



Autoridad Regulatoria Nuclear
PRESIDENCIA DE LA NACIÓN

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The Role of the Security Department during a Nuclear Safety Accident

Responding to Nuclear Accidents – A National Perspective

CHRISTIAN ELECHOSA

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Nuclear Regulatory Authority (ARN)

It is an autarchic governmental entity within the jurisdiction of the General Secretariat of the Presidency of the Nation, whose mission and responsibilities are established through the National Law on Nuclear Activity (No. 24804), published in the Official Gazette on April 25, 1997.



Nuclear Regulatory Authority (ARN)

The objectives fixed by the Nuclear Law imply that the ARN must exercise its regulatory powers over all the nuclear / radioactive activities of the country and, according to each case, the **competences of the ARN** will be extended to the following regulatory areas:

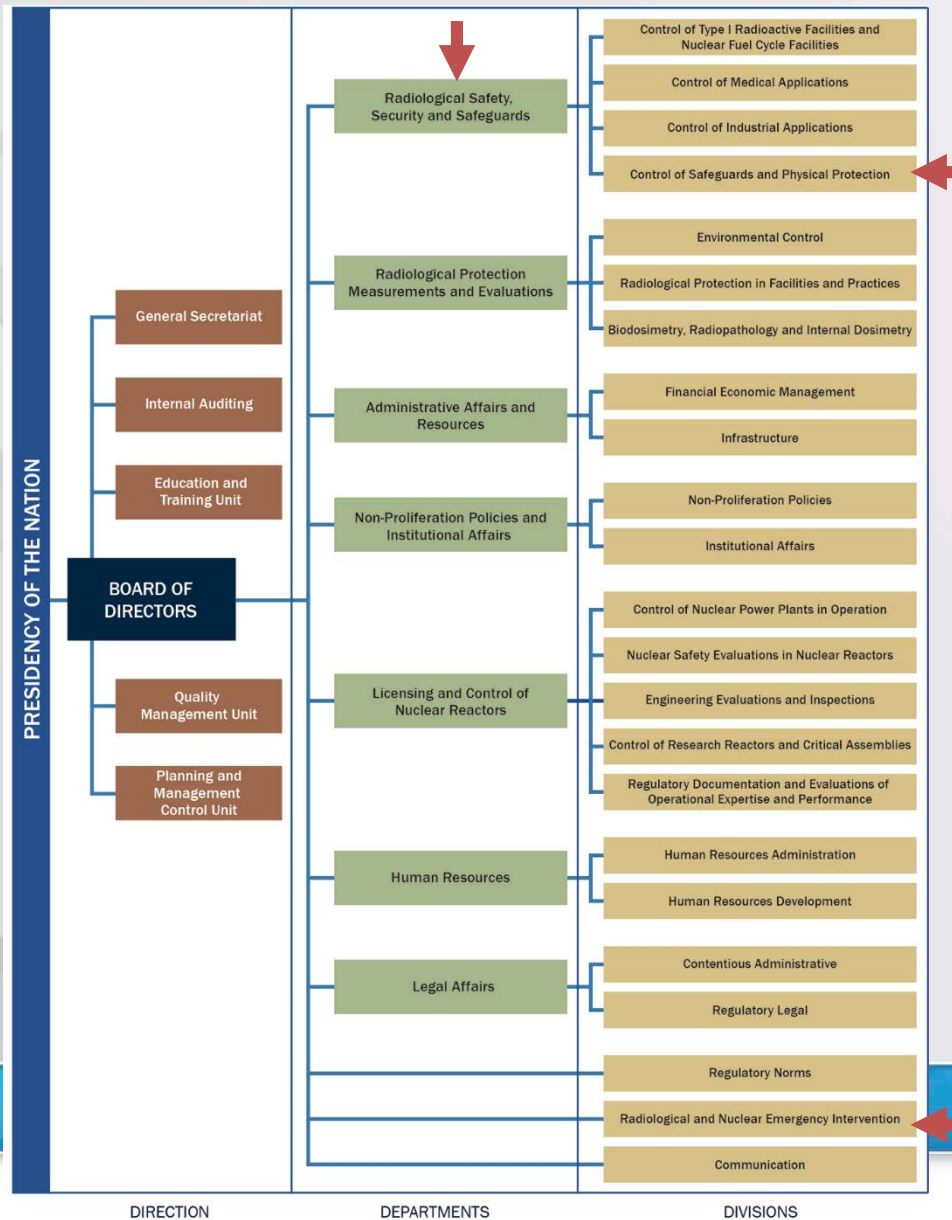
- Radiological Safety
- Nuclear Safety
- Safeguards and Non-proliferation
- Physical Protection**



