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Fundamentals of a State's Nuclear Security Regime

Andrea Braunegger-Guelich

*IAEA, Vienna
Austria*

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Andrea Braunegger-Guelich

*Office of Nuclear Security
Department of Nuclear Safety and Security*



Contents

- Nuclear Security
- International Response to the threats
- Fundamentals of a State's nuclear security regime
- Objective and essential elements of a nuclear security regime

Nuclear Security



Prevention



Detection

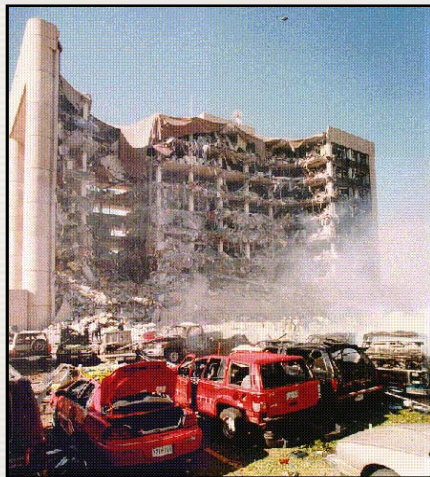


Response

... to theft, sabotage, unauthorized access, illegal transfer or other malicious acts involving nuclear material, other radioactive substances or their associated facilities.

Nuclear Security

- Too much radioactive materials are not properly secured.
- Possible criminal and intentional unauthorized acts involving such material is a continuing worldwide threat.



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

The International Response to the Threats

Conventions & Treaties

- Convention on the Physical Protection of Nuclear Material (1987) & Amendment (2005)
- Convention on the Suppression of Acts of Nuclear Terrorism (2005)
- Safeguards agreements and additional protocols
- Security Council resolution 1540
- Security Council resolution 1373



Codes of Conduct

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

Amendment to the Convention on the
Physical Protection of Nuclear Material

IAEA International Law Series No. 2



Convention
on the Physical Protection
of Nuclear Material

LEGAL SERIES No.12



INTERNATIONAL ATOMIC ENERGY AGENCY, VIENNA, 1982

IAEA Nuclear Security Series

15 publications
so far

➤ The Fundamentals of a State's Nuclear Security Regime

- ✓ Objectives and essential elements
- ✓ Based on provisions in the international instruments, experience of States and IAEA
- ✓ Basis for Nuclear Security Recommendations

➤ 3 Recommendations (WHAT?)

- ✓ General approaches, actions, concepts and strategies
- ✓ Applications of the Fundamentals

➤ Implementing Guides (HOW?)

- ✓ Broad guides on how Recommendations to be applied
- ✓ Ways and means for how Recommendations implemented at systems level

➤ Technical Guidance



IAEA

Reference Manuals, Training Guides, Service Guides

The Fundamentals Document Purpose

The *Nuclear Security Fundamentals* document provides the **objective** and **essential elements** of an appropriate and effective **national nuclear security regime**.

Objective of Nuclear Security Regime

The **Objective** of a State's *nuclear security regime* is to **protect persons, property, society, and the environment from harmful consequences of a *nuclear security event*** (*that has potential or actual implications for nuclear security that must be addressed*).

Essential Elements of a Nuclear Security Regime

1. **State responsibility to establish, implement, maintain & sustain a nuclear security regime applicable to all *nuclear material, other radioactive material* and *their associated facilities & associated activities* under the jurisdiction of the State.**
2. **Identification and definition of nuclear security responsibilities of competent authorities designated by the State** (including *regulatory bodies, law enforcement, customs and border control, intelligence and security agencies, health agencies, etc*)
 - **Integration & coordination of provisions**
 - **Continued appropriateness of responsibilities**

Essential Elements of a Nuclear Security Regime

3. Legislative & regulatory framework to govern the regime

- establish *competent authorities and regulatory bodies*
- ensure *independence* (functional & financial) of *regulatory bodies*
- assign nuclear security *responsibilities and provide* sufficient financial, human and technical *resources*
- ensure proper *coordination and communication*
- establish *regulations and procedures* for:
 - evaluating applications & granting authorizations and licenses
 - protecting the confidentiality of *sensitive information* & protection of *sensitive information assets*

Essential Elements of a Nuclear Security Regime

3. Legislative & regulatory framework to govern the regime (Con't)

- ensure that there are procedures for the State to assume the prime responsibility for security in the absence of authorized persons
- establish nuclear material and other radioactive material accounting or registering and ensure control and protection
- establish law enforcement systems and measures relevant for nuclear security
 - measures for export, import and border control of *nuclear material & other radioactive materials*
 - security procedures for transport
- establish verification and enforcement measures to ensure compliance with applicable laws and regulations, including imposition of sanctions.

