

## The IAEA Assistance and Training Programme for Transport Security

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### **Abstract**

The IAEA Office of Nuclear Security is working cooperatively with the U.S. Department of Energy's Global Threat Reduction Initiative, European Union and Australia to provide transport security assistance to countries throughout the world.

Assistance is available to countries in reviewing and upgrading their transport security programs at all levels

- National level (regulatory and other government agencies)
- Operator level (shippers and carriers)

Assistance is directed at implementing a consistent level of security throughout the life cycle of radioactive material (same level of security during transport as when in a fixed facility)

Upgrade assistance can include:

- Expert advisory missions to provide advice and guidance
- Training courses for regulatory, governmental and industry personnel
- Transport security awareness
- Detailed training on designing and implementing transport security programs
- Planning to identify and prioritize needs (developing security approaches and plans)
- Developing model security plans and procedures
- Equipment (vehicles, packages, command and control equipment, etc.)

Country visits are now being scheduled to initiate transport security cooperative activities

A training course has been developed to assist countries in developing and implementing transport security programs. The training course has been given as a national training course (three times) and as a Regional training course (three times). The course addresses recommended security provisions for the transport of all radioactive material.

### **The IAEA Assistance and Training Programme for Transport Security**

The International Atomic Energy Agency's (IAEA) Office of Nuclear Security is working cooperatively with the U.S. Department of Energy's Global Threat Reduction Initiative (GTRI), the European Union and Australia to provide transport security assistance to countries throughout the world. Assistance is being made available to countries in reviewing and upgrading their transport security programs at all levels, including the:

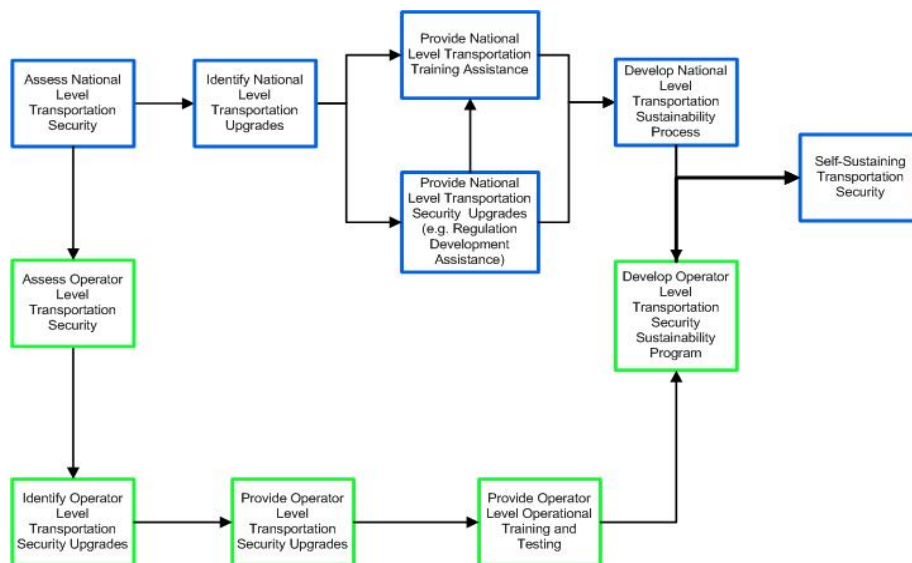
- National level (regulatory and other government agencies); and,
- Operator level (shippers and carriers).

This assistance is directed at implementing a consistent level of security throughout the life cycle of radioactive material (same level of security during transport as when in a fixed facility), particularly for high activity radioactive sources. The assistance programme is intended to help establish uniform transport security in participating countries.

A transport security assistance process has been established to ensure that the assistance program uses a structured and repeatable approach. The intention is to provide integrated comprehensive transport security support for Member States which includes:

- performing assessments of transport security cultures, programs and implementation at the national and operator (consignor, carrier and consignee) level to identify gaps and weaknesses; This is done cooperatively with the host country and is focused on identifying where assistance is desired in order to structure the nature of the assistance provided.
- developing recommendations for upgrades;
- developing standardized upgrade suites for use in countries where this is beneficial; and
- providing transport security awareness and detailed training to national authorities and operators.