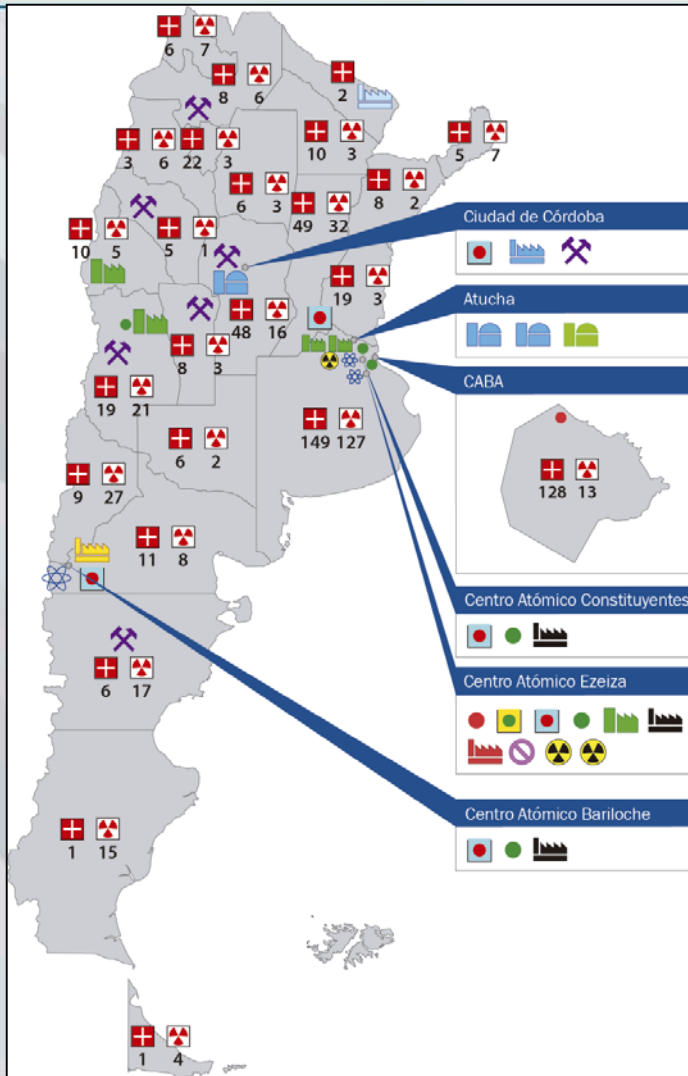
- Responsible of preparedness and response in case of nuclear and/or radiological (or security related) emergency**



ARN - Administrative Organization



Distribution of Facilities in Argentina



Principales instalaciones bajo control regulatorio 2017

- Sede Central ARN (CABA)
Laboratorios ARN y Centro de Capacitación Regional (Centro Atómico Ezeiza)
- ⚙️ Centros Atómicos (Bariloche - Constituyentes - Ezeiza)
- 🏭 Centrales Nucleares en Operación (CNA I y CNA II) y en Extensión de Vida (CNE)
- 🏗️ Reactor Multipropósito RA-10 en construcción (Centro Atómico Ezeiza)
- 🏗️ Reactor Prototipo CAREM 25 en construcción (Lima, Pcia. de Bs. As.)
- 🇲🇵 Reactores de Investigación y Conjuntos Críticos
- Aceleradores Lineales (Centro Atómico Bariloche, Pcia. de Buenos Aires, Mendoza)
- ☢️ Plantas de Producción de Radioisótopos
- 🏭 Plantas de Irradiación
- 🏭 Instalaciones del Ciclo de Combustible
 - 🏗️ Complejo Tecnológico Pilcaniyeu (Pcia. de Río Negro)
 - 🏭 Fábrica de Combustibles Nucleares (CONUAR - Centro Atómico Ezeiza)
 - 🏭 Complejo Fabril Córdoba (CNEA - DIOXITEK, Córdoba)
 - 🏗️ Planta de Producción de Dióxido de Uranio en construcción (DIOXITEK, Formosa)
- 🚫 Área de Gestión de Residuos Radiactivos de CNEA (Centro Atómico Ezeiza)
- ⚒️ Complejos Minero Fabriles fuera de servicio
- ⊕ Centros de Medicina Nuclear, Radioinmunoanálisis y Teleterapia (539)
- ☢️ Instalaciones de Gammagrafía y Aplicaciones Industriales (331)
- ☢️ Otras instalaciones para usos menores (no incluidas en el mapa) (254)

