



International Atomic Energy Agency

Meeting the Challenge of the Safety- Security Interface

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Outline

- Introduction
- Understanding Nuclear Security
- The Interface between Nuclear Safety and Nuclear Security
- Role of a TSO in supporting nuclear security
- IAEA's role in supporting the enhancement of technical competence and support for nuclear security within TSOs

Introduction

Following the successful conferences of 2007 and 2010 that considered the role of the Technical Support Organizations, this paper extends consideration of issues related to the role of the Technical Support Organization in the context of development of technical and scientific expertise in nuclear security to enhance and optimize both nuclear safety and nuclear security.

Understanding Nuclear Security

Nuclear Security



Prevention of

Detection of

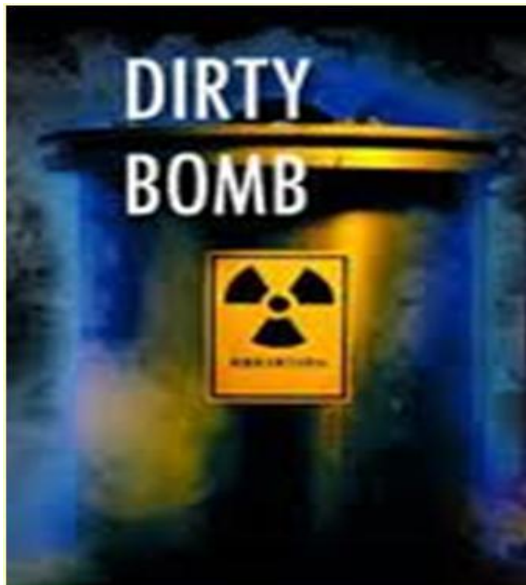
Response to

... criminal or intentional unauthorized acts involving or directed at **nuclear material, other radioactive material, associated facilities or associated activities.**

Nuclear Security is part of a State's overall security regime

Nuclear Security Concerns

- Nuclear and other radioactive material that is not properly secured
- Facilities and transports that are not properly protected
- Loss of, theft of or other unauthorised removal of nuclear and other radioactive materials and sensitive information
- Trafficking in nuclear and other radioactive material



What is the Risk?

- Theft of nuclear material to make an Improvised Nuclear Device (IND)
- Theft of Radioactive Material to make Radioactive Dispersal Device (RDD) or Radioactive Exposure Device (RED)
- Sabotage of a facility or transport
- Theft of sensitive information
- Threats or attempts in relation to any of these activities

Objectives of a State's Nuclear Security Regime

- **The objective of a State's nuclear security regime is to protect persons, property, society, and the environment from the harmful consequences of a nuclear security event.**
- **With the aim of achieving this objective, States should establish, implement, maintain and sustain an effective and appropriate nuclear security regime to prevent, detect and respond to such nuclear security events.**

Nuclear Security Regime

A Nuclear Security Regime is comprised of:

- **The legislative and regulatory framework and administrative systems and measures governing the nuclear security of nuclear material, other radioactive material, associated facilities and associated activities;**
- **The institutions and organizations within the State responsible for ensuring the implementation of the legislative and regulatory framework and administrative systems of nuclear security;**
- **Nuclear security systems and measures for the prevention of, detection of, and response to nuclear security events.**



Interface with Safety

Nuclear Safety and Nuclear Security

Safety and security are national responsibilities, but the consequences of a nuclear accident or of a nuclear security event may be *global*

Must be based on scientific and technical expertise

Technical Support Organizations play a key role

Interface issues may arise when:

- **Establishing key nuclear infrastructure**
 - New or amended legislation and regulations
 - Establishment or reorganization of Regulatory Body
- **Implementing nuclear infrastructure:**
 - Changes in facility or activity conditions
 - Process or procedural changes
 - Installation of new items

IMPORTANT: To have an overall framework with established systems to identify and manage the interface through solutions that satisfy the requirements of both safety and security

Role of a Technical Support Organization

Role of a Technical Support Organization:

There is general agreement that the role of the TSO is:

- To provide **scientific and technical expertise** to support decision making through specialized expert assessment
- To maintain **state of the art understanding** of the subjects upon which they give advice
- To undertake **research and development** to ensure comprehensive understanding of new and emerging issues
- **Independent** from the clients to whom they provide advice
- To provide **assurance** that the State has access to an appropriate level of nuclear expertise to support its programmes

What is the IAEA role in supporting enhancement of Technical Competence and support for Nuclear Security within Technical Support Organizations?

