Lecture 3. INTERNATIONAL LEGAL FRAMEWORK FOR NUCLEAR SECURITY

Course “New Challenges to the Nonproliferation Regime”

Dr. Alexey Ubeev

Dual Master’s Degree Program in Nonproliferation Studies
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Brief introduction to Nuclear “hard” and “soft” law;

International Legal framework against Nuclear terrorism;

Binding and non-binding legal instruments relevant to Nuclear Security;

CPPNM and 2005 Amendment, entry into force;

INFCIRC 225/Rev.5, main provisions, improvements from previous versions and its implementation
International Nuclear Law:
- a system of legal rules and regulations which govern relations among its subjects in the area of peaceful use of nuclear energy;
- provides a framework for balancing risks and benefits at national and international levels;
- comprises both “hard” and “soft” law;
- encompasses a number of fundamental principles;
- criminalize e.g. nuclear terrorism related offences (interface with International Security Law)

Traditional approach to Nuclear Law covers four main fields: Safety, Security, Safeguards and Civil Liability
Interface of Nuclear Security relevant Laws

- Nuclear Law
- Humanitarian Law (Law of War)
- Security Law (Counter-terrorism)
- Environment and Health Protection Laws

Nuclear Security Law
The International Legal Framework against Nuclear Terrorism

UN instruments

IAEA instruments

ICAO instruments

IMO instruments

19 INTERNATIONAL LEGAL INSTRUMENTS

Convention on the Physical Protection of Nuclear Material and 2005 Amendment

Terrorist Bombings Convention

2005 Maritime Protocols

2005 Nuclear Terrorism Convention

2010 Convention on Civil Aviation
Common points to the counter-terrorism Conventions

- Establish offences
- Require States to criminalize offences
- Establish the principle “aut dedere aut judicare”
  = “either extradite or prosecute”
- Provide for international cooperation mechanisms
Nuclear-related offences in the 2005 Maritime Protocols

- Amend existing maritime legal regime
- New offences
  - Using a nuclear weapon or radioactive material against or on a ship (or fixed platform)
  - Discharging a nuclear weapon or radioactive material from a ship (or fixed platform)
  - Unlawfully transporting nuclear weapon or radioactive material on board ships
Nuclear-related offences in the 2010 Civil Aviation Convention (Beijing Convention)

New offences:

- Using a nuclear weapon or radioactive material against or on board an aircraft
- Discharging a nuclear weapon or radioactive material from an aircraft
- Unlawfully transporting nuclear weapons or radioactive material on board an aircraft, knowing that it is intended to be used to cause, or in a threat to cause
Responsibility for the security of nuclear materials and related facilities and activities conducted by a State rests with that State.

The legal foundation for nuclear security comprises international instruments and recognized principles to be implemented by national authorities.

Appropriate assistance, coordination and cooperation with relevant international organizations and other States should be ensured.

Consistent and harmonized national legal frameworks for nuclear security can enhance and strengthen both global and national efforts to ensure nuclear security.
Formulating Nuclear Legislation

To strengthen existing legal infrastructure for nuclear law many States have enacted general law on peaceful use of nuclear energy, which allows for:

- identification of national policy
- determination of government responsibilities
- formulation of basic provisions governing main aspects of nuclear law

These provisions may include radiation protection, safety and licensing, nuclear transport, material accountancy, security/physical protection, administrative and penal sanctions.

This approach requires strong commitment by national authorities but could prove more cost effective than partial modification of applicable provisions.
Structure of a Legislative Framework for Nuclear Security

Non-Binding international Codes and Documents
- NPT, CPPNM and Nuclear Terrorism convention
- National Nuclear Legislation

Binding international Treaties, Resolutions, Conventions,
- National Legislation

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<thead>
<tr>
<th>Peaceful use</th>
<th>Criminalisation</th>
<th>Competent Authority</th>
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<tbody>
<tr>
<td>- Commitment to the Peaceful use of NM</td>
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<td>- State system of accounting and control (SSAC)</td>
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<td>- Penalties</td>
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<td>- Inspection</td>
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<td>- Enforcement</td>
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Regulatory Framework
Legal binding instruments

**Nuclear Security**

- Convention on the Physical Protection of Nuclear Material (152 Parties) & 2005 Amendment (103)
- Entry into force 8 May 2016
- Convention on the Suppression of Acts of Nuclear Terrorism (99)
- UN Security Council resolutions 1540, 1977
- UN Security Council resolution 1373

~ 900 locations worldwide with various NM
~ 2,100 inspections/year

**Safeguards**

- Nonproliferation Treaty
- Comprehensive Safeguards Agreements (INFCIRC 153)
- Additional protocols (INFCIRC 540)
- INFCIRC/66 Agreements
- Export and import control regulations

Nonproliferation Treaty
Comprehensive Safeguards Agreements (INFCIRC 153)
Additional protocols (INFCIRC 540)
INFCIRC/66 Agreements
Export and import control regulations

