

REPUBLIC OF MOLDOVA
NATIONAL AGENCY ON REGULATION OF NUCLEAR
AND RADIOLOGICAL ACTIVITIES



THE FOURTH NATIONAL REPORT
ON IMPLEMENTATION
OF THE OBLIGATIONS UNDER THE
JOINT CONVENTION ON THE SAFETY OF SPENT FUEL
MANAGEMENT AND ON THE SAFETY OF RADIOACTIVE
WASTE MANAGEMENT

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SECTION A

A.1 INTRODUCTION

The Forth National Report describes the activities carried out by Republic of Moldova in relation to the safety of radioactive waste management (RW). The report has been prepared in accordance with the guidelines for the structure and form of national reports (INFCIRC/604/Rev.3, from May, 2014). This report, is prepared by the National Agency for Regulation of Nuclear and Radiological Activities (NARNRA), in order to comply with the provisions of the Convention.

After entering into the force in Republic of Moldova of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (further - Convention) on 24 May 2010, NARNRA has submitted three National Reports - the first National Report was submitted in 2012, the second in 2014 and last in 2017.

The origin of radioactive waste in the country remains to be the use of radioactive sources in medical applications, research, education, industry, orphan radioactive source or materials containing radioactive material and seized material from illicit trafficking of nuclear or radioactive substances. All disused radioactive sources are stored in the Radioactive Waste Storage Facility “Special Facilities 5101, 5102” (further - “Special Facilities 5101, 5102”) which serves for the whole country.

The national legislative and regulatory framework of nuclear and radiological activities (inclusive management of radioactive wastes) consists of the Law No. 132 of 8 June 2012 *on safe deployment of nuclear and radiological activities*, which includes the section on

national policy and principles for radioactive waste management in base of relevant IAEA safety standards, the Regulation *on radioactive waste management* approved by Government Decision No. 388 on 26 June 2009 and amended on 30 December 2013 by Government Decision No. 1079; the Regulation on the safe transport of radioactive materials, approved by Government Decision No. 434 of 16 July 2015 and the National Strategy on radioactive waste management for 2017-2026 period, with Action Plan approved by Law No. 68 on 13 April 2017 as were reported in the Third JC Report.

SECTION B: POLICIES AND PRACTICES

B.1 Spent fuel Management Policy – Not applicable – The Republic of Moldova has no any spent fuel.

B.2. Spent fuel Management Practices – Not applicable – The Republic of Moldova has no any spent fuel.

B.3. Radioactive Waste Management Policy

The Law No. 132 of 8 June 2012 on safe deployment of nuclear and radiological activities (further Law No. 132/2012), within the Article 41 of Section IX establishes the national policy and principles for radioactive waste management.

The 2017-2026 National Strategy on radioactive waste management with Action Plan for its implementation (*further - National Strategy*), was approved by Parliament on 13 April 2017.

B.4 Radioactive Waste Management Practices

The National Strategy contains the approaches and technical solutions for the implementation of the Radioactive Waste Management Policy and main safety principles. It establishes the modalities and mechanisms for organizing of the measures that are

to be undertaken in order to provide the responsible and safe management of radioactive waste.

Therewith, the National Strategy includes the commitments implementation way by the Republic of Moldova at the international level, based on the provisions of international treaties, those arising from the Convention and of the Law No. 132/2012.

During of last 3 years have been drafted and approved by Government of Republic of Moldova two Regulation which contains some procedures connected to radioactive waste management:

- Regulation No 608 03/07/2018 about radiological safety in activities with sources of ionizing radiation outside of specially shielded facility;
- Regulation No. 506 of 15/07/020 on the mechanism of first response to nuclear or radiological events related to orphan radioactive sources.