IAEA's Vision for Nuclear Security

Achieving worldwide, effective security wherever nuclear or other radioactive material is in use, storage and/or transport, and for associated facilities and activities



A global threat demands a global response.

Nuclear Security Plans

Nuclear Security Plan 2014-2017



Board of Governors
General Conference

GOV/2013/42-GC(57)/19
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Item 4(b) of the Board's provisional agenda
(GOV/2013/37)
Item 16 of the Conference's provisional agenda
(GC(57)/1, Add.1 and Add.2)

Nuclear Security Plan 2014–2017

Report by the Director General

Summary

The first concerted nuclear security plan was approved in March 2002 by the Board of Governors (GOV/2002/10), which also approved the creation of a voluntary funding mechanism, the Nuclear Security Fund (NSF). The Board approved the current Nuclear Security Plan 2010–2013 (GOV/2009/54) in September 2009. This Plan will be concluded at the end of 2013. The Agency convened the International Conference on Nuclear Security: Enhancing Global Efforts at the Agency's Headquarters from 1 to 5 July 2013. On 1 July, Ministers adopted a Declaration which, inter alia, urged the Agency to take account of the Declaration in finalizing its Nuclear Security Plan for 2014 to 2017. This Plan builds on General Conference resolutions, the Ministerial Declaration and, where appropriate, the conclusions and recommendations from the Conference. In addition, it consolidates activities set out in the Nuclear Security Plan 2010–2013, taking into account new and modified priorities of Member States.

Recommended Action

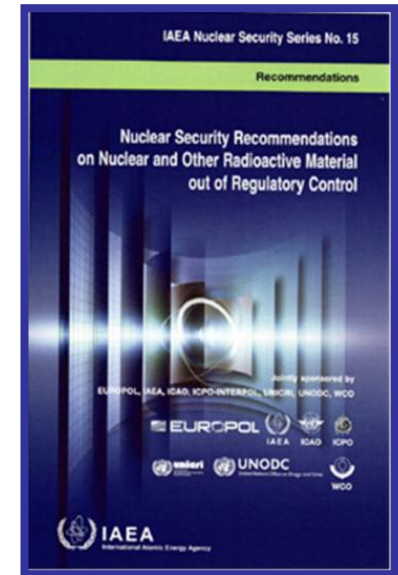
It is recommended that the Board of Governors:

- a. Approve the Nuclear Security Plan 2014–2017;
- b. Approve the continuation of voluntary funding for the activities included in the Nuclear Security Plan 2014–2017, without targets, and call upon all Member States to continue contributing on a voluntary basis to the Nuclear Security Fund; and
- c. Transmit the Plan to the General Conference with a recommendation that the Conference takes note of the Nuclear Security Plan 2014–2017 and calls upon Member States to contribute to the Nuclear Security Fund.



IAEA Supporting Scientific Expertise and Technical Competence

The nuclear security regime requires appropriate technical and scientific expertise to assure its effectiveness and sustainability, that is its effectiveness over time.



IAEA Nuclear Security Series

IAEA Nuclear Security Series No. 18

Implementing Guide

Nuclear Security Systems
and Measures for
Major Public Events

IAEA Nuclear Security Series No. 6

Technical Guidance
Reference Manual

Combating Illicit Trafficking
in Nuclear and other
Radioactive Material

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International Atomic Energy Agency

The **Nuclear Security Series (NSS)**, developed in close consultation with Member States' experts, bring together best practices acceptable to the international community for broad implementation.

