The benefit in Developing and Implementing Instructor Training for Front Line Officer on Nuclear Security Detection in Malaysia

N. F Rabani

Atomic Energy Licensing Board

Selangor, Malaysia

Email: [faezahrabani@aelb.gov.my](mailto:faezahrabani@aelb.gov.my)

N.F Bakri

Atomic Energy Licensing Board

Selangor, Malaysia

Email: [fitriah@aelb.gov.my](mailto:fitriah@aelb.gov.my)

**Abstract**

Malaysia has developed nuclear security detection capability focusing at our major point of entries and exits since 2007. The roles of nuclear security detection have been extended thus since then to nuclear security detection for major public event such as to the South East Asian (SEA) Games and Visits of Senior Foreign Leaders as well as to address interior detection on day to day operation in Malaysia. From day one of our experience in developing detection capability, the most challenging observation made was on how to build and ensure continuous capacity for frontline agencies in ensuring their capabilities to perform task related to nuclear security detection. The fact that nuclear by itself is a foreign subject to many, including frontline officer (FLO) agency, has making continuous availability of competent FLO to perform nuclear security detection task is almost impossible. The nature of FLO duties that are subject to job rotational policy has worsen the efforts to sustain nuclear security detection capability within FLO agencies a stumbling block to sustainable initiatives. High ratio gaps between strength of FLO agencies versus the technical competent authorities as the subject matter expert such as regulatory body like the Atomic Energy Licensing Board (AELB) in Malaysia, has pushes us further in finding a sustainable and better strategy to address this matter. The AELB with the support from the International Atomic Energy Agency (IAEA) through Malaysia’s Nuclear Security Support Centre (NSSC) and the United States Nuclear Smuggling Deterrence and Detection (US NSDD) work together in reforming approach to upgrade Instructor Training programme for FLO using a proper Strategic Approach to Training (SAT) methodology. Such approach involved task analysis, revision of FLO training materials, performing training programme, conducting examination and preparing evaluation report to ensure consistency and standard of the trained instructor. Malaysia’s NSSC has piloted the first two (2) weeks course of FLO Instructor Training programme involving 15 participants from AELB, Royal Malaysia Police (RMP) and Royal Malaysian Customs (RMC) in May 2017. Result from the training had produced a new batch of qualified instructor developed through a well-defined programme in ensuring the standard of our FLO training programme. The pilot Instructor course focused more on hands-on approach in compared to classroom training that does not suit best to FLO’s nature of work. Post the pilot course, the RMP and RMC respectively continue in developing the similar training programme within their organization to produce more trainers and in-house subject matter expert in nuclear security detection. Such approach lessens the dependency of FLO agencies to AELB in delivering training hence providing more opportunity for AELB to analyse and making continuous improvement to the training programme and other technical areas of nuclear security detection. The FLO training was also introduced as one-week Regional Training Course in Malaysia followed by revision of training material with US NSDD to finally come with the end-product that suits the needs of FLO in Malaysia. The trained Instructor were also invited to contribute to IAEA similar training programme in other countries. This strategic approach in implementing Instructors training programme addresses high needs of competent FLO within job rotational environment and has been one of the best initiatives undertaken by Malaysia’s NSSC in the effort to ensure effective and sustainable nuclear security detection capabilities in Malaysia.

## INTRODUCTION

The International Atomic Energy Agency (IAEA) has defined the three fundamental pillars of nuclear security Prevention, Detection and Response. The primary goal for nuclear security activities is the prevention of crime. However, detection and response also important in nuclear security. Detection and response are important roles played by the frontline officer (FLO) agency, has making continuous availability of competent FLO to perform nuclear security detection task is almost impossible. Malaysia has developed nuclear security detection capability focusing at our major point of entries and exits since 2007. The roles of nuclear security detection have been extended thus since then to nuclear security detection for major public event such as to the South East Asian (SEA) Games and Visits of Senior Foreign Leaders as well as to address interior detection on day to day operation in Malaysia. From day one of our experience in developing detection capability.

Malaysia is recognized as the only Nuclear Security Support Centre (NSSC) with the regional roles by the IAEA since December 2012. Malaysia has been extending our NSSC capability on a basis of experiences and best practice sharing with countries such as Albania, Indonesia, Sudan, Mauritania, Pakistan, Saudi Arabia, Vietnam Zimbabwe and Zambia, through cooperation with the IAEA. Malaysia is utilizing NSSC as a tool to retain knowledge and expertise gained from various international cooperation and assistance in nuclear security. Malaysia’s NSSC is capable to provide regional support for training such as Instructor Training for Front Line Officer.

## challenges in Developing and Implementing Instructor Training for Front Line Officer on Nuclear Security Detection in Malaysia

Capacity building in the field of nuclear and radioactive material detection has begun in Malaysia since 2005. Security control of nuclear and radioactive materials out of regulatory control that began with this border control operation became a push factor to related agencies such as National Security Council (MKN), Royal Malaysian Customs Department (RMCD), Royal Malaysian Police (RMP), Malaysian Armed Forces (ATM), Malaysian Maritime Enforcement Agency (MMEA) and Atomic Energy Licensing Board (AELB) to work hand in hand to create a network of cooperation in protecting national borders from any attempt to smuggle nuclear and radioactive materials into the country.

