

# Joint Convention on the safety of spent fuel management and on the safety of radioactive waste management

## Report of the Republic of the Islamic Republic of Mauritania October 2017

### **SECTION A. Introduction**

The legislative and regulatory framework for the control of sources of radiation in Mauritania is set out in law No. 2010-009, January 20, 2010 relating to nuclear energy its Decree of application N ° 2012-170 July 12, 2012.

This Act was developed with the help of the IAEA in 2009. It envisages the creation of a regulatory body, the national authority for radiation protection, safety and nuclear security n (ARSN), and defines its functions and responsibilities.

This Act provides also all principles and mechanisms essential to a national regulatory infrastructure appropriate, according to the publication "Infrastructure legislative and Government nuclear safety, safety." "radiological, safety of radioactive waste and the safety of the transport" (collection of IAEA, number GS-R-1 safety standards) and the Code of conduct on the safety and security of radioactive sources.

Mauritania has expressed his political support:

- the code of conduct on the safety and security of radioactive sources
- additional guidance for the import and export of radioactive sources.

The points of contact were also were appointed.

Mauritania has acceded to the following conventions:

- Convention on early notification of a nuclear accident,
- Convention on assistance in the case of nuclear accident or radiological emergency,
- Joint Convention on the safety of spent fuel management and on the safety of radioactive waste management.
- Ratification of the Protocol of 2005 and the 1988 SUA convention.
- Convention on the Physical Protection of nuclear material and its amendment
- Convention on nuclear terrorism
- Vienna Convention on civil liability for nuclear damage,
- Treaty of non-proliferation,
- International Convention for the Suppression of the terrorist bomb attacks
- Protocol for the Suppression of unlawful acts against the safety of fixed platforms located on the continental shelf (1988 fixed platforms Protocol)

Now Mauritania has no fuel or fuel in use.

No installation processing, reprocessing, storage or storage of spent fuel is present in Mauritania. However sealed radioactive sources are used in the industry, the medical sector, research, agriculture, etc.

## **SECTION B. policies and practices**

There are no facilities in the cycle of nuclear fuel in Mauritania.

### **Safety and security of radioactive sources**

There is a specific section for the security of radioactive sources in the law 2010-009 (Chapter 11) and its implementing decree in accordance with the basis of the principles and objectives of the Code of conduct on the safety and security of radioactive sources and guide associate on import and export.

## **SECTION C. scope**

There are no facilities in the cycle of nuclear fuel in Mauritania.

Mauritania is signatory to the Treaty of non-proliferation of weapons nuclear safeguards as a result of this Treaty agreements.

## **SECTION D. inventories and lists**

The national regulatory body (ARSN) competent proceeds to the inventory complete and official of radioactive sources (orphan or not orphan) throughout the national territory.

This census and campaign accounting of radioactive sources, of users of ionizing radiation, facilities began in 2012 and she is being finalized. The web system RAIS is used; a temporary storage for the source site was built and physically protected.

## **SECTION E. legislative and regulatory framework**

Islamic Republic of Mauritania has a legislative framework for management of its obligations to this agreement. The legislative and regulatory framework in line with the international norms and standards is implemented by law No. 2010-009, January 20, 2010 relating to nuclear energy and its Decree of application No. N ° 2012-170 July 12 2012

- **Law No. 2010-009 January 20, 2010 relating to nuclear energy;**
- **Decree No. 2012-170 July 12, 2012 with application of certain provisions of the law n ° 2010-009 January 20, 2010, relative to nuclear;**
- **Decree No. 2010-082 from 18 March 2010 prescribing the Organization and functioning of the national authority of radiation safety and nuclear safety and its texts amending;**

## **The objectives of the Act:**

Allow the beneficial uses of nuclear energy;

-Ensure adequate protection of current and future generations from the harmful effects of ionizing radiation;

-Establish a system of regulatory control which seeks to ensure the safety and security of peaceful applications implementing sources of ionizing radiation, including through the establishment of a competent regulatory authority the application of the provisions of this law and the relevant international instruments.

-Provide for the implementation of the obligations of Mauritania under the Treaty on the non-proliferation of nuclear weapons (NPT) and any other international instrument in the areas of safety, security and non-proliferation of nuclear weapons to which Mauritania is a party.

