

Anita Nilsson

Director

Office of Nuclear Security, IAEA

**PLENARY SESSION
PATRAM 2010**

7 October 2010, London



IAEA

International Atomic Energy Agency

Nuclear Security



Prevention

- Theft of nuclear weapon
- Theft of material to make improvised nuclear explosive device
- Theft of radioactive material for radiological dispersal device
- Sabotage of facility or transport



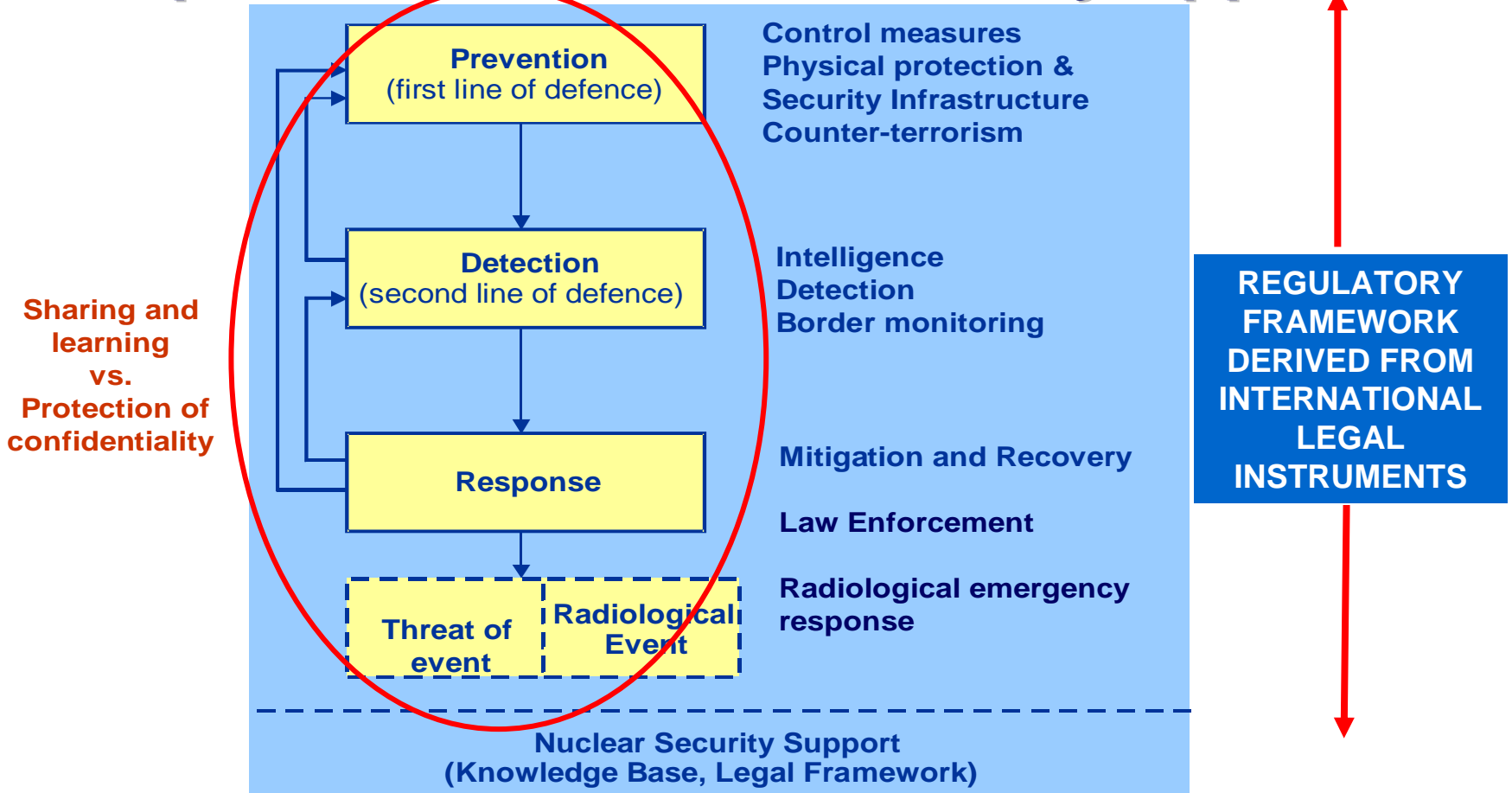
Detection



Response



Comprehensive Nuclear Security Approach



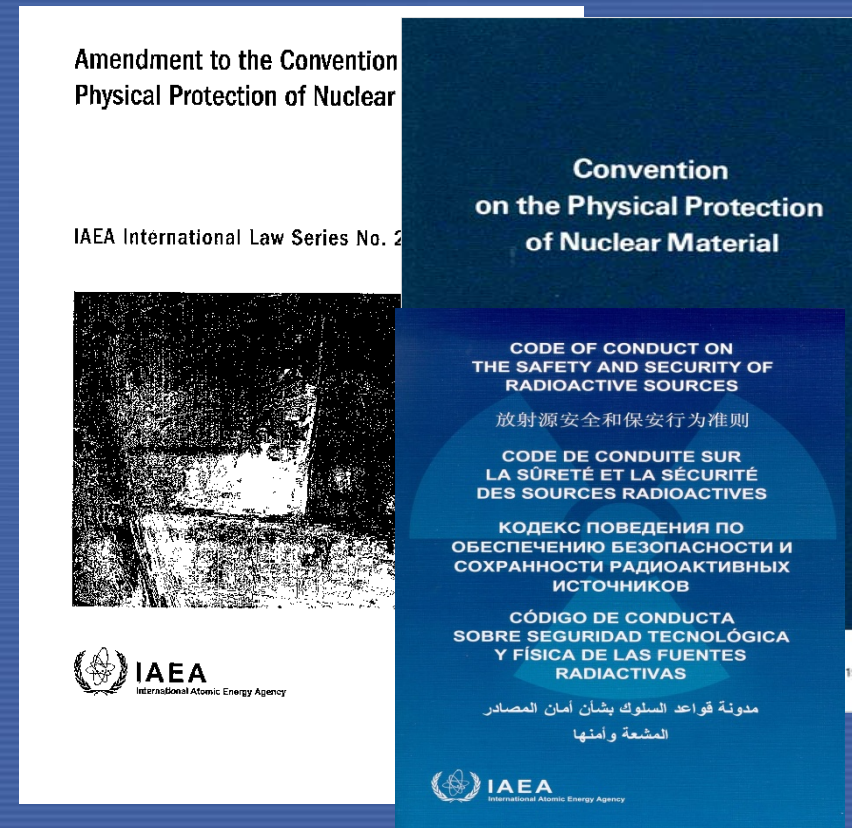
International Instruments

Legally binding:

- Convention on the Physical Protection of Nuclear Material & Amendment
- Safeguards agreements and additional protocols
- Convention on the Suppression of Acts of Nuclear Terrorism
- Security Council resolution 1540
- Security Council resolution 1373

Non-binding:

- Code of Conduct on the Safety and Security of Radioactive Sources



Convention on the Physical Protection of Nuclear Material (CPPNM)



Protection of Nuclear Material:

Export and Import Requirements:

- States are not to undertake transports/transits unless NM protected at appropriate levels

Identification of Offences

- Article 7 requires penalties under National Law

Responsibility for Nuclear Security

The responsibility for nuclear security rests entirely with individual States.

