



UNDERSTAND THREATS

By

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Threat **Definition(s)**

A person or group of persons with motivation, intention and capability to commit criminal or intentional unauthorized acts involving or directed at nuclear material, other radioactive material, associated facilities or associated activities or other acts determined by the State to have an adverse impact on nuclear security. [NSS 10]



Threat Definition(s)

The Code of Conduct on the Safety and Security of Radioactive Sources states:

“Every State should define its domestic threat, and assess its vulnerability with respect to this threat for the variety of sources used within its territory, based on the potential for loss of control and malicious acts involving one or more radioactive sources.”



Important questions in the nuclear security

1. What we should protect? (What are the assets to protect against theft and sabotage?)
2. Against what we must protect them ? (What is the threat ?)



Why sources are attractive for adversaries ?

- Materials Easily available
- Relatively unsophisticated technology
- Minimal security in many cases



RADIOACTIVE SOURCES CAN BE TARGETED





Cobalt60 irradiator



Industrial radiography cameras



Radiotherapy



Abandoned Sources ORPHAN



WHAT ARE THE SERIOUS EVENTS THE MOST PROBABLE?

- Sabotage
- stole and dispersion - for example a Radiological Dispersion Device (DDR)



THREATS TYPES

Insider and outsider threats
including:

- Cyber threats
- Terrorism
- Espionage
- Subversion and/or protest
- Crime
- Global, regional and domestic threats
- Transnational and sub-national adversaries



We have just defined the threat and the different types of threats.

But to face it, it is necessary to proceed to its assessment



Threat Assessment - DEFINITION

This process needs to begin with a national threat assessment, which is an analysis that documents — at a national level — the credible motivations, intentions and capabilities of potential adversaries that could cause harm through the sabotage of a facility or the unauthorized removal of a radioactive source for malicious purposes. (NSS no. 11)



Threat Assessment - PROCESS

An evaluation of the threats, usually including intelligence assessments, which describe the motivation, intentions, and capabilities of these threats to commit malicious acts (NSS 10)

It should be reviewed and updated regularly

If not involved in the assessment, the regulator should be informed of the results for use in establishing its regulatory programs for the security of radioactive sources



Threat Assessment - PROCESS

- **Motivation**

- Ideological, personal, economic, psychotic,

- **Intention**

- *Unauthorized removal or sabotage* or any other

- **Capabilities**

- Group size

- Skills

- Weapons

- Funding

- Explosives

- Collusion with insider

- Tools

- Support from (resources)

- Transportation



SUMMARY

Radioactive sources are potentially attractive targets for the adversaries ("What should I protect?").

Adversaries may try to sabotage or steal a source to make Radiological Dispersion Device (DDR).

A threat assessment is a way to know the potential adversaries.

Threat assessment should be used to establish regulations for the security of radioactive sources (Against what should the licensee / operator protect himself?).



Thank you for your attention