Training programmes in nuclear security aim to established in-depth and sustainable knowledge and skills, and foster nuclear security culture to the trainee. Training address to regulatory authorities, the nuclear industry, RMCD, RMP and other related agencies as the front line officer. The most challenging observation made was on how to build and ensure continuous capacity for frontline agencies in ensuring their capabilities to perform task related to nuclear security detection. The fact that nuclear by itself is a foreign subject to many, including frontline officer (FLO) agency, has making continuous availability of competent FLO to perform nuclear security detection task is almost impossible. It is challenging to teach subject to different background and nature of work by the trainee.

The nature of FLO duties that are subject to job rotational policy has worsen the efforts to sustain nuclear security detection capability within FLO agencies a stumbling block to sustainable initiatives. What we have done to overcome this challenge, we develop the syllabus that suitable for new recruit frontline officer for their basic training before entering the force. The instructor that have been develop before will be the instructor for the training conducted.

High ratio gaps between strength of FLO agencies versus the technical competent authorities as the subject matter expert such as regulatory body like the Atomic Energy Licensing Board (AELB) in Malaysia, has pushes us further in finding a sustainable and better strategy to address this matter. The AELB with the support from the International Atomic Energy Agency (IAEA) through Malaysia’s Nuclear Security Support Centre (NSSC) and the United States Nuclear Smuggling Deterrence and Detection (US NSDD) work together in reforming approach to upgrade Instructor Training programme for FLO using a proper Strategic Approach to Training (SAT) methodology. The Systematic Approach to Training (SAT) is a methodology for managing training programs. It is an orderly; logical approach to determining what people must know and do at a particular job or in a specific profession. The systematic approach to training ensures that people are prepared for their work by having the necessary knowledge, skills, and attitudes to do their job.

Training and exercises are of vital importance for handling nuclear threats. The contents of the events can be tailored for different target groups. Implementing realistic nuclear security scenarios is difficult with real radioactive sources. However, small sources are unsuitable for teaching safe and efficient search tactics in scenarios where measurements take place far away from the source.

Understanding the real challenges and requirements are the basis for establishing, develop and implement the instructor training for frontline officer for an efficient and secure information sharing mechanism between the authorities.

### INSTRUCTOR TRAINING FOR FRONTLINE OFFICER PROGRAM FRAMEWORK DEVELOPMENT

Malaysia has developing our training plan, there are a number of considerations as summary in Figure 1.

The considerations for developing the training program are as follows:

1. **Needs assessment and learning objectives.** This framework development consider the kind of training is needed in FLO organization. Once the need assessment have determined, learning objectives to measure the outcome at the end of the training was developed.
2. **Consideration of learning styles.** Variety of learning styles is important to development of training programs.
3. **Delivery mode.** The best way to get message across by using appropriate delivering mode. For this course mentoring mode is the best method.
4. **Budget.** The AELB with the support from the International Atomic Energy Agency (IAEA) through Malaysia’s Nuclear Security Support Centre (NSSC) and the United States Nuclear Smuggling Deterrence and Detection (US NSDD) mostly used to fund the training budget.
5. **Delivery style.** The training are instructor led and two way communication where the trainee were trained to deliver their own topics,
6. **Audience.** The training relevant to the FLO and related to their individual jobs
7. **Content.** The developing of syllabus to get a good contents to be taught? The information was sequenced.
8. **Timelines.** Basically, Malaysia have developed an one week and two weeks course for the training.
9. **Communication.** Communication before, during and after the course is important to ensure the quality of the course.
10. **Measuring effectiveness of training.** How will you know if your training worked? What ways will you use to measure this? We have prepared the pre and post-test to test the understanding of the trainee and training survey for each trainees.

*Figure 1 Training Program Development Model*

A screenshot of a cell phone

Description automatically generated

## THE CURRICULUM SUMMARY for Instructor Training for Front Line Officer on Nuclear Security Detection in Malaysia



## THE successful OF Instructor Training for Front Line Officer on Nuclear Security Detection in Malaysia

Malaysia’s NSSC has piloted the first two (2) weeks course of FLO Instructor Training programme involving 15 participants from AELB, Royal Malaysia Police (RMP) and Royal Malaysian Customs (RMC) in May 2017. Result from the training had produced a new batch of qualified instructor developed through a well-defined programme in ensuring the standard of our FLO training programme. The pilot Instructor course focused more on hands-on approach in compared to classroom training that does not suit best to FLO’s nature of work. Post the pilot course, the RMP and RMC respectively continue in developing the similar training programme within their organization to produce more trainers and in-house subject matter expert in nuclear security detection. Such approach lessens the dependency of FLO agencies to AELB in delivering training hence providing more opportunity for AELB to analyse and making continuous improvement to the training programme and other technical areas of nuclear security detection.

The FLO training was also introduced as one-week Regional Training Course in Malaysia which held in Kuala Lumpur on 4- 9 September 2017 involving 15 participants followed by revision of training material with US NSDD to finally come with the end-product that suits the needs of FLO in Malaysia. The trained Instructor were also invited to contribute to IAEA similar training programme in other countries. Another training that we have successfully organized on 22 July – 2 August 2019 in Kuala Lumpur Malaysia which involved Malaysian RMP, RMCD, Vietnam regulatory authority, Vietnam Custom Officer, Thailand regulatory authority and Custom Officer from Albania which attend International Train-the-Trainers Course for Instructors of Front Line Officers on the Detection of Nuclear and Other Radioactive Material out of Regulatory Control.

This strategic approach in implementing Instructors training programme addresses high needs of competent FLO within job rotational environment and has been one of the best initiatives undertaken by Malaysia’s NSSC in the effort to ensure effective and sustainable nuclear security detection capabilities in Malaysia.

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