



Autoridad Regulatoria Nuclear  
PRESIDENCIA DE LA NACIÓN

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# The Role of the Nuclear Regulatory Authority of Argentina in the Implementation of the Convention on the Physical Protection of Nuclear Material (CPPNM) and its Amendment

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- Adoption of the CPPNM and its Amendment in Argentina
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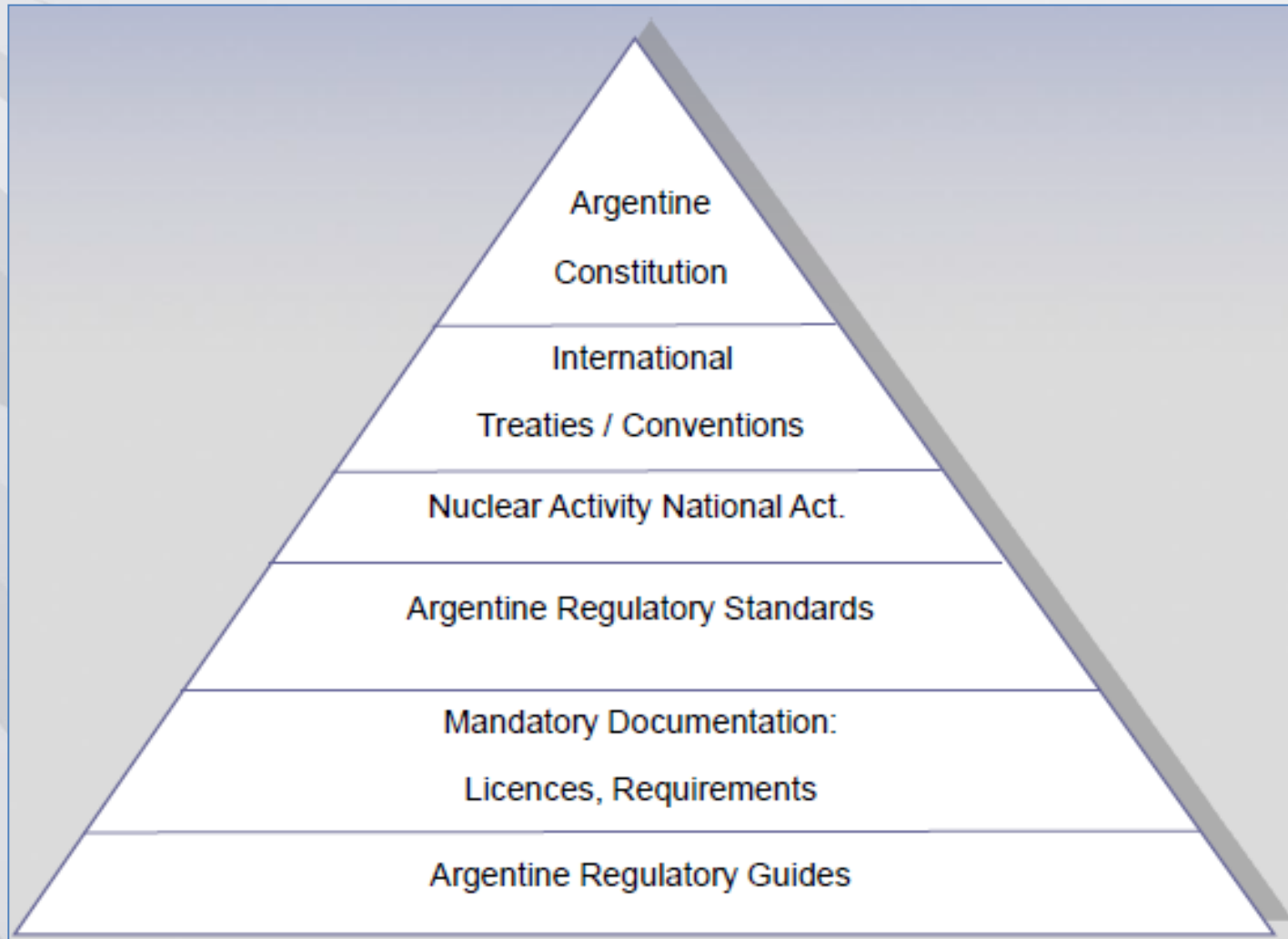


## *Adoption of the CPPNM and its Amendment in Argentina*

- ✓ Only legally binding international instrument in PP of NM area.
- CPPNM:
  - Prevention, detection and punishment of offences related to the international transport of NM.
- CPPNM/A:
  - PP of NM in use, storage and transport.
  - Cooperation among States.
- ✓ Argentina adopted the CPPNM by law in 1988.
- ✓ Argentina participated actively in the 2005 Conference and adopted the CPPNM/A in 2010.