The figure below describes the normal flow of concurrent activities involved in the transport security assistance process to accomplish the described activities.



The assessment process establishes a uniform approach to evaluating the transport security culture and practices of a country. This process uses a written assessment protocol that ensures a comprehensive, consistent, and effective approach to conducting the assessments. Included in the scope of the assessment process are: assessment preparation and planning; roles and responsibilities of assessment participants; performance and reporting of the assessment; follow-up and verification; and agreement on the actions to be taken as a result of the assessment. Implementation of this standardized methodology ensures that assessments are performed and documented in a consistent manner by qualified and experienced transport security subject matter experts (SMEs).

Assessment teams include SMEs knowledgeable of the IAEA guidance, GTRI's processes and other international security recommendations, including:

- Security in the Transport of Radioactive Material, Nuclear Security Series (NSS) No. 9;
- The Physical Protection of Nuclear Material and Nuclear Facilities, INFCIRC/225; and
- UN Recommendations on the Transport of Dangerous Goods - Model Regulations.

The SMEs are also knowledgeable in packaging and transportation operations involving nuclear and other radioactive material.

The result of each assessment is a report that includes recommendations to further develop or enhance a country's program. The recommendations provide a path forward that will allow the IAEA and other donor states to determine how to best assist the assessed country or organization to strengthen their transport security program.

Upgrade assistance can include:

- Providing expert advisory missions to provide advice and guidance
- Holding training courses for regulatory, governmental and industry personnel
  - Transport security awareness (normally a one-day workshop)
  - Detailed training on designing and implementing transport security programs (normally a 4-5 day detailed training course including practical exercises)
- Planning to identify and prioritize needs (developing security approaches and plans)
- Developing regulations, regulatory guidance, model security plans and procedures
- Procuring and providing equipment (vehicles, packages, command and control, communications, etc.), including operational training in the use of the equipment

To date, transport security assessments have been provided to the Philippines, Malaysia, Bulgaria, and Georgia.

Transport security assistance in the form of regulatory and technical upgrades is in progress in several countries. At this time equipment is being provided to China and the Philippines. This equipment varies from simple technologies such as tamper indicating devices to vehicles that have been designed to transport large irradiator sources and are equipped with:

- Hardened locks for cargo area
- Hardened chains or other strengthened tie downs
- Vehicle anti-theft system w/starting disabling device
- Vehicle tracking & data communication system
- Cargo area intrusion detection system
- Driver duress button
- Operator ID system
- Steel security boxes
- Communications devices for short and long ranges.

A training course is also available to assist countries in developing and implementing transport security programs. The course material was developed cooperatively by the IAEA, GTRI and Australia. Both IAEA and GTRI sponsor the courses which are frequently given jointly. The IAEA version of the course was first presented as a pilot national training course in Peru in 2007. Taking into account experience and comments from participants the training material has been further improved. The training material is being translated into the different official IAEA languages. Currently, the training material exists in English and French and a Spanish version will be available shortly.

The course material has been used both by the IAEA and the GTRI to perform training courses all over the world. National training courses have been held in China, Peru, the Philippines and Bulgaria and Regional training courses have been held in South Africa, Ukraine, Australia, Peru, Karlsruhe and Senegal.

The goals of the transport security training course are to:

- Illustrate the need for adequate security during the transport of radioactive material,
- Define levels of security with appropriate security measures, and
- Enable member states to effectively implement transport security programs.

The target audience for the training course includes regulators, shippers, carriers and other persons involved in the shipment of radioactive material.