The areas of application of the Act:

The law applies to all activities involving exposure to ionizing radiation, including the production, possession, use, import, export, transit, transport, storage, management of radiation sources ionizing or any other radioactive material identified by the regulatory authority.

The Act contains 61 articles in 17 chapters dealing with all aspects of the peaceful use of nuclear energy in accordance with the principles defined by the relevant conventions of the United Nations- and the safeguards agreements that Mauritania has ratified or signed.

Chapter 1 : Treaty of the General provisions

Chapter 2 : Bans

Chapter 3 : Definitions

Chapter 4 : Of the regulator

Chapter 5 : Permission

Chapter 6 : INSPECTION and COERCION.

Chapter 7 : The responsibility of the holder of the authorization.

Chapter 8 : Basic principles of PROTECTION against IONIZING radiation.

Chapter 9 : Protection of PATIENTS exposed to IONIZING radiation

Chapter 10 : Exploitation and treatment of radioactive ORES.

Chapter 11 : Safety and security of radioactive SOURCES.

Chapter 12 : Management of radioactive waste, the TRANSPORT of radioactive material and radiological emergency PLANS.

Chapter 13 : Physics of nuclear material protection

Chapter 14 : Guarantees

Chapter 15 : The control of exports and imports.

Chapter 16 : Penal provisions

Chapter 17 : Final and transitional provisions.

## **THE DECREE N ° 2012 BEARING APPLICATIONS OF CERTAIN PROVISIONS OF THE ACT.**

This Decree is intended to set the terms of the law n ° 2010-009 January 20, 2010, relative to nuclear energy. Set conditions for the exercise of activities within the peaceful use of nuclear energy and involving exposure to ionizing radiation including the use of electric generators of radiation ionizing, production, import, export, trade, processing, handling, use, possession, storage, storage, transport, transit and elimination of natural radioactive substances or artificial at least that they are excluded or exempted.

The Decree containing 150 articles and 4 annexes implements a certain number of rules in accordance with the Act to determine the responsibility of suppliers, employers and workers in the use of ionizing sources. The limits of doses that must be absorbed in case of exposure by workers, patients and the public in accordance with the international standards as well. IT enacts also measures which must be taken for the protection of workers, patients and the public exposed to radiation.

He also organizes the transport of radioactive substances and sources and lays this transport conditions and the management of radioactive waste according to their type and their category. Finally, this text provides procedures for inspections of facilities and the control of sources.

### **Regulator:**

As indicated above, the Act 2010-009 has created regulatory agency: the national authority for radiation protection, safety and nuclear security (ARSN).

The order 2010-082 establishing the Organization and functioning of the ARSN was published March 31, 2010. The ARSN is an actually independent administrative authority, under the supervision of the Prime Minister, with financial autonomy, a national Council and a president. It is the body responsible in Mauritania in radiation protection, nuclear safety and security.

The President of the authority is responsible for the technical, financial and administrative management of the ARSN (Article 13). He delivers the authorizations and implements the program of inspections and investigations.

The national Council has a role of administrative supervision and validation of the activities of the ARSN (Article 4)

## **SECTION F: OTHER GENERAL SAFETY AND SECURITY**

### **RESPONSIBILITY OF THE HOLDER OF THE AUTHORIZATION.**

The primary responsibility of radiation safety and nuclear security is the responsibility of the holder of the authorization. (**Article 17 of the law**)

The holder of the authorization ensures the safety and security activities, sources and facilities which it is responsible. For this purpose, it is required to:

- Develop and implement a radiation safety program tailored to the nature and extent of the risks associated with the activities under his responsibility. The authority will determine the detailed content of the radiation safety program;
- Notify the ARSN any radiological emergency or loss of control of any source of ionizing radiation;
- Identify specific areas of work and storage for radioactive material and to ensure that these areas are appropriate, identified, well ventilated and equipped with armor appropriate;
- Implement a program of radiological control and medical supervision of staff;
- Control of atmosphere of the workplace;
- Keep up to date an inventory of sources of ionizing radiation and other radioactive materials;
- Regularly provide appropriate training in radiation protection to all users of the sources of ionizing radiation;
- Designate a person responsible for the operational aspects of radiation safety as necessary;
- Notify the ARSN any modification or cessation of the activity, and safety and security measures that are necessary in this area.