## Adoption of the CPPNM and its Amendment in Argentina (cont'd) *Legal and Regulatory Framework*



# Adoption of the CPPNM and its Amendment in Argentina (cont'd)

## Preexisting legal instruments

**Article 7:** punishable offences (use without lawful authority, theft, sabotage, smuggling, illicit trafficking, etc.).

- **Penal Code** (1922): establishes penalties for crimes against public safety, public health, public order and security of the Nation.
- **National Law** "Penalties for those who attempt against the Security of the Nation" (1950): considers the sabotage as an action of betrayal to the Nation.
- **Customs Code** (2005): defines smuggling as a customs offence and determines a more severe penalty in the case of nuclear materials.





# Nuclear Regulatory Authority (ARN)

## Notes

- Independent body reporting directly to the Presidency of Argentina (National Nuclear Activity Act: Law 24.804),
- Autarchic entity with federal competence,
- National governmental organization in charge of the regulation of nuclear activities in Argentina,
- Competence on radiation and nuclear safety, safeguards and physical protection,
- Objective: to develop and apply a regulatory regime for all nuclear activities in the country.



# Nuclear Regulatory Authority (cont'd)

## Functions

- To issue mandatory regulatory standards,
- To grant licenses and permits to facilities and operators,
- To control the compliance of requirements stated in standards and license condition and enforcing the compliance by gradual means,
- To apply of sanctions corresponding to their violation.

### **Physical Protection:**

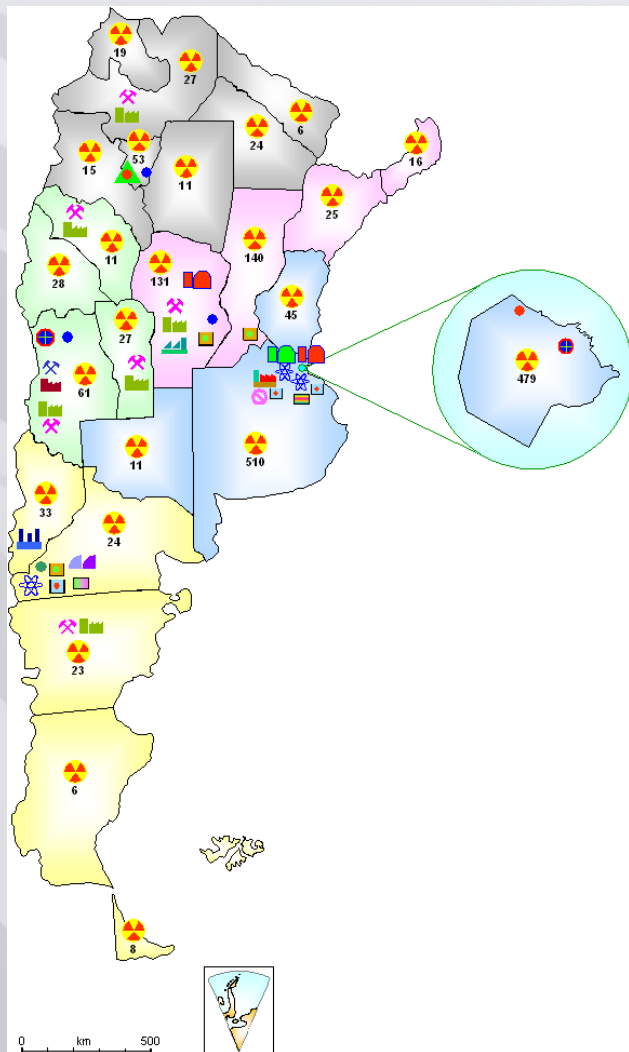
- ARN has the authority to require a complete system of physical protection for nuclear materials and facilities.