Total de instalaciones **1.205**

The ARN licenses facilities and associated personnel



Classification of Facilities in Argentina

ARN Basic Standard (AR 10.1.1) establishes 3 types of facilities/practices, taking into account a graded approach in accordance with the associated radiation risk:

- *Type I: Nuclear Power Plants, Research Reactors, Production Facilities, Industrial Irradiators, Radioactive Waste and Spent Fuel Management Facilities, etc.*
- *Type II: Industrial Radiography, Well Logging, Telecobaltotherapy, Brachithery, Nuclear Medicine, etc.*
- *Type III: Minor Facilities, Research, Training.*



Licensing Process

- *Type I: construction, commissioning, operation, decommissioning licences.*

There is a Prime Responsible for safety, security and safeguards. In addition, could be a contact for security.

Mandatory documentation: safety report, emergency response plan, security report, management system, etc.

- *Type II: operation licence.*

There is a Responsible for radiological safety.

Facilities/practices with Category I-II sealed sources shall designate a Responsible for security.

Mandatory documentation: safety report, emergency procedure, management system, security report (Category I-II sealed sources).

- *Type III: registration.*



ARN Structure for Response – SIER/SIEN

In a event of radiological (or security related) emergencies in facilities, transport or nuclear power plants, the ARN will take the necessary steps through its own Radiological and Nuclear Emergencies Intervention System (SIER/SIEN).

The SIER/SIEN is conformed by Radiological and Nuclear Emergency Intervention Division (**SIERN**) staff, as well as by personnel of other ARN' departments.

- Staff in passive duty 24/7;
- It is activated about 5 to 10 times per year.

SISTEMA DE INTERVENCIÓN EN EMERGENCIAS RADIOLÓGICAS Y NUCLEARES
Disponible las 24 hs, los 365 días del año



ATENCIÓN

Solo para reportar **emergencias** con material radiactivo o nuclear, involucrado en :

- Instalaciones reguladas por la ARN
- Transporte de material radiactivo
- Vía pública

TELÉFONOS	
JEFE DE TURNO	011 15 4471 8686
ALTERNO	011 15 4470 3839
COORDINADOR	011 15 4421 4581

El teléfono de línea **011 4519 0094** está disponible, sólo de lunes a viernes de 9 a 17 hs.

Esté preparado para brindar la siguiente información, de ser posible:

- Nombre y teléfono de contacto
- Fecha, hora y lugar del evento
- Material involucrado
- ¿Se ha notificado a alguna otra persona u organización?
- ¿Qué ha sucedido y qué está sucediendo?

