

Estonia

IAEA Member State since January 1992

Selected achievements

2023: The Integrated Nuclear Infrastructure Review (INIR) Phase 1 mission takes place with positive outcomes and recommendations to the inter-ministerial nuclear energy working group established in 2021 under the Ministry of Climate, providing an overview of the country's energy needs and energy security.

2019: The IAEA's Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation (ARTEMIS) mission acknowledges Estonia's commitment to safely manage radioactive waste.

2016 and 2019: Two IAEA Integrated Regulatory Review Service missions (IRRS) note Estonia's strengthened legislative and regulatory infrastructure on radiation protection and nuclear safety.

National priorities

- Institutional, legal and regulatory framework
- Competence in nuclear safety and radiation protection
- Human health
- Radioactive waste management
- Nuclear knowledge management
- Consideration of nuclear power

Main areas of IAEA support

- Regulatory framework
- Radioactive waste management
- Emergency preparedness and response
- Nuclear medicine
- Radiotherapy

Project successes

Radiation protection and nuclear safety

Cooperation between Estonia and the IAEA resulted in the passage of the Radiation Act by the Estonian parliament in May 1997.



Needles are prepared to deliver low dose rate prostate brachytherapy in Estonia. (Photo: A. Aasa/Tartu University Hospital)

Subsequent milestones include a revised Radiation Act on Estonia's accession to the European Union in 2004, a RaSSIA mission in 2005, and two successful infrastructure self-assessments in 2015 and 2016, followed by IAEA Integrated Regulatory Review Service (IRRS) missions.

Estonia's commitment to safety infrastructure was reaffirmed by the 2019 ARTEMIS mission. IAEA advice helped develop a roadmap for radioactive waste disposal and strengthened legislative and regulatory frameworks.

Human Health

Estonia has significantly enhanced its nuclear medicine and radiotherapy services.

The IAEA provided support through training, fellowships, Quality Management Audits in Nuclear Medicine Practices (QUANUM) and missions in Quality Improvement Quality Assurance Team for Radiation Oncology (QUATRO).

The Agency also facilitated technical upgrades of treatment units, including a new medical linear accelerator.

This has enhanced Estonia's capacity to treat cancer patients and led to reduced waiting times, decreased staff workload and an improved quality of cancer treatment nationwide.

Estonia now shares its expertise by training professionals from other countries in the region.

Nuclear knowledge development and management

Estonia's regulatory authority for radiation protection and safety has been an active participant in IAEA training programmes, enhancing the authority's ability to fulfil legal and statutory functions. Trainings attended by the authority included radioactive waste management, decommissioning and exposure control.

This has resulted in improved regulatory infrastructure, enhanced national control capabilities, and optimized radiation protection programmes.

Recent support also focused on strengthening emergency preparedness, enabling the authority to effectively fulfil its role as first responder.

In addition, junior professionals have attended the IAEA Postgraduate Educational Course in radiation Protection and the Safety of Radiation Safety (PGEC) as well as IAEA-organized



A patient is positioned to receive radiotherapy at the Haematology and Oncology Clinic of Tartu University Hospital in Estonia. (Photo: L. Randle/Tartu University Hospital)

Nuclear Law Institute courses, contributing to the development of a national legal framework.

Participation in the major initiatives

- ZODIAC

IAEA support received in the 21st century



Contributions to South-South and triangular cooperation