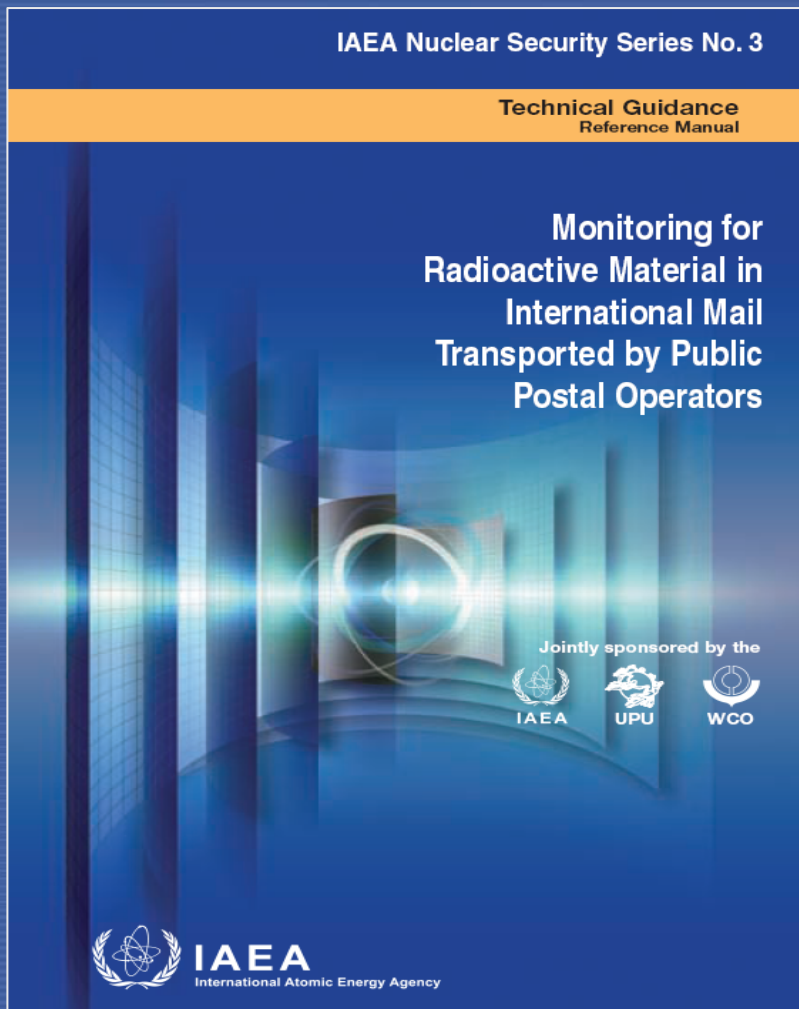


Nuclear Security Plan 2010-2013



Contribute to effective nuclear security through assistance in capacity building, guidance, human resource development, sustainability and risk reduction. Contribute to global efforts to achieve worldwide, effective security wherever nuclear or other radioactive material is in *use, storage and/or transport*, and of associated facilities, by supporting States, upon request, in their efforts to establish and maintain

Nuclear Security Guidance



Nuclear Security Series

Security Fundamentals

Recommendations

Implementing Guides

Final stage of development

Fundamentals

The purpose of the *Fundamentals* is to provide the objective and essential elements necessary for a State's *nuclear security regime*.

Bringing together implementation of relevant nuclear security legal instruments

Recommendations

There are three different Recommendations document:

- Physical protection of Nuclear Material and Nuclear Facilities (also INFCIRC/225. Rev. 5)
- Recommendations on Security of Radioactive Material and Associated facilities
- Recommendations on Security of Radioactive Material outside of Regulatory Control

The two first documents contain separate recommendations chapters for transport security.