~ 900 locations worldwide with various NM
~ 2,100 inspections/year
Some IAEA Nuclear Security related instruments (non-binding)

- Code of Conduct on the Safety and Security of Radioactive Sources (INFCIRC/663)
- Guidance on the Import and Export of Radioactive Sources (INFCIRC/663)
- The Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/ Rev.5)
- Nuclear Security Fundamentals (NSS#20)

Basic principles of *Code of Conduct on the Safety and Security of Radioactive Sources* details that:

✓ Every State should have in place effective national legislative and regulatory system of control over management and protection of radioactive sources;

✓ Every State should, in order to protect individuals, society and the environment, take the appropriate measures necessary to ensure:

(a) that the radioactive sources within its territory, or under its jurisdiction or control, are safely managed and securely protected during their useful lives and at the end of their useful lives; and (b) the promotion of safety culture and of security culture with respect to radioactive sources.

- Broadly criminalizes unlawful and intentional possession and use of radioactive material (NM + RM) *with a specific intent*
- Introduces definitions of “nuclear facility” and “radioactive material”
- International exchange of information
- Depository – the Secretary-General of the United Nations
- Partly different scope and definitions than in the CPPNM and its 2005 Amendment
2005 Nuclear Terrorism Convention, cont’d

Article 5 calls for each State Party to adopt such measures as may be necessary:

- to establish as criminal offences under its national law the offences set forth in Article 2
- to make those offences punishable by appropriate penalties which take into account grave nature of offences

Article 8 — States shall make every effort to adopt appropriate measures to ensure protection of radioactive material
Convention on the Physical Protection of Nuclear Material (CPPNM)

- In force since 8 February 1987
- 152 Parties (as of October 2016)
- The CPPNM has a threefold scope of application: the physical protection of nuclear material during international transport; the criminalisation of offences; and international cooperation and information exchange

- The CPPNM applies to nuclear material used for peaceful purposes while in international nuclear transport (Article 2.1).

- With the exception of the provisions relating to physical protection (Articles 3, 4 and 5.3), the CPPNM also applies to nuclear material used for peaceful purposes while in domestic use, storage and transport (Article 2.2).
Under the provisions that apply only to nuclear material used for peaceful purposes while in international nuclear transport, States Parties are required:

- to ensure that, during international transport, nuclear material is protected at the levels described in Annex I as applicable to the categories of nuclear material set out in Annex II (Article 3);

- not to export or import, or authorize the export or import of, nuclear material unless assurances have been received that the nuclear material will, during international transport and storage incidental to such transport, be protected at the levels described in Annex I (Article 4); and

- to cooperate and consult with a view to obtaining guidance on the design, maintenance and improvement of systems of physical protection of nuclear material in international transport (Article 5.3).
2005 Amendment to CPPNM (Scope Extension)

- Scope extended to nuclear facilities and material in peaceful domestic use, storage and transport;
- Protection against sabotage;
- National responsibility for physical protection;
- Protection of confidential information;
- Expended co-operation between States on rapid measures to locate and recover stolen or smuggled nuclear material, mitigate any radiological consequences of sabotage, and prevent and combat related offences;
- Covers Physical protection objectives and fundamental principles;
- Addition of definitions of “nuclear facility” and “sabotage”.

**Entry into force 8 May 2016**
State Parties Obligations under 2005 CPPNM

In implementing the obligations above, each State Party shall, without prejudice to any other provisions of this Convention, apply insofar as is reasonable and practicable the following 12 **Fundamental Principles of Physical Protection of Nuclear Material and Nuclear Facilities:**

A: **Responsibility of the State**
B: **Responsibilities During International Transport**
C: **Legislative and Regulatory Framework**
D: **Competent Authority**
E: **Responsibility of the License Holders**
F: **Security Culture**
G: **Threat**
H: **Graded Approach**
I: **Defence in Depth**
J: **Quality Assurance**
K: **Contingency Plans**
L: **Confidentiality**

Repeated in INFCIRC 225/Rev.5
Background of INFCIRC/225 on Physical Protection of NM

Reasons for last revision:

**INCREASE IN THREAT** capability and intent

**NEW INTERNATIONAL INSTRUMENTS** related to nuclear security (especially the 2005 amendment to the CPPNM)

**MORE 12 YEARS EXPERIENCE** in methods and approaches

**DEVELOPMENT** of IAEA nuclear security documents (security culture, DBT and others)
Hierarchy of Physical Protection of Nuclear Materials and Facilities within State (INFCIRC 225/Rev.5)

- Physical protection measures
- Physical protection system
- Physical protection regime
- State

Licensees, operators

Personnel
Procedures
Equipment
Changes in definitions (INFCIRC 225/Rev.5)

✓ Instead of 17 definitions (Rev.4), new document (Rev.5) contains 39 definitions;
✓ All 39 definitions were changed in some way compared with the previous version;
✓ Original English version should be used in case of inconsistencies.

