

Nuclear Security

Protecting Against Acts of Nuclear Terrorism

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IAEA

International Atomic Energy Agency

Nuclear Security: Definition

The prevention and detection of, and response to, theft, sabotage, unauthorized access, illegal transfer or other malicious acts involving nuclear material, other radioactive substances or their associated facilities.



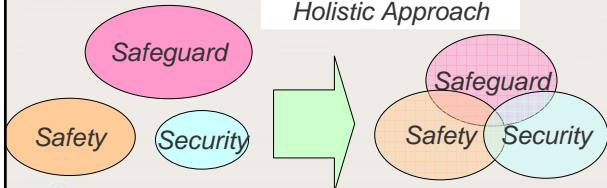
Nuclear security vulnerabilities remain

The collage features three main elements: a newspaper clipping from Pretoria News titled 'Man shot in nuke plant attack' with a sub-headline 'Questions over security as armed gang of four storm Haheloiba and shoot officer in chest'; a document from the United Nations General Assembly titled 'Resolution adopted by the General Assembly' regarding nuclear security; and a screenshot from Army Times showing a news anchor reporting on an 'B-52 mistakenly flies with nukes aboard'.

Global Nuclear Security Regime

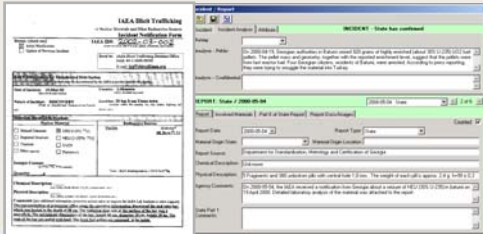
- Nuclear Safeguard – Non-proliferation
- Nuclear Security – Protect Against Terrorism
- Nuclear Safety – Technical Accident Prevention

Holistic Approach



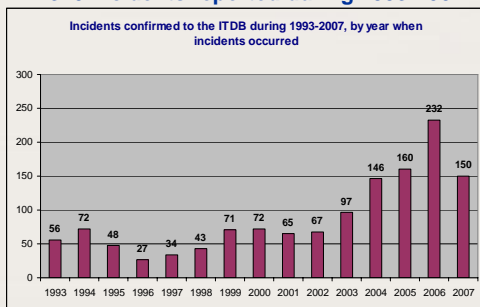
IAEA Illicit Trafficking Database

- Established in 1995
- Unique network of points of contact connecting 100 States and several international organizations



Illicit Trafficking Database (ITDB)

1340 incidents reported during 1993-2007



Note: About 50% of 2006 incidents were confirmed NRC reports. The share of such reports in 2005 or 2007 data is much smaller.

International response to nuclear terrorism

Amendment to the Convention on the Physical Protection of Nuclear Material

IAEA International Law Series No. 2

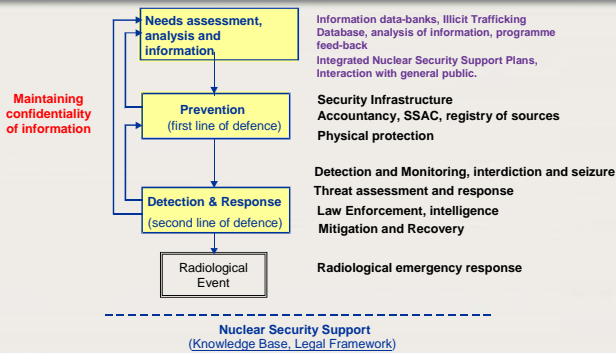


Significant strengthening of the international legal instruments for nuclear security

- **Convention on the Physical Protection of Nuclear Materials**
 - 90% IAEA Member States are now party
- **CPPNM Amendment, progress, but slow.**
- **Convention on the Suppression of Acts of Nuclear Terrorism**
- **UN Security Council Resolutions 1540 and 1373**
 - Obligations are binding for **all States**.
- **Code of Conduct on the Safety and Security of Radioactive Sources**
- **Safeguards Agreements, Additional Protocols; the Agency's safeguards system**
- **Nuclear Safety Conventions**



Comprehensive Nuclear Security Approach



Growing nuclear energy demand – requires solid security arrangements

- **Vitae nova of nuclear energy; hope and challenge.**
- **A significant growth in nuclear energy, means:**
 - increased production of source material,
 - more fuel cycle facilities or throughput
 - More transports
 - More nuclear power plants and waste disposal facilities.
- **Nuclear security** must be systematically implemented, part of the commonly accepted norm.
- The IAEA plays a crucial role for that purpose, the only international organization with a mandate in nuclear security.