The training course includes 12 different modules and two practical exercises. The modules are based on the security provisions recommended in the Nuclear Security Series No.9 “Security in the Transport of Radioactive Materials” that was published by the IAEA in 2008. The course uses the following outline:

#### **Syllabus for the IAEA Transport Security Course**

<b>Topic</b>
<b>Module 1</b> – Introduction (course and activities description, review of materials provided)
<b>Module 2</b> – The Need for Transport Security
<b>Module 3</b> – International Requirements and Guidance
<b>Module 4</b> – Transport Safety and the Interface with Security
<b>Module 5</b> – IAEA Guidance on Security of Radioactive Material during Transport
<b>Module 6</b> – Transport Security Approaches
<b>Module 7</b> – Basic Security Level
<b>Module 8</b> – Enhanced Security Level
<b>Module 9</b> – Additional Security Measures
<b>Module 10</b> – Developing the Transport Security Plan
<b>Practical Exercise 1</b> – Developing the Transport Security Plan Introduction to Exercise 1; Organize working groups
<b>Module 11</b> – Readiness Review for Transport of Radioactive Sources and Materials
<b>Practical Exercise 2</b> – Performing a Readiness Review Introduction to the exercise, review generic readiness review/corrective action checklists, organize working groups
<b>Module 12</b> - Implementation

The course addresses recommended security provisions for the transport of all radioactive material with a particular emphasis on high activity radioactive sources since these are routinely transported for industrial and

medical applications. It focuses on radioactive material transport security and does not address the additional physical protection provisions that may be needed for the transport of nuclear material subject to requirements stemming from the Convention on the Physical Protection of Nuclear Material (CPPNM), its amendment nor its implementing guidance (INFCIRC/225).

The practical exercises are intended to give the participants a first-hand opportunity to experience the work that is involved in writing a transport security plan and performing a readiness review. For the security plan exercise, students are given information about a specific shipment for which a transport security plan must be developed. Building on a model transport security plan they are given, they must select appropriate security measures for the shipment based on its radioactivity level and the threat against which they want to protect the shipment. In the second exercise, participants perform a readiness review of a simulated shipment. The host country is asked to provide a transport vehicle (typically a van) containing a package and equipped with the security provisions required for a shipment of a radioactive source. The readiness review is carried out based on the security plan the students developed in the previous exercise.

A train-the-trainer course (TtT) also has been developed. This training is used to develop lecturers that can deliver training to subsequent groups of students. The IAEA held a TtT course 16-20 August 2010 to develop lecturers who can give the transport security training course in their native languages. GTRI is using the TtT course to assist countries in developing their own country-specific course and pool of lecturers. The training course covers:

1. Adult learning principles, training techniques and presentation skills; and,
2. Detailed knowledge of the subject matter contained in the training modules

Participants at the IAEA train-the trainer course were provided with the full set of course materials and subsequently made two presentations to demonstrate their skills and obtain feedback on their performance. Depending on their language skills, the lecturers will be used to present the training course in English and/or Spanish, Russian and French. Participants learned specific presentation skills, including:

- how to start the presentation (objectives, setting the scene, etc.)
- how to pace the presentation to ensure keeping the students engaged and keeping on schedule without rushing presentation of the slides
- how to end the presentation (summarize the material and conclude the presentation)

## **Conclusion**

The IAEA assistance and training programme for transport security provides countries with a comprehensive spectrum of resources and the ability to establish and sustain their own national transport security programs through a systematic process that applies a graded approach. The program illustrates the need for adequate operational security during the transport of radioactive material, identifies how to define levels of security with appropriate security measures, and how to effectively implement operational transport security programs. By performing national and operational assessments and providing training and transport security upgrades, the programme assists regulatory bodies and operators (consignors, carriers, and consignees) in understanding the importance of their role and how they interface with other organizations involved in the transport of radioactive material.

If you are interested in taking advantage of this IAEA assistance programme, please contact Ann-Margret Eriksson of the IAEA Office of Nuclear Security at +43-1-2600-26638 or A.Eriksson@iaea.org.