Essential Elements of a Nuclear Security Regime

4. International transport of nuclear and other radioactive material

Adequate protection until that responsibility is properly transferred to another State.

5. Offenses & penalties including criminalization

A nuclear security regime includes measures for:

- defining criminal or intentional unauthorized acts involving or directed at nuclear material, other radioactive material, associated facilities or associated activities as offenses under domestic laws;
- dealing with other acts that have an adverse impact on nuclear security;
- establishing the jurisdiction of the State over such offenses or violations;
- providing for the prosecution/extradition of alleged offenders;

Essential Elements of a Nuclear Security Regime

6. International Cooperation & Assistance

A nuclear security regime provides for cooperation and assistance between and among States, either directly or through the IAEA or other international organizations by:

- Making known designated point of contacts for notification, assistance & cooperation;
- Providing timely information to States concerned about events or credible threats;
- Providing timely response to requests for assistance (recovery, technical assistance, including nuclear forensics or mutual legal assistance);
- Cooperating and exchanging of experience & information
- Ensuring protection of exchanged sensitive information;

Essential Elements of a Nuclear Security Regime

7. Identification & assessment of nuclear security threats

A nuclear security regime ensures that:

- nuclear threats are identified and assessed regardless of whether the targets of internal nuclear security threats are within or outside the jurisdiction of the State;
- State's assessments of nuclear security threats *are kept up-to-date and are used in implementing the State's nuclear security regime;*

Essential Elements of a Nuclear Security Regime

8. Identification & assessment of **targets & potential consequences**

A nuclear security regime ensures that:

- targets are identified and assessed to determine if they require protection from nuclear threats;
- assessment is based on potential consequences should the targets be compromised;
- an up-to-date assessment of such targets is maintained;

Essential Elements of a Nuclear Security Regime

9. Use of Risk-Informed Approaches

based on *graded approach** and *defense-in-depth***, taking into account:

- State's *current assessment* of the *nuclear security threats*;
- *Relative attractiveness* of identified *targets to threats*
- *Characteristics* of the *material, facilities and activities*;
- Potential harmful *consequences* from criminal acts involving or directed at *nuclear material, other radioactive material, associated facilities, associated activities*;

* The application of nuclear security measures proportional to the potential consequences of such acts.

** The combination of successive layers of systems & measures for the protection of targets from nuclear security threats.

Essential Elements of a Nuclear Security Regime

10. Detection of *Nuclear Security Events*

A nuclear security regime ensures that nuclear security systems and measures are in place to:

- *detect and assess nuclear security events;*
- *notify the relevant competent authorities for initiating appropriate response actions:*
 - at facilities;
 - at major public events or strategic locations;
 - in searches for, recoveries of, or discoveries of such material that is missing or lost or otherwise out of regulatory control;
 - within the State's territory or on board its ships or aircraft and at its international borders;

Essential Elements of a Nuclear Security Regime

11. Planning for, Preparedness for, and Response to a *Nuclear Security Event*

A nuclear security regime ensures that *competent authorities are prepared to respond, at local, national & international levels to events by:*

- *developing arrangements and response plans to ensure:*
 - rapid mobilization of resources to an event;
 - coordination and cooperation during response;
 - use of relevant international assistance and response systems;
 - investigation of any *nuclear security event* and prosecution/extradition of alleged offenders,
- *exercising, testing and evaluating the plans for effectiveness:*
 - to mitigate and minimize harmful consequences from *nuclear security events*,
 - to locate, recover, and secure *nuclear material and other radioactive material* that is out of *regulatory control*;

Essential Elements of a Nuclear Security Regime

12. Sustaining a *Nuclear Security Regime*

A nuclear security regime ensures that each organization with nuclear security responsibilities contributes to the sustainability of the *regime* by:

- maintaining integrated management systems and quality management systems;
- demonstrating leadership in nuclear security matters
- maintaining a robust nuclear security culture;
- allocating sufficient human, financial and technical resources to carry out nuclear security responsibilities,
- conducting maintenance, training and evaluation to ensure effectiveness of the nuclear security systems;
- using best practices and lessons learned from experience;
- minimizing insiders threats;
- identifying and addressing issues that may affect capacity to provide adequate nuclear security at all times.

Thank You!