Para mayor información, puede enviar su email a arn@arn.gov.ar

www.arn.gov.ar



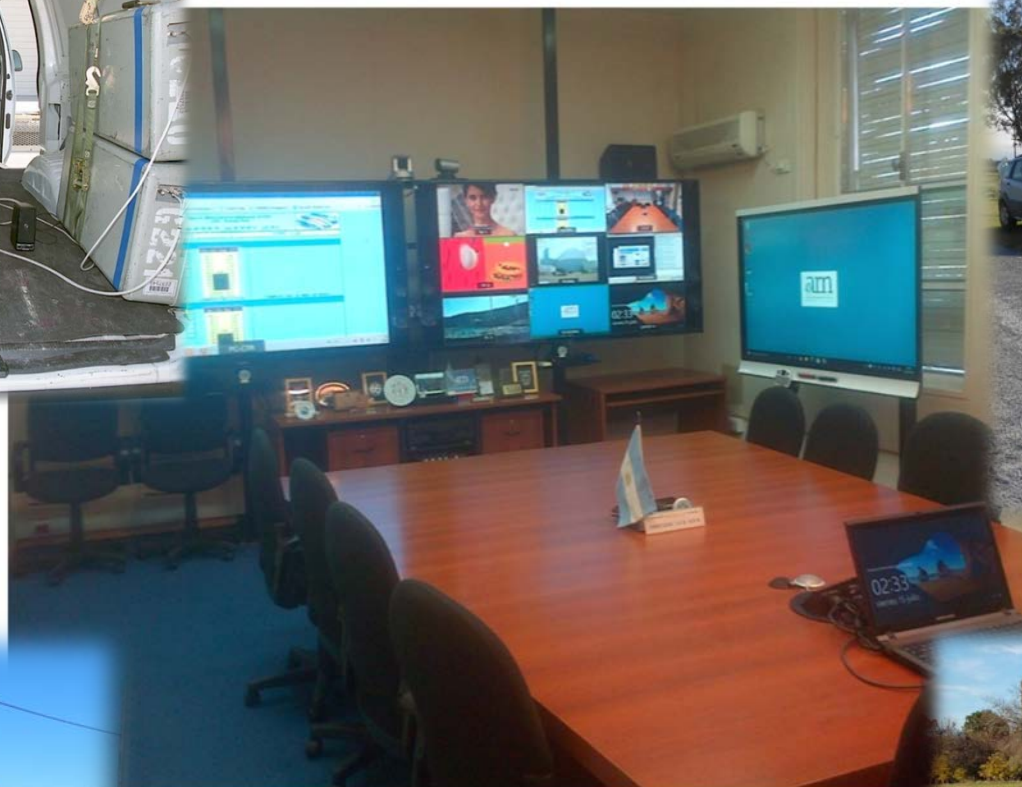
versión: abril de 2017

SIERN Division Activities

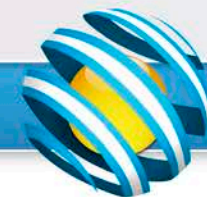
- Advise personnel in charge of facilities/transport in the event of a radiological (or security related) emergency.
- Advise public authorities involved in the control of radiological emergencies, or in case of a security event.
- Intervene in case of emergencies which may arise in facilities and practices where the radiological accident cannot be adequately controlled by those responsible or that may affect the members of the public, as well as in the event of radiological emergencies in public areas.
- Medical advice to the Health System about the treatment in patients who are exposed to radiation.
- Take part in exercises, drills and training with Argentine Army (QBN) and the Special Risks Brigade (BRE-Hazmat) of the Argentine Federal Police (PFA).
- Provide training for first responders in all the country.



SIERN Division Activities



- ARN is part of the **National System of Integral Management of Risk and Civil Protection (SINAGIR)**, according to Law 27.287/2016.
- In instance of a major radiological emergency or nuclear accident, ARN coordinates the response and reports the status to local, national and regional response organizations, and is the National Warning Point with the International Atomic Energy Agency (IAEA).
- ARN has specialists to perform radiological assessment, emergency monitoring and medical advice to patients potentially exposed to ionizing radiation.
- In case of nuclear emergency, an official designated by ARN, will be the Operative Nuclear Emergency Chief (JOEN). Civil organizations, law enforcements and military institutions have to report to JOEN to comply with the provisions of Act No. 24.804/97 (National Law of Nuclear Activity) and Decree No. 1390/98.



Organizations involved in radiological/security emergency response

- Coast Guard (PNA);
- National Gendarmerie (GNA) – Responsible for atomic centers security;
- Airport Security Police (PSA);
- Federal Police (PFA) - Special Risks Brigade/Hazmat - BRE;
- Army - QBNR Brigade;
- Fire Brigades;
- Provincial Police;
- Civil Defense (DC);
- Emergency medical services.