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<tr>
<th>Removed definitions</th>
<th>Revised definitions</th>
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<td>Assessment</td>
<td>Central alarm station</td>
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<td>Intrusion detection</td>
<td>Defence in depth</td>
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<td>Patrol</td>
<td>Inner area</td>
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<td>Security survey</td>
<td>Physical barrier</td>
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<td>Protected area</td>
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<td>Response forces</td>
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<td>Sabotage</td>
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<td>Transport control centre</td>
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<td>Vital area</td>
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Some improvements (INFCIRC 225/Rev.5)

- New requirements on licensing
  - A security plan prepared by operator, based on the threat assessment or the design basis threat
  - A security plan includes sections dealing with design, evaluation, implementation, and maintenance of the physical protection system, and contingency plans
  - License process:
    - Review and approval of the security plan by competent authority
    - Implementation by operator of the approved security plan
    - The security plan should be regularly reviewed
    - The competent authority should verify the operator’s compliance with the security plan (inspection)

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<th>Contingency Plan</th>
<th>Emergency Plan</th>
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<td>Includes measures to prevent further damage in case of sabotage, theft or other malicious act (classified)</td>
<td>Includes measures to minimize radiological consequences of man-made or natural disasters (open or for official use)</td>
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New approaches to PP measures during transportation of NM (Section VI)
UN Security Council Resolutions relevant to Nuclear Security

UN Security Council Resolution 1373 (2001)
- Prevention and suppression of terrorist financing
- Prevention and criminalization of terrorist acts
- International cooperation
- Establishes a Counter-Terrorism Committee

- Refers specifically to the CPPNM and to the IAEA Code of Conduct
- Obliges States to implement accountancy and control and physical protection measures and import and export control measures.

UN Security Council Resolution 1887 (2009)
- Notes concern for nuclear terrorism and need for effective measures to prevent misuse of nuclear material or technology
- Calls upon States to share nuclear security practices and secure vulnerable material
UNSC Resolution 1540 (2004)

Resolution highlights:

➢ [Security Council] Recognizing that most States have taken... effective measures to account for, secure and physically protect sensitive materials, such as those required by the Convention on the Physical Protection of Nuclear Materials and those recommended by the IAEA Code of Conduct on the Safety and Security of Radioactive Sources; (Preamble)

➢ [Security Council] Decides also that all States ...shall:
(a) Develop and maintain appropriate effective measures to account for and secure such items in production, use, storage or transport;
(b) Develop and maintain appropriate effective physical protection measures;
(c) Develop and maintain appropriate effective border controls and law enforcement efforts to detect, deter, prevent and combat, including through international cooperation when necessary, the illicit trafficking and brokering in such items in accordance with their national legal authorities and legislation and consistent with international law; (OP 3)

➢ [ Security Council] Calls upon all States:
(c) To renew and fulfil their commitment to multilateral cooperation, in particular within the framework of the International Atomic Energy Agency...; (OP 8)
Joint UNODC/IAEA Model Legislative Provisions against Nuclear Terrorism (implementation)

Merge the offences set forth in the 2005 CPPNM and in the Nuclear Terrorism Convention.

Handle the offences in an integrated and coordinated manner. With regard to attempt, participation, contribution and other ancillary conducts reference is made to Section 2 and 3 of UNODC’s Model Legislative Provisions against Terrorism.
Basic elements and Model Provisions on Nuclear Security (implementation at national level)

✓ Regulation of Physical Protection, including inspections;
✓ Responsibilities of the authorized persons (Licensee);
✓ International cooperation and assistance;
✓ Protection of confidential information;
✓ Communication prejudicing security of nuclear material;
✓ Criminal offences for violation of applicable laws and regulations, with stringent penalties, particularly for malicious acts.

(Handbook on Nuclear Law. Implementing Legislation, IAEA)
Some Russian legal instruments in nuclear security area

Federal Law № 170 “On peaceful use of atomic energy” adopted by Russian Federation Parliament (State Duma) in 1995 with amendments
Chapter XI. Physical Protection of Nuclear Power Plants, Radioactive Sources, Storages of Nuclear Material and Radioactive Materials (Articles 49,50,51,52)

Some RF Federal Laws linked with Nuclear security /Physical Protection issues
“On Security”, March 5, 1992
“On Counter - Terrorism Acts,” March 6, 2006
“On State Confidentiality”, July 21, 1993

General Rules and regulations on Physical Protection of Nuclear Material, Nuclear Facilities and Nuclear Material Storages, authorized by the Government of the Russian Federation # 456 on July 19, 2007:
International Nuclear Security Legal Framework is based on relevant international laws (nuclear law, security law, humanitarian law and others);

Newly adopted legal instruments (UN SC Resolutions, conventions, amendments, protocols, etc.) – global response to new challenges in security area;

Entry into force 2005 Amendment to CPPNM and implementation of INFCIRC 225/Rev.5 at national level are important and essential inputs in strengthening nuclear security regime worldwide
Thank you for your attention!

*Special thanks to the IAEA and UNODC staff for kind assistance*

Questions?