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IAEA
International Atomic Energy Agency

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Some thoughts on the connections between the
Code of Conduct, the Joint Convention and
Nuclear Security related Conventions and
Instruments



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Nuclear Terrorism Threats

A. Nuclear Explosives

Theft of a nuclear weapon
Theft of *nuclear material* to make a nuclear explosive device

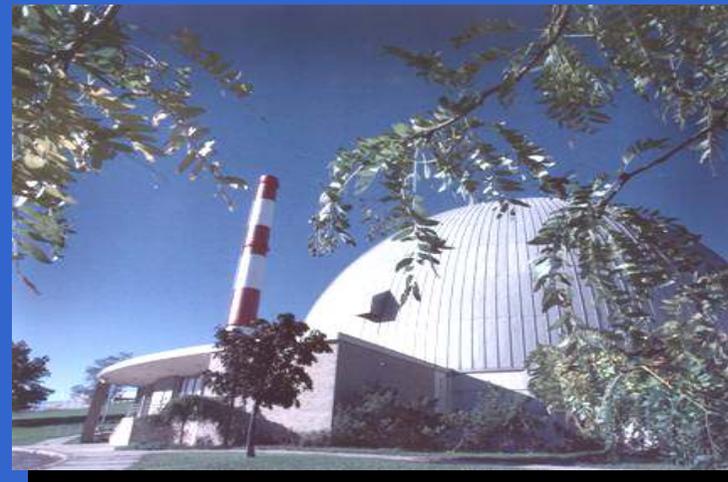


B. Radiological Dispersal Devices (RDDs)

Theft of radioactive material to make an RDD, e.g. a 'dirty bomb'



C. Sabotage



Nuclear Security

- **What is “nuclear security?”**

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.

International Legal Instruments Relevant to Nuclear Security

- The legal foundation for nuclear security comprises international instruments, binding and non-binding, and recognized principles that are implemented by national authorities
- There is no single international legal instrument that addresses nuclear security in a comprehensive manner. The relevant **binding** and **non-binding** instruments, however, provides a solid platform.

International Legal Instruments: binding

International Conventions

- Treaty on the Non-Proliferation of Nuclear Weapons
- Convention on the Physical Protection of Nuclear Material, and Amendment
- International Convention for the Suppression of Acts of Nuclear Terrorism (UNGA Resolution 59/290) (2005)
- International Convention for the Suppression of Terrorist Bombings (UNGA Resolution 52/164, Annex) (1997)

United Nations Security Council Resolutions

- 1373 (2001), *Threats to international peace and security caused by terrorist acts*
- 1540 (2004), *Non-proliferation of weapons of mass destruction*



International legal instruments: non-binding

- **Physical Protection Objectives and Fundamental Principles (GC(45)/INF/14)**
- **The Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Rev.4)**
- **Code of Conduct on the Safety and Security of Radioactive Sources (INFCIRC/663)**
- **Guidance on the Import and Export of Radioactive Sources (INFCIRC/663)**
- **Code of Conduct on the Safety of Research Reactors (GOV/2004/4 and Corr.1)**
- **New publication by OLA in Nuclear Law Series will summarize the binding and non-binding instruments relating to nuclear security**

Implementation

**Solid platform of international legal instruments,
binding and non-binding**

**All instruments point to IAEA functions and
programmes for implementation: internationally
accepted guidance, common principles,
strategies and assistance**

International Legal Instruments: coverage

- **Joint Convention was not drafted for security**
- **The Code of Conduct clearly covers security, limitations in scope**
- **The Nuclear Terrorism Convention covers all radioactive isotopes**

International Legal Instruments: definitions

- “**Radioactive material**” means nuclear material and other radioactive substances which contain nuclides which undergo spontaneous disintegration (a process accompanied by emission of one or more types of ionizing radiation, such as alpha-, beta, neutron particles and gamma rays) and which may, owing to their radiological or fissile properties, cause death, serious bodily injury or substantial damage to property or to the environment. **NT Convention**
- “**Radioactive source**” means radioactive material that is permanently sealed in a capsule or closely bonded, in a solid form and which is not exempt from regulatory control. It also means any radioactive material released if the radioactive source is leaking or broken, but does not mean material encapsulated for disposal, or nuclear material within the nuclear fuel cycles of research or power reactors. **Code of Conduct**
- “**Device**” means:
 - (a) Any nuclear explosive device; or
 - (b) Any radioactive material dispersal or radiation-emitting device which may, owing to its radiological properties, cause death, serious bodily injury, or substantial damage to property or to the environment. **NT Convention**



Code of Conduct: scope

- The coverage of the Code is limited to *radioactive sources*, defined as follows:

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Code of Conduct: coverage



Category	Practice	Activity Ratio A/D
1	RTG's; Irradiators; Teletherapy; Gamma Knife	$A/D > 1000$
2	Gamma radiography Brachytherapy (HDR/MDR)	$1000 > A/D > 10$
3	Fixed industrial gauges (e.g.: level, dredger, conveyor gauges) Well logging	$10 > A/D > 1$
4	Brachytherapy (LDR except eye plaques & perm implants) Portable gauges; Static eliminators; Bone densitometers	$1 > A/D > 0.01$
5	Brachytherapy (eye pl. & perm implants); XRF; ECD	$0.01 > A/D > \text{Exempt/D}$

A = source activity;

D = radionuclide-specific “dangerous” activity

Code of Conduct: coverage

- Although the Code does mention aggregation of lower Category sources, there are security concerns about lower Category sources even without aggregation.
- Lower Category sources dispersed in a confined major metropolitan area, could result in significant economic and social impact.
- There is no corresponding limitation in the NTC.

Joint Convention

- “security” appears in the Joint Convention as follows:

The provisions of this Convention shall not affect the rights and obligations of the Contracting Parties under their laws to protect information from disclosure. For the purposes of this article, "information" includes, inter alia, information relating to national security or to the physical protection of nuclear materials, information protected by intellectual property rights or by industrial or commercial confidentiality, and personal data. [emphasis added]

Joint Convention

- A careful understanding of the CPPNM, its amendment, of the Joint Convention, and the Nuclear Terrorism Convention, with respect to coverage, overlaps and gaps, is required to address adequately the threat posed by the spent fuel, radioactive waste, and facilities used for storage, handling, etc.

Conclusions

- Both the Joint Convention and the Code are limited adequate from a security viewpoint.
- The Joint Convention and the Code should be reviewed in conjunction with the Nuclear Terrorism Convention.
- The Nuclear Terrorism Convention should be more considered in regulatory work.