

Case Study on Information Sharing

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Organizations involved in the nuclear field (I)

- **National Commission for Nuclear Activities Control (CNCAN)**
- **National Nuclear Company SC “Nuclearelectrica” SA**
- **Ministry for Research and Innovation: National Institute for R&D in Physics and Nuclear Engineering-Horia Hulubei**
- **Autonomous Company for Nuclear Energy Technologies (RATEN) Nuclear Research Institute-Pitesti, CITON, Bucuresti**
- **Nuclear Agency and Radioactive Waste**
- **National Agency for Export Import Control for Strategic Products**

Competent authorities

- ❖ CNCAN maintains regulatory control over:
 - ❖ Power reactors
 - ❖ Research reactors
 - ❖ Nuclear research and test facilities
 - ❖ Uranium mines and mills
 - ❖ Uranium refining and conversion facilities
 - ❖ Fuel fabrication facilities
 - ❖ Heavy water production facilities
 - ❖ Radioactive waste management facilities
 - ❖ Prescribed substances and items, and
 - ❖ Radioisotopes & ionising radiation applications

INSTITUTIONS INVOLVED IN NUCLEAR SECURITY (1)

CNCAN – National Competent Authority

Ministry of Foreign Affairs – Import/export control through **ANCEX**

Ministry of Defence – protection of national territory covering States responsibilities for the protection of nuclear installations

MINISTRY OF FINANCE – National Customs Authority checks and monitors the network detection system for goods

MINISTRY OF HEALTH / radiation hygiene responsibility

MINISTRY OF INTERIOR

- **CBRN** unit responsible with combating the illicit trafficking
- **Gendarmerie**, responsible with physical protection of nuclear installation and transport of nuclear and radiological materials

INSTITUTIONS INVOLVED IN NUCLEAR SECURITY (2)

- **DGIPI** - General Directorate for Information and Internal Protection – provides INTEL
- **Special Aviation Unit** / air support in a case of emergency
- **Border Police** - monitoring the network detection system on borders – Second Line of Defense operator
- **General Inspectorate for Emergency Situations** coordinates the off-site response activities in a case of nuclear/radiological emergency

Romanian Intelligence Service provides Intel & antiterrorism brigade

Romanian Foreign Intelligence Service provides foreign Intel

Major Nuclear installations (1)

- Cernavoda NPP
 - NPP Spent Fuel Pool
 - NPP Interim Spent Fuel Storage
- TRIGA Research Reactor
- VVR-S Research Reactor (in decommissioning)
- Nuclear Fuel Plant
- Nuclear Fuel Powder Plant
- Research Reactors Interim Spent Fuel Storage

Major Nuclear installations (2)

- Radioactive Waste Treatment Facilities
- Hot Cells
- Tritium Removal Facility
 - Pilot Facility
 - Full Scale Facility
- National Radioactive Waste Repository
- Heavy Water Storage

AUTHORIZATION HOLDER OBLIGATIONS

MUST Ensure:

- nuclear safety and security
- protection against ionizing radiation
- safeguards system for accountancy and control of nuclear materials
- physical protection system
- his own emergency plans in case of nuclear accident

AUTHORIZATION HOLDER OBLIGATIONS

MUST Ensure:

- quality assurance system
- his own system of requirements and procedures
- Must report any violation of the technical conditions and limits provided in the authorization, any violation regarding the physical protection of nuclear materials and nuclear installations.

STATE OBLIGATIONS

- Ensuring nuclear security.
- Protection of information.
- Establishing legal framework.
- Distribution and coordination of responsibilities.
- Interaction.

ORGANIZATION OBLIGATIONS

- Nuclear security policy.
- Management structures.
- Resources.
- Review and improvement.

National Structure for Response to Radiological or Nuclear Incidents

Countering the illicit trafficking in nuclear or other radioactive material is a large phenomenon and requires the involvement of several institutions, **Romanian Border Police** playing the most important role in detecting and identifying the nuclear and radioactive materials at the state border.

Competent authorities in event of nuclear incidents:

- Romanian Border Police
- National Commission for Nuclear Activities Control
- Romanian Intelligence Service
- The General Inspectorate of Romanian Police
- National Customs
- The General Inspectorate for Emergency Situations

NATIONAL SYSTEM FOR PREVENTING AND COUNTERING TERRORISM

The National System of Terrorist Alert (**Sistemul Național de Alertă Teroristă**) is the terrorist barometer in Romania.

SNA is a system that, based on existing intelligence from SRI, [SIE](#) and possibly other agencies, ranks the risk of a terrorist attack on Romanian territory. The system is color based (green-low to red-critical). The color can be changed (and therefore security measures increased) at the propose of the executive of SRI and with the approve of the National Supreme Deffense Council (CSAT).