Effective nuclear security in any State includes

- *Effective legal and regulatory structures*
- *Up-to-date physical protection for sites/locations with nuclear and radioactive substances*
- *Accounting, control and registry of all materials*
- *Effective border control systems*
- *Security at major public events*
- *Threat reduction for vulnerable materials or facilities/locations, including repatriation to suppliers*
- *Human resource development*
- *Research and development*
- *Nuclear security culture and sustainability*



IAEA Contributions Nuclear Security Series of Documents

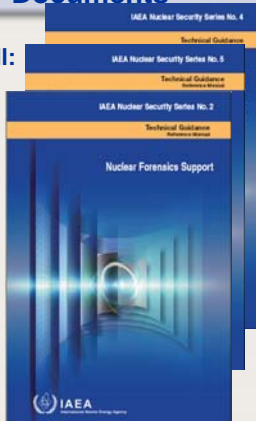
IAEA Nuclear Security Series will:

Facilitate international implementation of legal instruments and domestic/national policy

Hierarchical structure:

- **Fundamentals;**
essential elements
- **recommendations**
- **Implementing guides**

Synergies with nuclear safety and safeguards



IAEA contributions

Nuclear Security Information Platform

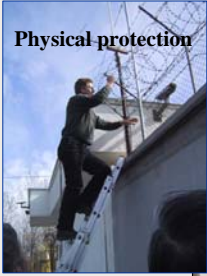
- Enhanced ITDB & other databases
- Continuous improvement of quality of data in cooperation of MS
- Enhanced analysis to identify nuclear security needs and priorities
- Nuclear Security Information Products that are helpful for States and for the general public.

N.B. Maintaining confidentiality of sensitive information



IAEA Advisory and Assessment Support Nuclear Security Missions

Physical protection



2층 금강실 한국기술산업(주)
ISSAS Mission
to the Republic of Korea
Place : Konkang Hall 2nd Floor (Korea)
2층 금강실 크라운제과

Accountancy/registry



Regulatory structure



RADIATION SAFETY AND SECURITY OF
RADIOACTIVE SOURCES INFRASTRUCTURE
APPRAISAL (RSASAI) FOR THE REPUBLIC OF
JEREMBAKIN
Technical development with
CONTROL OF PUBLIC EXPOSURE AND WASTE
SAFETY APPRAISAL (CEPWSAP)
No. 12 December 2007
IAEA



Threat reduction

Physical protection upgrades, repatriation to supplier

- The Agency supported improvements of physical protection.
- The Agency assisted recovering, conditioning and repatriating spent research reactor fuel or dangerous radioactive sources.
- Activities in a large number of States, all regions



Effective Border Control

- Enhanced capabilities to detect, interdict, and respond to illegal acts involving nuclear and other radioactive material and associated facilities, in a large number of States
- Equipment & testing services
- Expert advice
- Research & Development



Nuclear Security at Major Public Events

The Agency continued to assist States in developing and implementing measures to prevent incidents of nuclear terrorism at major public events, with support and advice and technical support in the areas of detection, interdiction and response.

- 2004: Summer Olympic Games, Greece
- 2006: Football World Cup, Germany
- 2007: Pan-American Games, Brazil
- 2008 LAC-EU Summit and APEC CEO Summit, Peru
- 2008: Summer Olympic Games, China



Human Resource Development



- Coordinating/convening a large number of training and education events; reaching most Member States
- Efforts in support of training programmes in Member States, e.g. National N.S. Support Centres
- Graduate educational programme at universities



Integrated Nuclear Security Support Plans

Integrated Nuclear Security Support Plan
MTRPA Component

COUNTRY



Proposed Actions ¹	Responsible Entity	Proposed Initiation	Main Comments
Legal and Regulatory Framework			
1. Review the relevant Country laws and regulations to determine where provisions specifically related to nuclear security (such as physical protection, controls, strict licensing, export control, prohibited materials) to which existing laws address international legal dimensions and IAEA position gaps exist.	Country/IAEA	Month/Year	Start with by ICI Joint Action, Project ...
2. Expedite drafting and promulgation of emergency or national laws based on gap analysis, and bring into force the necessary gap provisions.	Country/IAEA	Month/Year	
3. Expedite drafting and promulgation of advanced regulatory rules, based on gap analysis, and bring into force the regulatory rules.	Country/IAEA	Month/Year	IAEA mission conducted ... Start with ...
4. Expedite the ratification of the Additional Protocol to the IAEA Safeguards Agreement.	Country	Month/Year	ITE mission conducted in ...
5. Initiate process of adhering to and implementing the Convention on Physical Protection of Nuclear Material (CPPNM).	Country	Month/Year	
6. Initiate process of adhering to and implementing the Amendment to Convention on Physical Protection of Nuclear Material (CPPNM).	Country	Month/Year	
7. Initiate process of adhering to and implementing the Nuclear Terrorism Convention.	Country	Month/Year	
8. Consider endorsing the Code of Conduct on the Safety and Security of Radioactive Sources including the supplementary Guidelines on the Import and Export of Radioactive Sources.	Country	Month/Year	
Prevention			
9. Establish State's own assessment.	Country/IAEA	Month/Year	
10. Carry out review of the level of security arrangements of the nuclear facilities, taking into account the State assessment, regulatory requirements and IAEA recommendations. Implement for necessary upgrades.	Country/IAEA/Donors	Month/Year	Priority task with by ICI Joint Action, Project ... IAEA will provide support for upgrading ...

CONFIDENTIAL

International Cooperation and Coordination

- **Member States and not yet Member States**
- **Interpol, Europol, WCO, OSCE, UNICRI, ITU/JRC, UNODC, etc.**
- Conferences, meetings and workshops
- Expert support: development of Nuclear Series documents, peer reviews and missions
- Outreach and information exchange; e.g. information clearing house and international coordination



Q&A