# GEOGRAPHICAL DISTRIBUTION OF FACILITIES

## Installations under regulatory control in 2016



-  A.R.N. BUENOS AIRES  (HEADQUARTERS)
-  CONTROLLED RADIOISOTOPE CENTERS
-  HEAVY ION ACCELERATORS TANDAR- CONSTITUYENTES A. C.
-  LINEAL ACCELERATOR LINAC - BARILOCHE ATOMIC CENTER
-  ATOMIC CENTERS ( CONSTITUYENTES - EZEIZA - BARILOCHE )
-  MINING FACILITIES - MENDOZA
-  MINING FACILITIES CLOSED
-  NUCLEAR POWER PLANTS UNDER CONSTRUCTION (ATUCHA II)
-  OPERATING NUCLEAR POWER PLANTS (ATUCHA I – EMBALSE)
-  C.N.E.A RADIOACTIVE WASTE MANAGEMENT FACILITY
-  RESEARCH AND PRODUCTION REACTORS
-  RESEARCH REACTORS AND CRITICAL ASSEMBLIES
-  URANIUM DIOXIDE PRODUCTION PLANT - CORDOBA
-  NUCLEAR MEDICINE SCHOOL - MENDOZA
-  URANIUM PRODUCTION PLANT - MENDOZA
-  URANIUM PRODUCTION PLANT
-  URANIUM ENRICHMENT PLANT - RIO NEGRO
-  NUCLEAR FUEL PLANT - C.A.EZEIZA
-  HEAVY WATER PRODUCTION PLANT - NEUQUEN
-  SEWER MUD IRRADIATION PLANT - TUCUMAN

**TOTAL 1255**



# Standard for the Physical Protection of Nuclear Material and Installations

- **Performance basis:** non-prescriptive in nature.
- **Objective:** to establish the general criteria for the physical protection of nuclear materials and installations.
- **Scope:** applicable to protected materials, within relevant installations, in storage and during transport.
- **Sections:** objective and scope, definitions of terms, criteria, levels of physical protection and responsibilities.
- **PPS:** set of people and means available with the capacity to prevent, delay or avoid malevolent acts. It also establishes desirable characteristics.
- **Focus:** prevention and deterrence through the use of passive measures.



## *Levels of Physical Protection*

### **Criteria:**

- 1) Type, characteristics, quantity and accessibility of the protected material,
  - 2) Possibility of intentionally inducing accidents with severe radiological consequences.
- PPS designed for each installation according to its characteristics.
  - Identifying structures, systems and components essential to the protection function.
  - PPS compatible with radiological and nuclear safety systems and emergency plans.
  - Vital areas separated and delimited to restrict access.
  - Level of PP proportional to the doses that the most exposed member of the public could receive.



## *Physical Protection of NM during Transport*

**Levels / procedures / recommendations** for the PF of NM during inter-national transport determined by the **categorization of NM** provided by CPPNM in Annex II .

### **Measures to optimize PP of NM during transport:**

- Minimization of the total time of transport,
- Physical protection according to the material category,
- Confidentiality of information,
- Cross-checks on reliability of staff,
- Avoidance of regular roads,
- Use of escort vehicles,
- Permanent communication and satellite tracking.



## *Responsibility*

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- **Responsibility** for physical protection lies upon the **holder** of the license/permission/authorization granted by the ARN.

### **Responsible Entity** must:

- Ensure physical protection,
- Designate a manager for PP for each installation and/or transport,
- Guarantee the confidentiality of the information,
- Submit technical documentation,
- Perform audits to verify the correct implementation of PPS,
- Establish and maintain a communication system with response forces.



## *Importance of the CPPNM/A*

- IAEA's key role → Strengthen global nuclear security
- Efforts → Universalization of CPPNM/A
- Promotion → Regional adherence
- RWS 2012, Argentina → Facilitating Adherence & Implementation CPPNM/A





## Conclusions

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### Challenges:

- ✓ Raising awareness of the importance of the CPPNM and its Amendment.
- ✓ Coordination at the national level among institutions.
- ✓ Offences incorporated to Article 7 → national legislations review.
- ✓ Updating regulations and procedures.
- ✓ Strengthening bonds at the regional level.
- ✓ International communication & cooperation.





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