

Enhancing Sustainable Nuclear Security Operations through Participation in the Coordinated Research Project on Improved Assessment of Initial Alarms

Nuclear security is the responsibility of a Member State. Meeting international obligations and effectively implementing national nuclear security strategies can be a challenging activity, oftentimes made complicated by the need to implement and sustain national detection strategies that use both instruments and information. This paper will focus on the challenges of nuclear security operation involving detection by instruments and demonstrate how participation in an IAEA Coordinated Research Project (CRP) has directly led to the advancement of operations and enhanced the sustainability of nuclear security detection operations in Sri Lanka.

Sri Lanka is an island country with its seaports serving as a vital national economic and security connector to the global community. Not only does the major port of Colombo serve as a gateway for commerce into and out of Sri Lanka, the seaport also serves as an important gateway for east-west transshipment of goods. The security of commerce through the seaport is globally important, and Sri Lanka is proud of its efforts to ensure the nuclear security of cargoes moving through the port to reduce the likelihood of illicit trafficking in nuclear and other radioactive materials, and also to ensure the safety of cargo moving through the port.

Sri Lanka has installed and operates a sophisticated system of radiation detectors at the seaport to monitor cargo –providing nuclear security detection capacity and safety to ensure that radioactively contaminated goods and/or radiological sources out of regulatory control are detected and safely removed from commerce. The Sri Lanka Atomic Energy Board (AEB) and Sri Lanka Customs are two of the agencies involved in the detection operations and were faced with numerous sustainability challenges ranging from equipment sustainability, training, expert knowledge of equipment, and nuclear security culture.

To address a number of these challenges, the AEB and Customs decided in 2015 to join the IAEA Coordinated Research Project on Improved Assessment of Initial Alarms from Radiation Detection Equipment. The participation in this CRP has yielded benefits far beyond the initial expectations. The improvement in alarm resolution processes through the use of a Tool for Radiation Alarm and Commodity Evaluation (TRACE) has resulted in more effective, efficient, and consistent alarm resolution and improved training.

The participation in the CRP has also enhanced collaboration and expert knowledge among the stakeholders of national nuclear security regime through:

- Sharing technical knowledge and onsite experience (FLO/ Experts),
- Training implementation,
- Development of methodologies, and
- Improvement of detection capabilities.

The feedback for questionnaires distributed among the FLO's on the use of TRACE in their alarm assessment activities will be included in the paper.

Sustainability of nuclear security culture in Sri Lanka has been enhanced through:

- Improved utilization and understanding of detection instruments and how to repair, maintain, and calibrate the instruments for peak performance,
- Improved and focused training using need analysis and a systematic approach to training (SAT),
- Improved Standard Operation Procedures (SOPs) that take advantage of the TRACE tool and have ensured a consistent and reliable source of information,
- Development of new approaches to implementing effective nuclear security detection operations.

Another important, and often overlooked benefit of participation in IAEA CRPs, is the enhanced opportunities for international collaboration. The CRP has provided an excellent pathway for the following:

- Sharing knowledge, experience and best practices through:
- Technical & Scientific Visits among other CRP members,
- Technical workshops to share enhanced alarm and data analysis capabilities, and

- Interactions with technical experts and equipment manufacturers.
- Joining professional and nuclear security networks (IAEA- FLO, IAEA-NSSC, World Custom)

In summary, the participation in the CRP on Improved Assessment of Initial Alarms has had great positive impact on the nuclear security capacity of Sri Lanka. The tangible benefits have been discussed and the enhanced knowledge and skills will help sustain an effective nuclear security detection. Sri Lanka expresses its gratitude to the IAEA for the support and opportunity to participate in the CRP program. Sri Lanka encourages other Member States to join CRPs and for the IAEA to continue this very successful program that addresses Member States needs through mutual participation and capacity building.

Gender

Female

State

Sri Lanka

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