



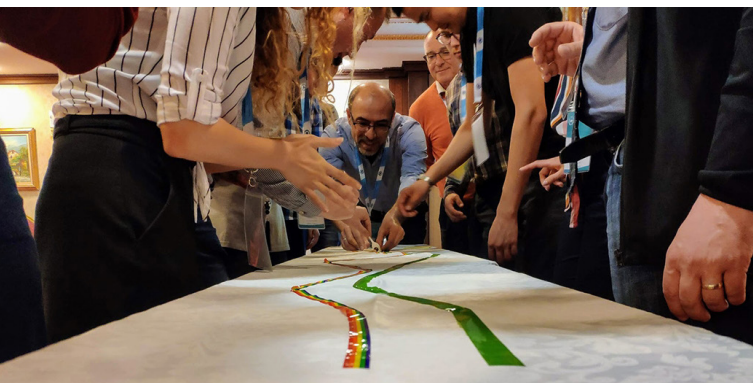
Key achievements in Turkey

- 2018-2020: IAEA supports Turkey in the preparation of Decree Law No: 702 which facilitates the establishment of the Nuclear Regulatory Authority (NDK) and the Turkish Energy, Nuclear and Mining Research Agency (TENMAK), which is responsible for nuclear research, radioactive waste disposal, and training.
- 2018-2020: Turkey begins construction on three units out of four of its first nuclear power plant (NPP) at Akkuyu Site.
- 2020: Turkey becomes a member of the IAEA/ World Health Organization (WHO) Network of Secondary Standards Dosimetry Laboratories.

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.



In 2019, junior and mid-career professionals learned about nuclear safety leadership skills at the IAEA School of Nuclear and Radiological Leadership for Safety held in Ankara. The development of a strong safety culture within organizations requires the creation of space for open and meaningful discussions between nuclear professionals of different backgrounds. (Photo: J. Gil Martin/IAEA)

Recent project successes

Nuclear power and regulatory oversight

The IAEA supported Turkey in developing its first nuclear power plant (NPP) programme in a safe, secure and effective manner. In 2016, the IAEA helped the Ministry of Energy and Natural Resources (ETKB) to enhance its capacity to develop and implement policies relevant to the Akkuyu NPP programme infrastructure. Further assistance was provided to Turkey's Nuclear Regulatory Authority (NDK) to develop competencies for the regulatory oversight of the NPP as well as to Turkey's Atomic Energy Authority (TAEK) to enhance the regulatory and legislative framework in the field of licensing, inspection and enforcement of NPPs.

In addition, the IAEA supported a Site and External Events Design (SEED) Mission to review chapters of the Akkuyu NPP's Preliminary Safety Analysis Report. In 2019, the IAEA worked with national experts to discuss the challenges and lessons learned during the development of the new NPP. The discussions covered the licensing process, review and assessment of documentation, use of external support and inspections during the construction phase, and the equipment necessary for the plant's construction. This enabled Turkey to enhance its regulatory capabilities in licensing and inspection of NPPs, and enforcement. IAEA support has contributed to the diversification of Turkey's energy mix and helped to secure a more sustainable electricity supply.

Nuclear and radiation safety and security

Turkey's national nuclear safety and security infrastructure and capacities were enhanced, with IAEA support. This included strengthening the country's management of radioactive waste and its emergency preparedness and response capacities. IAEA support was provided through various expert missions and meetings, training courses and fellowships.

Isotope and radiation technology

The IAEA helped to establish capacities at the Proton Accelerator Facility at the Turkish Energy Nuclear and Mineral Research Agency (TENMAK-former Turkish Atomic Energy Authority) to produce radioisotopes and radiopharmaceuticals, such as

fludeoxyglucose and fluorodopa, used in positron emission tomography (PET) to diagnose diseases such as cancer. The IAEA supported a national training course on radiation safety in cyclotron and radiopharmaceutical production through expert advice and visits.

In 2017, TAEK established the Secondary Standards Dosimetry Laboratory (SSDL) to support the calibration of dosimetry equipment, and in March 2020, Turkey's SSDL became a member of the IAEA/WHO Network of Secondary Standards Dosimetry Laboratories.

Active national projects

- Enhancing the Nuclear Regulatory Authority's Capabilities for Regulatory Oversight of Nuclear Power Plant (TUR9022)
- Supporting Human Resources and Infrastructure Development for the Nuclear Power Programme Follow-up (TUR2019)
- Conducting a Pilot Program on Integrated Management of Aedes Aegypti Including Sterile Insect Technique (TUR5026)

Turkey also participates in 33 regional and 3 interregional projects, mostly in the areas of energy planning and nuclear power.

Previous IAEA support to Turkey

Previous IAEA support to Turkey focused on human resource capacity building and infrastructure development for the national nuclear power programme. IAEA support also enhanced the capabilities of the nuclear safety regulatory authority in the regulatory oversight of construction, commissioning and operation of new nuclear power plants.



Through training and expert missions, the IAEA enhanced capacities of staff at the Turkish Atomic Energy Agency's (TAEAs) Proton Accelerator Facility, part of the Sarayköy Nuclear Research and Training Center (SNRTC) in Ankara, to produce positron emission tomography (PET) radioisotopes and radiopharmaceuticals used to diagnose diseases. (Photo: B. Özyardimci)

IAEA support to Turkey, 2009–2019



378 124 230

trained
(including 129 women)

international
experts
provided

attended specialist
meetings
(including 107 women)

Priority areas of support

- Improving nuclear and radiation safety and security
- Supporting nuclear and radiological emergencies
- Strengthening nuclear energy
- Enhancing knowledge management and capacity building
- Improving isotope and radiation technology applications
- Supporting human health and nutrition

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



expert and lecturer
assignments provided
by Turkey

12

training
courses
hosted

244

fellows or
scientific visitors
hosted

Based on data available as of April 2020

Strategic documents supported

- Country Programme Framework 2018–2023, signed in September 2018

www.iaea.org/technicalcooperation

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