Organizations involved in radiological/security emergency response



QBNR – (EA)



BRE (Hazmat) – PFA



Coast Guard (PNA)



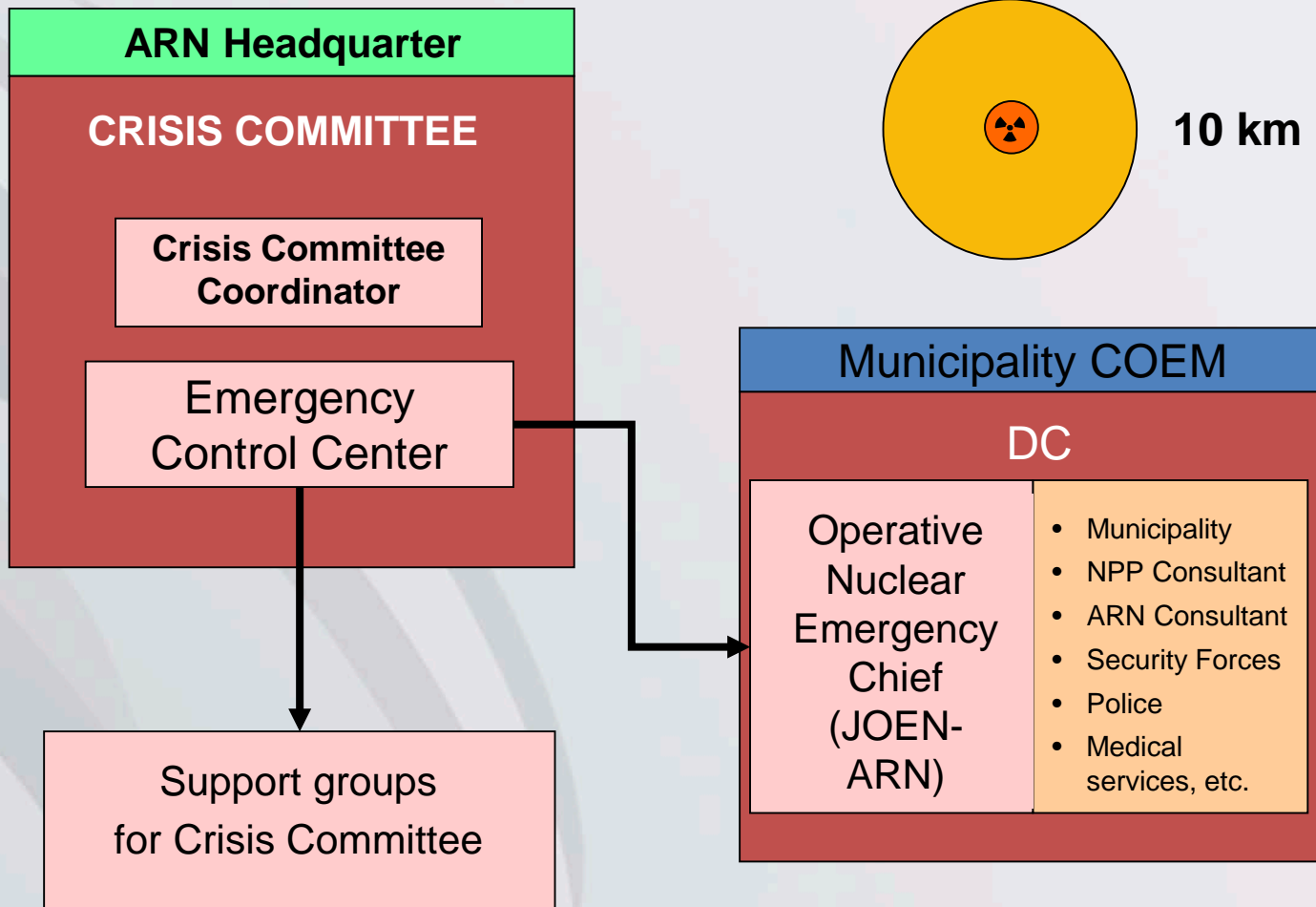
Air Force (FAA)