B.4.1 Criteria used to define and categorize radioactive waste

No updates

SECTION C: SCOPE OF APPLICATION

No updates

SECTION D: INVENTORIES AND LISTS

D.1 Inventory of Radioactive Waste in Republic of Moldova

According to Regulatory Information System Database of NARNRA, currently are registered on the basis of declaration of the “Special Facilities 5101, 5102” the total amount of 9605 spent sealed sources and nuclear material, (especial – Co-60, Cs-137, Sr(Y)-90, Am-241, Ra-226, Ni-63, Th-232, natural uranium, depleted uranium and radioactive materials or goods (products) which contains radioactive material (Pu-239, Ra-226)), including:

41 sources of Category 2 (Co-60, Cs-137);

95 sources of Category 3 (Co-60, Cs-137);
282 sources of Category 4 (Co-60, Cs-137, Ra-226, Sr(Y)-90);
over 9115 Category 5 sources - smoke detectors with Pu-239, and
Am-241 and other devices (Ni-63, H-3, Pm-147);
Uncategorized sources and materials – 72;
Cs-137 polluted soil – 120 m³;
No spent sources of Category 1;
Nuclear material (DU) – over 2 000 kg;

D.2 Not applicable

SECTION E: LEGAL AND REGULATORY SYSTEM

E.1 Regulatory framework description

From the third National Report, there have been some changes to the legislation applied to the radioactive waste management.

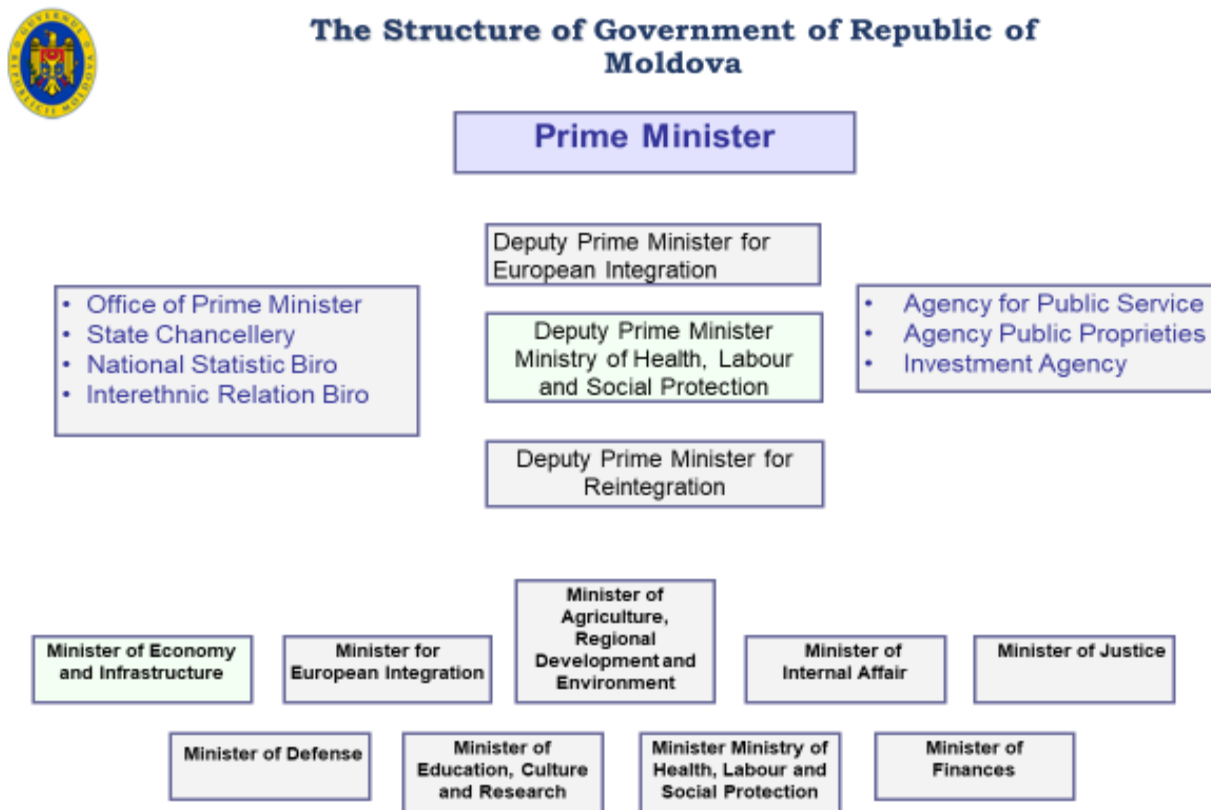
E.2 Legislative and regulatory framework In the light of the new Law No. 132 of 8 June 2012 *on safe deployment of nuclear and radiological activities*, was approved new regulations:

