

IMPROVED SPECIFICATIONS, PERFORMANCE, AND UNDERSTANDING OF RADIATION DETECTION EQUIPMENT USED FOR NUCLEAR SECURITY – OUTCOMES OF PARTICIPATION IN IAEA COORDINATED RESEARCH ACTIVITIES

The Coordinated Research Project (CRP) J02012 has been deployed by the IAEA in the theme of “Advancing Radiation Detection Equipment for Detecting Nuclear and Other Radioactive Material out of Regulatory Control”. The objective of the CRP was to determine and fulfill the gaps between nuclear security (NS) needs and existing capabilities of the detection instruments. The final goal of the project was to assure the sustainability of the nuclear security regime on a local and global scale. Sri Lanka, as one of the participating Member States in the CRP, has received tremendous benefits through it.

Sri Lanka’s major improvements and achievements on its NS regime through the CRP can be identified in both technical and managerial context. Sri Lanka Atomic Energy Board (SLAEB) has been a part of the CRP from 2017 and received assistance for the development, improvement, and sustainment of NS detection. The paper discusses these improvements as fruits of the project and encourages other Member States to collaborate in CRPs.

The technical gain from CRP can be expressed further using the significant improvements in a) instrument selection and in b) detection capabilities. The understanding of the identification of suitable instruments and specifications has been enhanced with the assistance of the CRP. This can be further explained in the scopes mentioned in figure 01. The detection capabilities were tested and identified gaps have been reduced through networking & combination of instruments, improving the performance and developing the ways of assuring technical sustainability.

The managerial gain from CRP can be explained in a) improvement of approach and b) sharing of knowledge and experience. This intangible development was primarily facilitated by sharing of experience and by inter-state, inter-organization collaborations. The approach to the NS has been expanded through the exposure to international and institutional NS cultures. Also, the CRP has developed a platform to establish links among the stakeholder member states. With this improved approach, the members have been strengthened up through sharing of the knowledge, experiences on best practices, ways of overcoming challenges and understanding limitations of detection instruments.

The needs of the NS stakeholders have been identified through a systematic need analysis performed using a sample of Front-line Officers (FLOs) and expert competent authorities working in NS. This response can be considered as a critical input to understand the instrument characteristics valued by the field officers and the performance required by the competent authorities and its experts. Apart from that, tests for assessing the performance of the NS detection instruments are being conducted by the SLAEB’s instrument research team to fulfill the objectives of the CRP J02012. The results obtained through these descriptive studies are also presented by this document.

Gender

Male

State

Sri Lanka

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