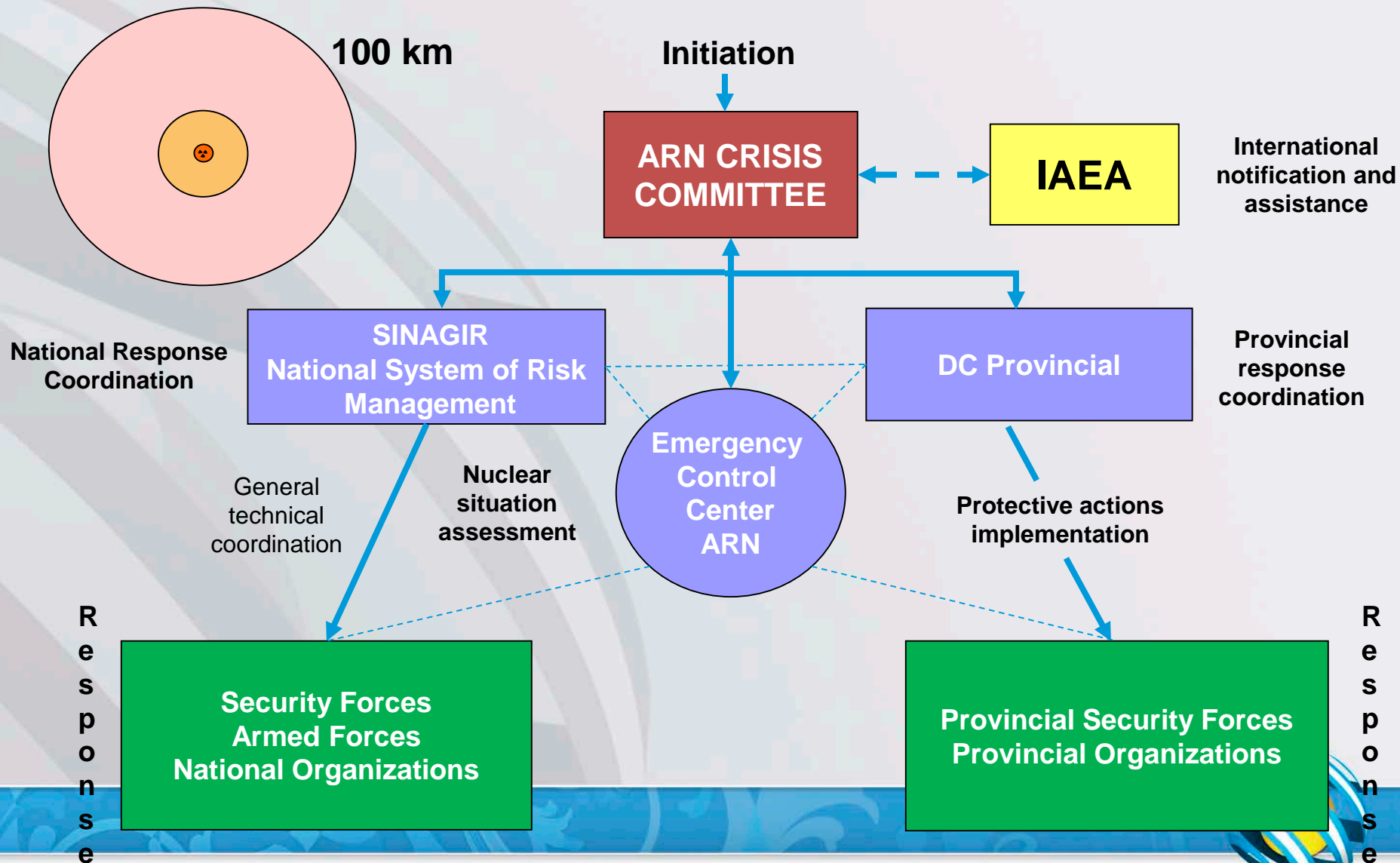
Organizations involved in radiological/security emergency response



Organization for local intervention



Functional diagram for the National/Provincial intervention



Functional diagram for the National/Provincial intervention

- In the framework of the National System of Integral Management of Risk and Civil Protection (SINAGIR), the security forces are part of the response.
- The role of the Operator Security Department shall be clearly established in the Emergency Response Plan, reporting to the Prime Responsible, and then, to ARN, reporting the status to local, national and regional response organizations and to **SINAGIR**, which will coordinate the security forces and could give instructions to the Operator Security Department.
- For nuclear power plants, one exercise per year is mandatory (internal / external, involving the different organizations). During the last 2 years (since **SINAGIR** creation), the exercises have been useful for improving the national coordination mechanism, in the framework of the integration of the emergency management system process.



Thanks for your attention
Nuclear Regulatory Authority



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