

## Key achievements in Estonia

- 2019: The IAEA's Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation (ARTEMIS) mission acknowledges Estonia's commitment to the safe management of radioactive waste.
- 2016 and 2019: IAEA Integrated Regulatory Review Service (IRRS) missions noted Estonia's strengthened legislative and regulatory infrastructure on radiation protection and nuclear safety.

## Atoms for peace and development

Widely known as the world's 'Atoms for Peace and Development' organization within the United Nations family, the IAEA is the international centre for cooperation in the nuclear field. The Agency works with its Member States and multiple partners worldwide to promote the safe, secure and peaceful use of nuclear technologies.

The IAEA's technical cooperation (TC) programme helps countries to use nuclear science and technology to address key development priorities in areas including health, agriculture, water, the environment and industry. The programme also helps countries to identify and meet future energy needs. It supports greater radiation safety and nuclear security, and provides legislative assistance.



The IAEA supported training for medical physicists and clinical staff at the Department of Radio and Oncotherapy of the Haematology and Oncology Clinic of the Tartu University Hospital to provide Estonia's first low dose rate brachytherapy for prostate cancer. (Photo: A Aasa/TUH)

## Recent project successes

### Radiation protection and nuclear safety

The IAEA has supported Estonia in strengthening its national radiation and nuclear safety infrastructure since 1997. The country conducted its own assessment of its infrastructure between 2015 to 2016, followed by two IAEA Integrated Regulatory Review Service (IRRS) missions, which provided recommendations for further safety infrastructure development. In 2019, the IAEA carried out an Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation (ARTEMIS) mission to assist in further developing the country's roadmap for the disposal of radioactive waste. Expert advice also helped to strengthen legislative and regulatory infrastructure on radiation protection and nuclear safety, and noted the country's commitment to the safe management of radioactive waste.

### Human health

Estonia received IAEA support to strengthen its nuclear medicine and radiotherapy services through specialised training for medical practitioners to implement a quality management system and introduce advanced diagnostic and treatment technology. Further national and regional training and fellowships were supported for medical physicists, radiation oncologists and nuclear medicine physicians and technologists. Additional improvements in these areas were established through Quality Management Audits in Nuclear Medicine Practices (QUANUM) and a Quality Improvement Quality Assurance Team for Radiation Oncology (QUATRO) mission.

The IAEA also supported the upgrade of new treatment units with training and equipment, including a new medical linear accelerator (LINAC) radiotherapy machine for the North Estonia Medical Centre in Tallinn. These measures have increased Estonia's capacity to treat cancer patients and reduced waiting times and staff workload, while contributing to better quality cancer treatment throughout the country. Estonia's current capacity and expertise is now being used to train nuclear medicine professionals from neighbouring countries.

## Nuclear knowledge development and management

The IAEA helped Estonia's regulatory authority for radiation protection and safety to acquire the necessary qualifications and expertise to fulfil its legal statutory functions and duties. This included providing the regulatory staff with training on radioactive waste management, decommissioning of facilities that used radioactive materials, and public and occupational exposure control. IAEA support also helped strengthen the regulatory authority's preparedness and response capacities for nuclear or radiological emergencies, with an emphasis on the authority's role as first responder.

The training helped improve regulatory infrastructure for the safety and control of radiation sources, strengthened national capabilities for regulatory control and optimized national radiation protection programmes.

In addition, Estonia supported the participation of its staff at IAEA organised Nuclear Law Institute courses which helped in the development of a national legal framework.

## Active national projects

- Compiling and Accrediting Calibration Methodologies for the Secondary Standard Dosimetry Laboratory (EST6021)
- Improving Safety, Efficiency and Increasing Access to State of the Art Diagnostic and Therapy Facilities for Cancer Treatment and Beyond (EST6022)
- Improving Legislative, Regulatory and Organizational Infrastructure on Radiation and Nuclear Safety (EST9005)
- Increasing the Calibration Capacity Necessary for the Regular Inspection of Measurement Devices Used in Ensuring Radiation Safety (EST9006)

Estonia also participates in 30 regional and 2 interregional projects, mostly in the areas of health and nutrition.

## Previous IAEA support to Estonia

Previous IAEA support has focused on strengthening cancer management. Over the past few years, radiotherapy and nuclear medicine facilities have been upgraded with relevant training for medical practitioners. Support was also provided to improve the radiation and nuclear safety legislative, regulatory and organizational infrastructure.

## IAEA support to Estonia, 2009–2019



216 40 238

trained (including 103 women) international experts provided attended specialist meetings (including 134 women)

## Priority areas of support

- Strengthening the legal and regulatory infrastructure, including emergency preparedness and response systems
- Supporting human health
- Improving the radioactive waste management infrastructure and management
- Supporting environmental monitoring
- Enhancing nuclear knowledge management

## Estonia's contribution to South-South and triangular cooperation, 2009–2019



133 expert and lecturer assignments provided by Estonia

3

training courses hosted

52

fellows or scientific visitors hosted

Based on data available as of April 2020

## Strategic documents supported

- Country Programme Framework 2016–2021, signed in September 2016

[www.iaea.org/technicalcooperation](http://www.iaea.org/technicalcooperation)

The IAEA collaborates with National Liaison Officers and Permanent Missions to deliver its TC programme.