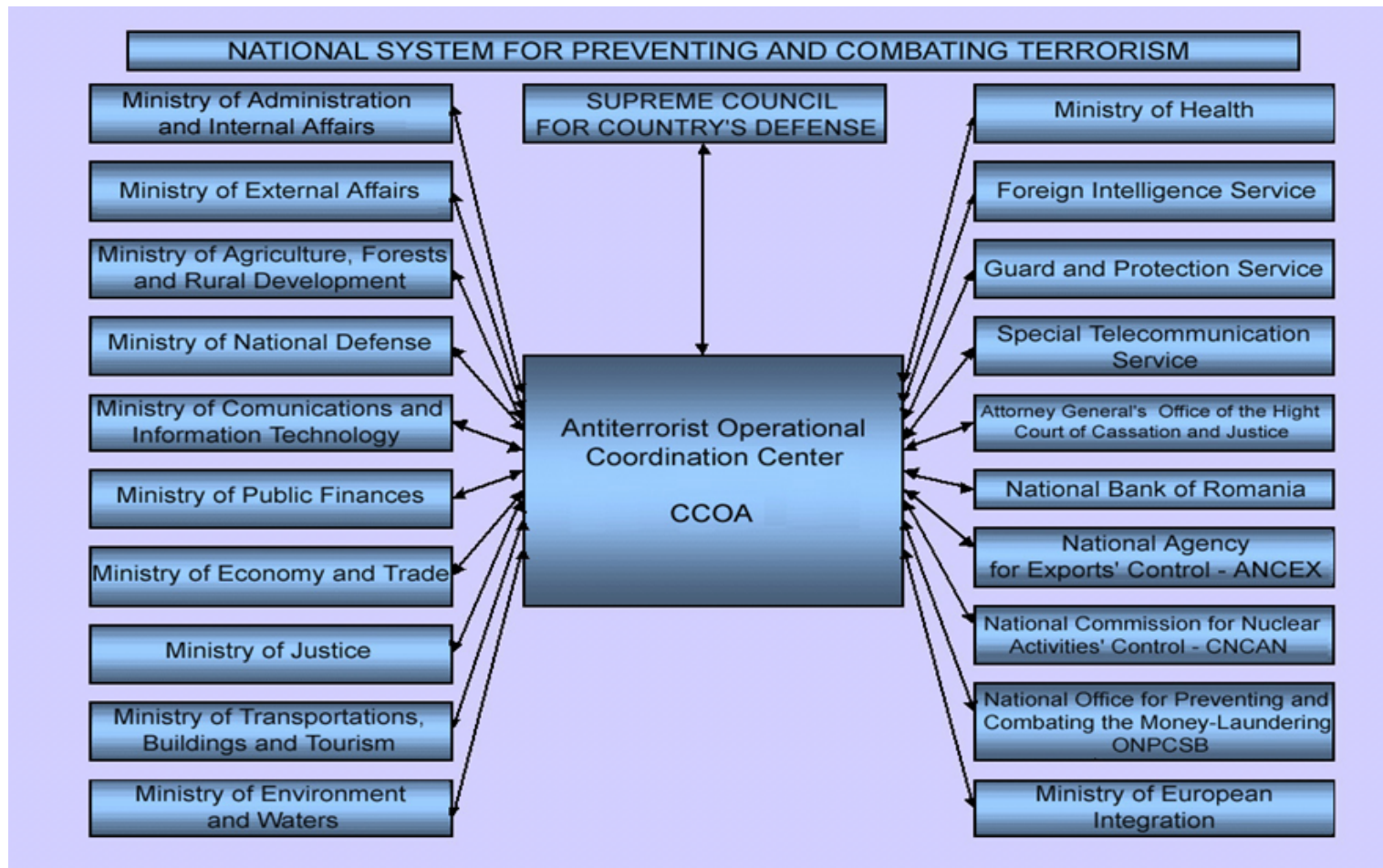
Currently, SNA is colored blue-cautious; this means that the intelligence on hand suggests there is a relatively low risk of a terrorist attack.

NATIONAL SYSTEM FOR PREVENTING AND COUNTERING TERRORISM

CNCAN is part of the National System for Preventing and Countering Terrorism

- Has signed a Protocol of cooperation with the Romanian Intelligence Service
- Sharing of data and information related threats against nuclear installation
- Input to the DBT working group
- Training of personnel
- Organize Annual exercises

NATIONAL SYSTEM FOR PREVENTING AND COUNTERING TERRORISM



Manual for Response to Illicit Trafficking of Nuclear Material-CNCAN

- Radiation protection;
- Health and Safety;
- Criminal investigation;
- Laboratory analyses
- Nuclear material safeguards;
- Transports with authorized vehicles
- Storage on authorized places

Technical reachback

- IFIN-HH receive by phone and by fax from CNCAN request to ensure intervention, receive the primary information regarding the nuclear security event;
- Has the vehicles equiped with radiological instrumentation characterization (portable gamma spectrometer, portable dose meter, contamination measurements, protective equipment for CBRN, tools for sampling, tools for isolate area, CBRN detection instrumentation, drums and tools to recovery, transportation and storage radioactive materials in authorized spaces

Technical reachback

- IFIN-HH in authorized and accredited laboratory issued the bulletin of radiological characterization on sample collected. This bulletin is recognized at EU level. Then elaborate the technical report and sent to CNCAN and CNCAN distribute these information at national level.
- The sample are stored in authorized spaces until the procedures will be finalized. Based on type of the radiological/nuclear material will be decided to treat, or conditioned, or store, or disposal, or recorded in safeguards system.

Scientific reachback

- IFIN-HH participated in international intercomparison session with nuclear materials with other laboratories from many countries (CMX 5), April 2017 will the international technical meeting organized by IFIN-HH at Bucharest to analyze the results obtained, sharing the experience and knowledge;
- If as primary measurements use the gamma spectrometer and portable radiological devices, in IFIN-HH use for characterization nuclear material:
 - Tandetron 1 and 3 MV IBA, AMS, ICP MS, XRF, XRD, HPLC, SEM
 - International cooperation: the results sent to CNCAN and this authority exchange the information with other Nuclear Forensics laboratory that have the library in the order to identify the potential initial place of nuclear material (ex: pellets for fresh nuclear fuel)
 - In the next 2 years in IFIN-HH will be operational the first Romanian nuclear forensics laboratory.

Thank you for your attention