The holder of an authorization issued by the ARSN must work to establish and maintain a culture of safety and nuclear security within institutions which it has responsibility. (**Article 18 and 19**)

#### **Human and financial resources.**

The State must put at the disposal of the ARSN human, material and financial resources necessary to fulfill its tasks as defined by this law the State must put the human, material and financial means at the disposal of the ARSN necessary to carry out such duties as defined by the law. (**Article 9 of the law**)

#### **Radiation protection**

Any practice likely to be originally from exposure to ionizing radiation must be justified by the net benefits in both social and economic. (**Section 20**)

Protection against ionizing radiation must be optimized so that the magnitude of individual doses, the number of people exposed, and the likelihood of exposure is kept at the lowest level that it is reasonably possible to achieve in light of the social and economic factors. (**Article 21**)

Exposure of persons to ionizing radiation must be strictly restricted so that the doses to the whole body or bodies are always lower than the limits set by the regulation. (Article **22**)

The requirements for protection against exposure to ionizing radiation, safety and security of radioactive sources, the transport of radioactive substances, the management of radioactive waste and sources are established by Decree. (Article **23**)

#### **SECTION G: SAFETY OF THE MANAGEMENT OF THE FUEL USE**

*This section is not applicable to Mauritania because there is no SF generated because there is no nuclear power and research reactor*

## **SECTION H: SAFETY OF RADIOACTIVE WASTE MANAGEMENT**

The ARSN shall establish and maintain a national register of radioactive sources. **Article 30**

The ARSN takes the necessary measures for the protection of the information contained in the register and ensure its security.

The ARSN establishes a categorization of sources in accordance with that established by IAEA for the definition of safety and security measures to be implemented. **Article 31**

The ARSN collaborates with institutions involved in the definition of the threat of reference and implementation of security measures there related **Article 32**

The ARSN coordinates the implementation of a national strategy of renewed control of orphan radioactive sources. **Article 33**

The ARSN proposes regulations and establishes procedures for the security of radioactive sources including for import, export and transit of radioactive sources based on international recommendations and in particular, the Code of conduct on the safety and security of radioactive sources. **Article 34**

This regulation and these procedures allow the ARSN to conduct an assessment of the information to ensure that the legal or physical person who is to receive the source has the capacity to ensure the safety and security.

### **MANAGEMENT OF RADIOACTIVE WASTE, THE TRANSPORT OF RADIOACTIVE MATERIAL AND RADIOLOGICAL EMERGENCY PLANS.**

No person shall engage in radioactive waste management without seeing obtained prior authorization from the ARSN in accordance with the provisions of Chapter 5 of this Act.

The terms and conditions of management of radioactive waste from their production to their evacuation including segregation, collection, characterization, packaging and processing are defined by Decree.

Import of radioactive waste is prohibited in the Islamic Republic, Mauritania. **Article 35**

The conditions and procedures for decommissioning of facilities containing radioactive sources or any other radioactive including the decommissioning plan material as well as the financial aspects that are connected are defined by regulation. **Article 36**

The transport of radioactive material is subject to the approval of the ARSN. **Article 37**

The transport of radioactive material is done in accordance with the international regulations such as the International Agency for Atomic Energy.

To deal with any accidental situation involving radioactive materials, a national radiological emergency plan is established by the Ministry of the Interior in cooperation with the ARSN and the other institutions concerned. This plan should be reviewed and updated on a regular basis. **Article 38**.

A national radiological emergency Committee has been set up.

A radiological emergency plan is required for all installations using sources of ionizing radiation

This plan must be approved by the ARSN prior to the issuance of the authorization.

As such, the holder of the authorization must put at the disposal of the staff in charge of the intervention, including the radiation safety officer the means of implementation of the radiological emergency plan. These means must be in good condition and subject to inspections of the ARSN.

#### **Article 39**

#### **Annexes**

- **Law N ° 2010-009 20 January 2010 relating to nuclear energy;**
- **Decree N ° 2012-170 July 12, 2012 on the implementation of certain provisions of the law n ° 2010-009, January 20, 2010, on-nuclear;**
- **Decree No. 2010-082 for March 18, 2010 prescribing the Organization and functioning of the national radiation protection authority, safety and nuclear safety and its texts amending;**