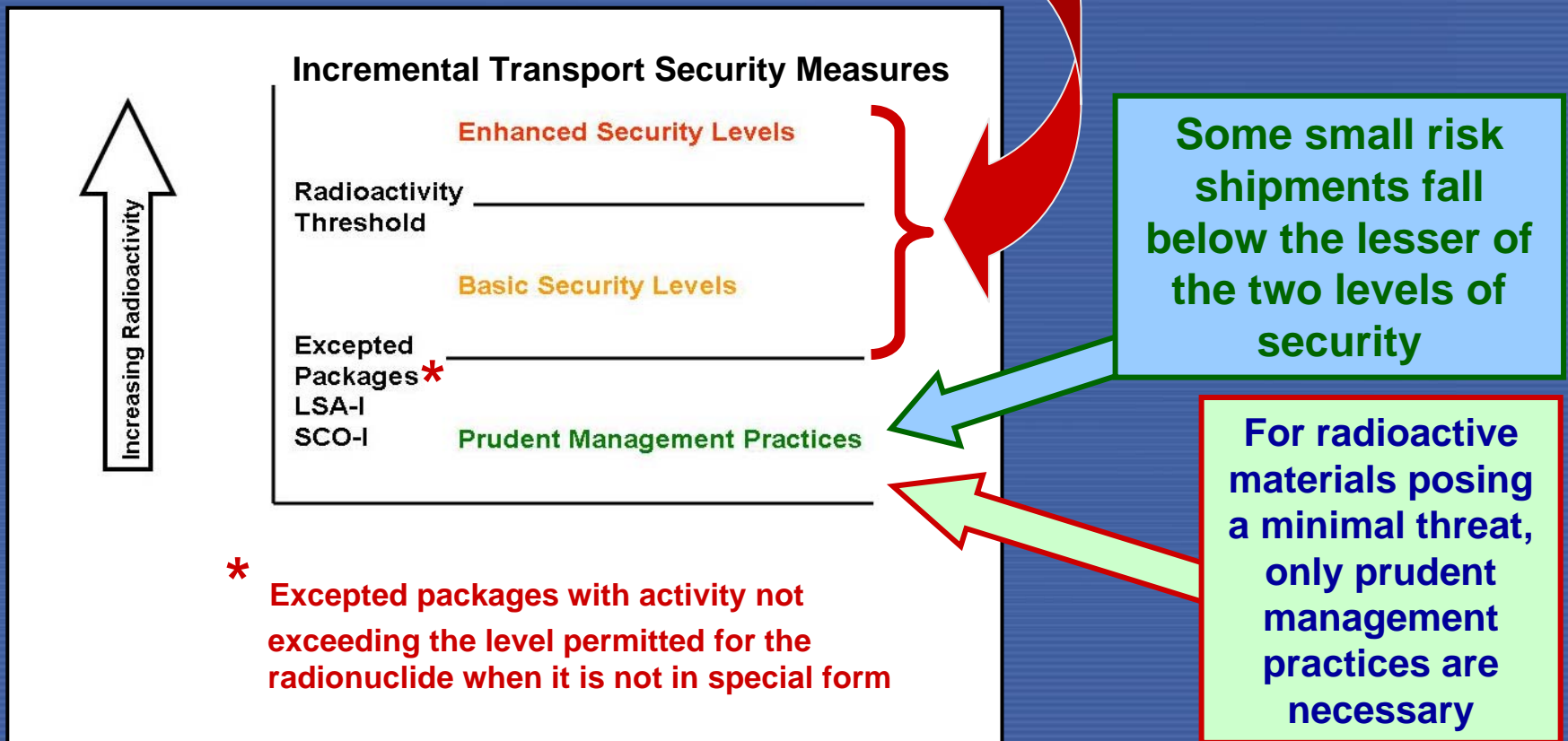
Recommendations on radioactive material and associated facilities

- The threshold values for high consequence class 7 material is set to 10D for radionuclides listed in the Code of Conduct and 3000A₂ for all other nuclides
- The new threshold values has been communicated to the UN Sub-Committee of Experts and will be included in the next revision of the Model regulations



Transport Security Group Levels

Two security levels
are recommended



Security Requirements for Nuclear Material of Category I and II

- Advance *notification* to the receiver of the planned shipment
- Prior *authorization* by the competent authority after a security survey
- Transport security plan
- Selection of *transport mode and routing*:
- Provision of *locks and seals* and their checks before dispatch
- Search of the load vehicle for *sabotage devices* prior to loading
- Written instructions to transport personnel
- *Transport control centre* for the continuous monitoring of vehicle
- Requirements on communications, guards, emergency actions and transfer of responsibilities

