Republic of Moldova

IAEA Member State since September 1997

Selected achievements

2024: A 3D Brachytherapy facility is installed at the National Institute of Oncology in April 2024.

2020–2023: Stable isotope technology is introduced to evaluate water resource formation under the impact of climate change.

2017–2023: Capacities to retrieve legacy radioactive waste and decommission the Radon Type facility are developed.

2016–2023: Governmental, legal and regulatory infrastructure is strengthened for nuclear technology use and for planning, commissioning, operating and decommissioning radiological facilities.

National priorities

- Nuclear and radiation safety
- Nuclear medicine and radiotherapy
- Water resource management
- Agriculture

Main areas of IAEA support

- Cancer diagnosis and treatment
- Radioactive waste management
- Strengthening national radiation protection infrastructure
- Emergency preparedness

Project successes

Human health

IAEA support for the modernization of radiation medicine services in the Republic of Moldova over the past two decades has significantly increased the efficiency of cancer management in the country.

Support was provided for the country's first radiotherapy centre at the Oncological Institute in Chișinău, and a high dose rate (HDR) brachytherapy unit was provided in 2006.

A containment for the retrieval and decommissioning of legacy radioactive waste is supported by the IAEA. (Photo: F. Dragolici/IAEA)

In 2009, the IAEA procured a linear accelerator radiotherapy machine and dosimetry equipment, with further LINACs procured using government cost sharing in 2022 and 2023. National staff were trained in brachytherapy and radiotherapy, and related areas. IAEA support was provided for a Nuclear Medicine Laboratory at the Oncological Institute and for procurement of a SPECT gamma camera.

In 2017, the IAEA supported the establishment of Moldova's first PET/CT diagnostic services at the Nuclear Medicine Department of the Republican Clinical Hospital in Chișinău, and the Center of Medical Imagery and Radiotherapy acquired quality assurance capabilities.

Radiation protection and nuclear safety

In response to a request from the Republic of Moldova, the IAEA played a key role in facilitating the Integrated Regulatory Review Services (IRRS) mission which was conducted in 2018.

This mission led to many achievements, including the adoption of key regulations and laws related to radiological and nuclear safety, first response mechanisms for radiological events and the radiological monitoring of scrap metal.

To strengthen the country's technical capabilities and environmental protection measures, the IAEA also supported the development of the National Strategy for Radioactive Waste

Management with Action Plan 2017–2026 and provided essential laboratory equipment in 2020.

In 2023, the IAEA supported the establishment of a containment for the retrieval and decommissioning of legacy radioactive waste.

Water resource management

In 2023, the newly upgraded Laboratory of Isotope Hydrology was equipped with state-of-the-art technology, including an Isotopic Water Analyser, an Ion Chromatography System and relevant sampling and field equipment.

Comprehensive staff training was also conducted, and analytical procedures validated through intercomparison exercises.

This technology is now available for the national water monitoring programme to improve water management practices.

A Computer Tomography (CT) simulator is installed at the National Institute of Oncology with IAEA support. (Photo: A. Blink/IAEA)

Participation in the major initiatives

- Rays of Hope
- ZODIAC

Date of imPACT Review(s)

2008

IAEA support received in the 21st century

Contributions to South-South and triangular cooperation