The **Nuclear Security Guidance Committee (NSGC)**, open to all Member States, makes recommendations on the development and review of the Nuclear Security Series.

21 NSS Publications include:
1 Fundamentals
3 Recommendations
8 Implementing Guides
9 Technical Guidance

IAEA Nuclear Security Series No. 13

Recommendations

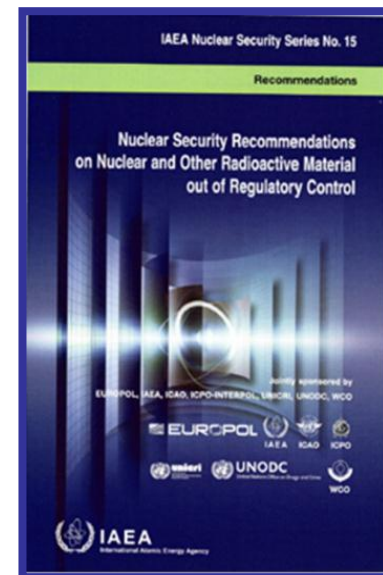
Nuclear Security Recommendations
on Physical Protection
of Nuclear Material
and Nuclear Facilities
(INFCIRC/225/Revision 5)

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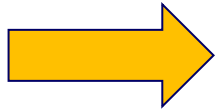
Capacity Building

- Conduct of education & training activities
- Nuclear Security Networks
- Nuclear Security Support Centres



Human Resource Development

Building expertise



Comprehensive Training Programme

Objective: To raise awareness, to fill gaps between the actual performance of personnel and the required competencies and skills and, to build-up qualified instructors/trainers



Promoting Nuclear Security Education

Objective: To support the development of teaching material, faculty expertise and preparedness, and the promotion of nuclear security education in collaboration with the academic and scientific community

Ultimate Goal: To develop capabilities for supporting sustainable implementation of the international legal instruments and IAEA guidelines for nuclear security worldwide, and to foster nuclear security culture.