Requirements related to the mode of transport

- Shipment by road: designated and specially designed load vehicles, guards to each load vehicle, guarded parking, *transport control centre*
- Shipment by rail: freight train and exclusive use wagon, guards, travelling in the nearest carriage
- Sea transportation: dedicated ship, secure compartment or container, locked and sealed
- Air transportation: designated aircraft, NM as its sole cargo



Security training of transport personnel

- Security awareness training :
 - Nature of security threats and concerns
 - Actions to be taken in case of an incident
 - Responsibilities for implementation of security plans

Records of all security training should be kept by the employer.



Specifics of ground transportation

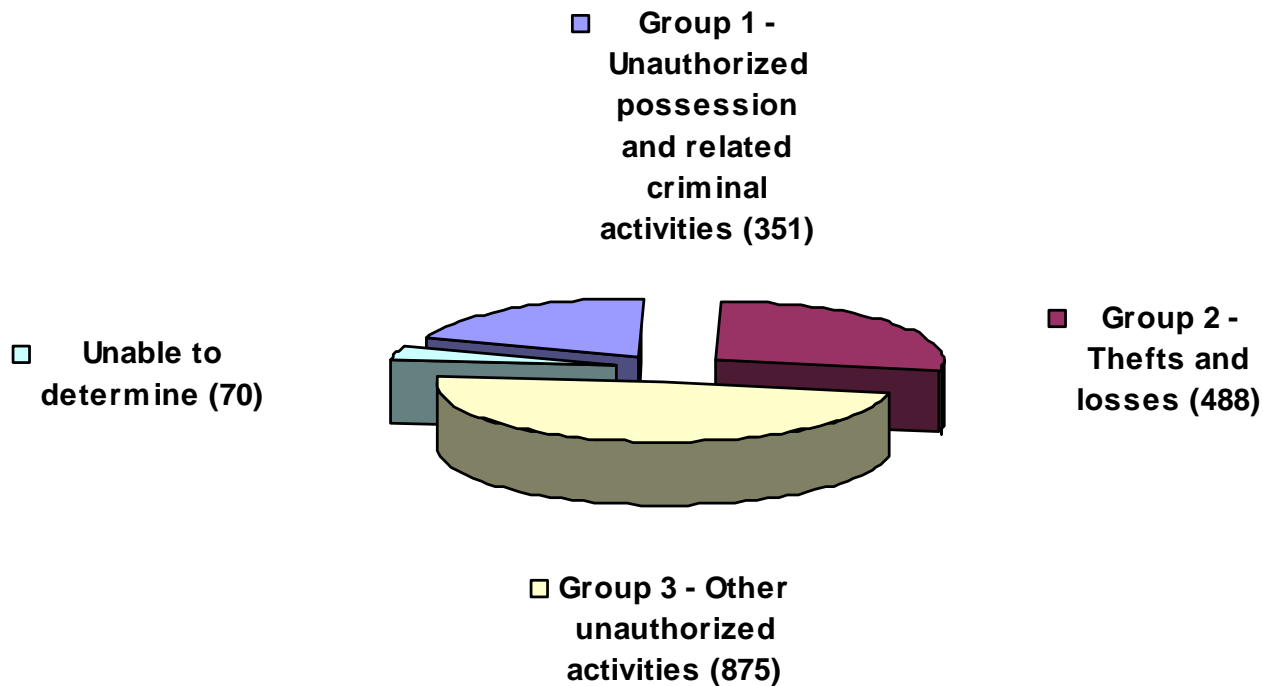
- Challenges of public domain on the transportation route
 - Traffic uncertainties
 - Public can very closely approach vehicle—no stand off distance
 - Need to stop for fuel, subsistence
- An attack can occur anywhere along the route (up to thousands km)
 - Potential attack locations- difficult for arrival of secondary response
- Access to moving nuclear transport would be difficult/impossible
 - Adversary scenario must include stopping transport



