disposal of radiation equipment and will invite them to attend a virtual roundtable to conduct a comprehensive review of their activities to better understand their objectives and how they influence the process.

The discussions will be based on real-life experiences and the main lessons learned from those who have been involved in international activities and programmes. Case studies will be used to demonstrate the diversity of parties involved and how decision makers can influence which equipment or which technology will actually be used.

The roundtable will serve as an opportunity for participating organisations to better know each other and identify gaps and opportunities for enhancing their respective coordination and contributions. Participants will be asked to have open discussions, express their own perspectives, and offer suggestions for improving the collective approach to the topic. In particular, participating organisations will be expected to share with the group what their missions and objectives are, what they are doing regarding collaboration and partnerships, which gaps they see and which opportunities they would be willing to explore. The discussions will aim at identifying follow-up actions to strengthen the coordination between international organisations and programmes, including an effective and sustainable mechanism to share information on achievements and plans. Whenever possible, follow-up actions will build on already existing programmes and forums of exchange.

Targeted organisations

The discussions will cover all applications of radiation technologies including for medical (blood irradiation, oncology, etc.), industrial (sterilisation, radiography, well-logging), agricultural (phytosanitary and SIT) and research purposes.

The roundtable will be open to representatives from:

- International organisations and initiatives, including those funding devices for their members or for research, international development and health projects;
- Organisations supporting usage of irradiation or applications within irradiation (such as health, agriculture, etc.) via governance (especially guidance, standards or accreditation), research or advocacy;
- Organisations that use high activity radioactive sources and/or alternative technologies;
- Manufacturers of alternative technology devices and associated R&D organisations;
- Regulatory authorities and other governmental organisations.