**IAEA Support
to Building Capacity through E&T,
Advisory Services, Networking**

Courses and Practical learning

Post-graduate & Basic
Professional Courses

Specialized Training
Curriculums and Courses

On-the- Job Training
Fellowships
Technical Visits

Sustainability

Train the
Trainers

Distance
Learning
E- Learning

Review Services & Tools

Appraisals

Review
Services

Advisory
missions

Training/
Competence
Needs
Assessment
Tools

Steering Committees & Networks

Steering
Committees of
Member States

Knowledge and technical
networks

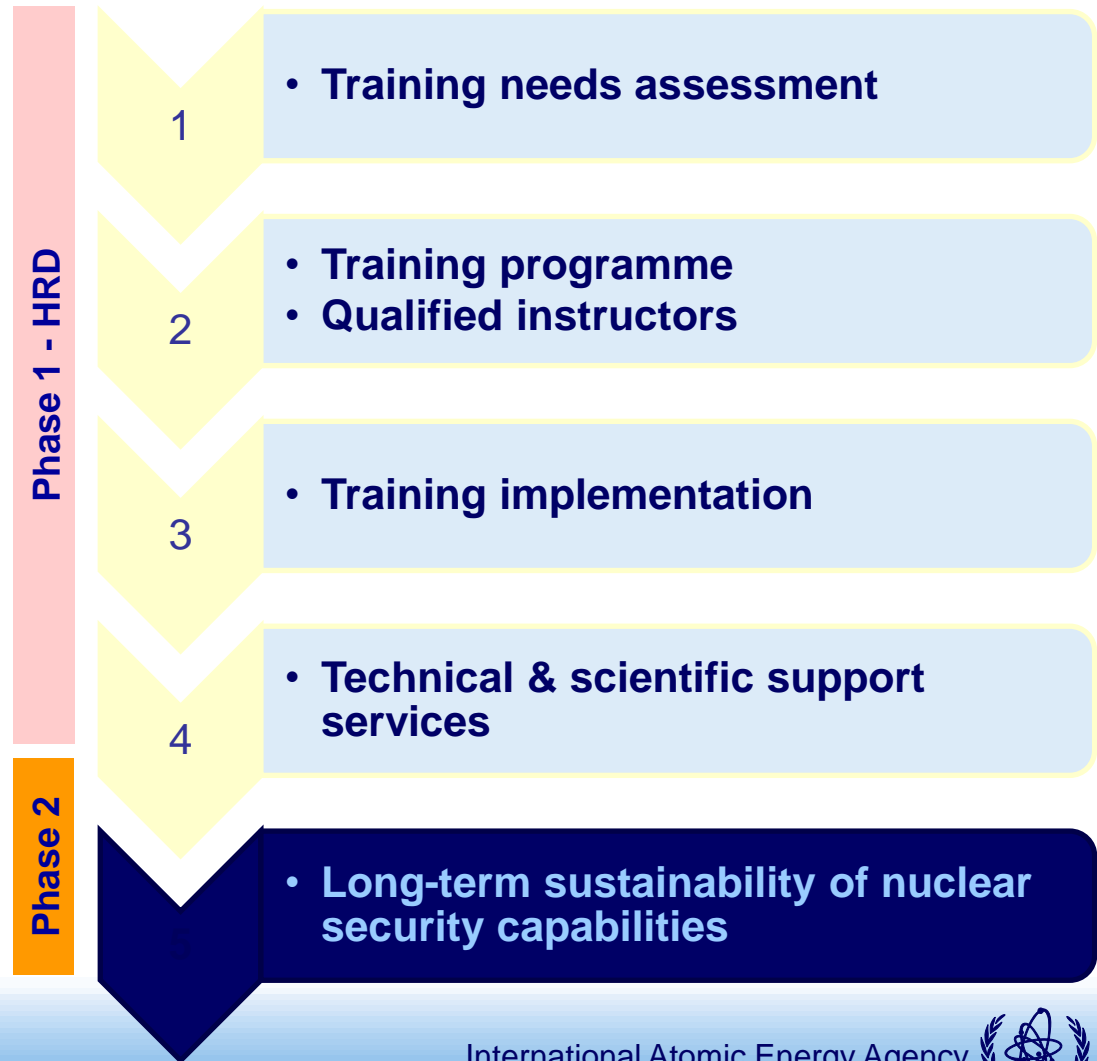
Extra-budgetary, Projects, regional networks, TC, regular Budget



Nuclear Security Support Centres

Primary objectives are:

- Develop human resources through the implementation of a tailored training programme
- Develop a network of experts
- Provide technical support for lifecycle equipment management and scientific support for the detection of and the response to nuclear security events



International Network of Nuclear Security Training and Support Centres (NSSC)

- **Progress reported from regional networks and activities**
- **New publication – TECDOC-1734**
- **WG progress – member survey for better information and resource sharing**
- **Increased interest in establishing NSSC**

IAEA TECDOC SERIES

IAEA-TECDOC-1734

Establishing a National
Nuclear Security
Support Centre

International Nuclear Security Education Network (INSEN)



Currently more than 60 members.

Mission:

to enhance global nuclear security by developing, sharing and promoting excellence in nuclear security education

Cooperative Research Projects

- brings together researchers to develop solution to problems of common interest.
- facilitates involvement of Member State institutions to contribute to advancements in key disciplines.
- results are shared free of charge
- Nuclear Security Assessment Methodology



Conclusion

- **Safety and Security share a common aim - protecting persons, property, society and the environment.**
- **Effective nuclear security and safety infrastructure requires an understanding of the interface between safety and security and an awareness of the need to optimize the effectiveness of both.**
- **Appropriate management of the interface between safety and security results in both safety and security in a State being strengthened and enhances each State's capacity to protect and secure its nuclear and other radioactive material, associated facilities and associated activities.**
- **Safety and Security require a foundation of strong technical competence and scientific expertise**
- **The IAEA has an important role to support the development of technical competence and scientific expertise in nuclear security to enhance and strengthen both safety and security.**

...Thank you for your attention