Confirmed incidents 1993-2009

1784 incidents reported during 1993-2009

Breakdown of incidents reported to the ITDB during 1993-2009
by type of Groups



IAEA Transport Security Assistance Program

- **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
- **Identification and prioritization of needs** (developing security approaches and plans)
- **Development model security plans and procedures**
- **Equipment*** (vehicles, packages, command and control equipment, etc.)

Conclusion

- CPPNM and its amendments, other international instruments and IAEA guidance provide clear obligations and indication on the need to secure transportation of nuclear and other radioactive materials
- Security elements
 - detection - convoy observation or interior intrusion devices
 - delay- building a vault-type enclosure on the nuclear cargo/ truck
 - response – planning and preparations
- *scenario analysis* and feed back
- Considerations and graded approach security should always be part of normal transport preparations

For further information please visit our website

<http://www-ns.iaea.org/security/>

The screenshot shows a Microsoft Internet Explorer browser window displaying the IAEA Nuclear Security website. The browser's address bar shows the URL <http://www-ns.iaea.org/security/>. The website header features the IAEA logo and navigation tabs for 'About IAEA', 'Our Work', 'News Centre', 'Publications', and 'Data Centre'. A search bar is also present. The main content area is titled 'Nuclear Security' and includes a breadcrumb trail: 'You are in: Home > Our Work > Nuclear Safety & Security > Nuclear Security'. The page is divided into several sections: 'Our Work' with a list of activities, a main text block about the 2006-2009 Nuclear Security Plan, 'Find out more...' with links to documents and reports, 'Related links' to the Security Plan and Fund, and 'What we do' describing advisory services. A taskbar at the bottom shows the Windows Start button and various application icons.

Nuclear Security Home - Microsoft Internet Explorer provided by IAEA Safeguards

File Edit View Favorites Tools Help

Address <http://www-ns.iaea.org/security/> Go Links Google Settings

IAEA.org
International Atomic Energy Agency

About IAEA **Our Work** News Centre Publications Data Centre NS IAEA Search this site Go

You are in: Home > Our Work > Nuclear Safety & Security > Nuclear Security

> Our Work

- Advisory, evaluation and response missions
- Human Resource Development
- Development of methodology
- Adherence to international legal instruments
- Technical upgrades
- Information coordination and analysis
- Major public events

> NS Quick Links

Nuclear Security

In March 2002 the IAEA Board of Governors approved a Plan of Activities to Protect Against Nuclear Terrorism, which enhanced and integrated the Agency's existing nuclear security-related activities. In September 2005, the Board approved a new [Nuclear Security Plan](#) covering the period 2006-2009.

The new Plan builds on existing [international legal instruments and agreements](#) to help States strengthen their nuclear security to combat the [risk of nuclear terrorism](#). The plan focuses on three key areas:

- [Prevention](#) to protect nuclear and other radioactive material and facilities and transports from malicious acts.
- [Detection of and response to](#) malicious acts involving nuclear and other radioactive material.
- [Information coordination and analysis](#) to underpin the Plan and support its implementation. This includes evaluation, cooperation with bilateral and multilateral support programmes, and information collection.

> Find out more...

- Fundamental Nuclear Security documents
- General Conference reports
- Nuclear Security Series
- Conferences

> Related links

- Nuclear Security Plan for 2006-2009
- Nuclear Security Fund

What we do

The IAEA provides [advisory services](#) to States to establish the necessary infrastructure to protect nuclear and other radioactive materials from theft and diversion, protect nuclear installations and transport against sabotage and other malicious acts, and to combat illicit trafficking in nuclear and other

Done Local intranet

start