

Kazakhstan

IAEA Member State since February 1994

Selected achievements

2018–2022: The Center of Nuclear Medicine and Tomotherapy in Astana and the Center of Nuclear Medicine and Oncology in Semey begin operations.

2021: Kazakhstan maintains its leading position in the uranium world market, accounting for about 40 per cent of the world's uranium production. This amounts to 21 800 tonnes.

National priorities

- Nuclear and regulatory infrastructure
- Development of the national nuclear power programme
- Human health focusing on nuclear medicine

Main areas of IAEA support

- Nuclear and radiation safety and security
- Human health

Project successes

Remediation

With IAEA support, Kazakhstan has for the past three decades undertaken a comprehensive study to assess and manage the radiological impact of the extensive nuclear weapons testing conducted at the Semipalatinsk test site.

By identifying areas that require further remediation and flagging those areas with minimal residual radioactivity for potential economic utilization, the findings of the study supported the revision of administrative boundaries at the test site.

This marked a significant step towards ensuring the environmental safety of an area of about 9000 km², or approximately 50 per cent of the entire test site.



Map of Semipalatinsk Test Site. (Photo: IAEA)

Human health

In Kazakhstan, significant efforts were made under the Comprehensive Plan to Combat Cancer (2018–2022): protocols were aligned with global standards, a 'green corridor' for patients with suspected cancer was established to expedite cancer diagnosis and treatment and new nuclear medicine and oncology centres were established.

This led to the development of the 2023–2025 Comprehensive Plan, in line with the Health Development Concept. This plan placed emphasis on the importance of regional PET and radiotherapy centres, radioisotope production and establishing a National Research Oncology Center in Astana with advanced proton therapy.

These efforts have demonstrated Kazakhstan's long term commitment to enhancing cancer care, prevention and research infrastructure.

Uranium mining

Kazakhstan's uranium mining is carried out through environmentally friendly and cost-effective in-situ leaching.

The launch of a nuclear fuel assembly production plant at the Ulba Metallurgical Plant JSC enabled Kazakhstan to be involved in subsequent stages of the nuclear fuel cycle. It also supported long term growth along the entire value chain.

Kazakhstan is committed to protecting the environment by carrying out effective waste recycling and rehabilitating radiation-contaminated areas in line with international best practice and safety standards.



Radioecological assessment at Semipalatinsk Test Site.
(Photo: IAEA)

Participation in the major initiatives

- Rays of Hope
- ZODIAC

Date of imPACT Review(s)

2016

IAEA support received in the 21st century



Contributions to South-South and triangular cooperation