- Regulation No 608 of 03/07/2018 about radiological safety in activities with sources of ionizing radiation outside of specially shielded enclosure;
- Regulation No 506 of 15/07/2020 on the Mechanism of first response to nuclear or radiological events related to orphan radioactive sources.

At the moment, NARNRA are in the final process of approval Regulation concerning Radiation Safety in treatment of Radioactive Waste which include all necessary measurement to maintain radiation safety during RW treatment.

E.3 REGULATORY AUTHORITY

From the last National Report the Structure and the Staff limit of the NARNRA have not been changed. NARNRA it is in subordination of Ministry of Agriculture, Regional Developments and Environment



According to the Law No. 132/2012, (Article 10) the NARNRA is the single independent national authority with regulatory functions in the field of nuclear and radiological activities.

In order to improve and maintain the legislative and regulatory framework for the safety of nuclear and radiological activities at the request of the Government of the Republic of Moldova, an international team of senior safety experts met representatives of the NARNRA from 10 to 19 December 2018 to conduct an Integrated Regulatory Review Service (IRRS) mission. The purpose of this peer

review was to review the Republic of Moldova's regulatory framework for radiation safety. The review mission was formally requested by the Government of the Republic of Moldova in January 2016. In base of IRRS mission recommendation NARNRA started the new stage of process of consolidation of legal and institutional framework in relevant area.

The IRRS team carried out the review in the following areas:

- Responsibilities and functions of the government;
- The global nuclear safety regime;
- Responsibilities and functions of the regulatory body;
- Management system of the regulatory body;
- The activities of the regulatory body including the authorization, review and assessment, inspection and enforcement processes;
- Development and content of regulations and guides;
- Emergency preparedness and response;
- Occupational radiation protection;
- Control of medical exposure,
- Discharges and material clearance,
- Radioactive waste management and decommissioning.

In addition, one policy issue was discussed: Risk-informed Inspections Planning. During the mission, the IRRS team performed a systematic review of all topics. In this respect, a plan of measures has been proposed to improve the existing legal framework and to develop regulatory acts that are missing at the moment.

SECTION F: OTHER GENERAL SAFETY PROVISIONS

F.1 Responsibility of the licensee	No updates
F.2 Human and financial resources	No updates

F.3 Quality assurance	No updates
F.4 Operational radiation protection	No updates
F.5 Emergency preparedness	No updates
F.6 Closing	No updates

SECTION G. SAFETY OF SPENT FUEL MANAGEMENT

G.1 General security requirements	No applicable
G.2 Existing facilities	No applicable
G.3 Location of proposed facilities	No applicable
G.4 Design and construction of facilities	No applicable
G.5 Safety evaluation of facilities	No applicable
G.6 Operation of facilities	No applicable
G.7 Disposal of spent fuel	No applicable

SECTION H. SAFETY OF RADIOACTIVE WASTE MANAGEMENT

H.1 General security requirements	No updates
H.2 Existing facilities and past practices	No updates
H.3 Location of proposed facilities	No updates
H.4 Design and construction of facilities	No updates
H.5 Safety evaluation of facilities	No updates
H.6 Operation of facilities	No updates
H.7 Institutional measures after closure	No updates

SECTION I. TRANSBOUNDARY MOVEMENT

No updates

SECTION J. DISUSED SEALED SOURCES

No updates

SECTION K. PLANNED ACTIVITIES TO IMPROVE SAFETY

There main plan for activities for the next period:

1. Implementation of Action Plan of 2017-2026 National Strategy on Radioactive Waste Management;
2. Development and improving of regulatory framework in base of the Recommendations of IAEA IRSS Mission;
3. Implementation of orphan radioactive sources consolidation activities.