

Selected achievements

2023: The IAEA completes the OMARR, INSARR and IRRUR review missions on targeted research reactors in Iran and provides recommendations for their safe operation and utilization.

2022–2023: The IAEA supports capacity building for nuclear regulatory and radioactive waste management in Iran by dispatching six expert missions and placing 15 scientific visitors and fellows.



Improving of N fertilizer management in irrigated wheat to mitigate greenhouse gases. (Photo: J. Pirvali Biranvand/Nuclear Agriculture Research School, Nuclear Science Technology Research Institute — AEOI-IRAN)

National priorities

- Nuclear and radiation safety
- Food and agriculture
- Human health
- Water and the environment
- Nuclear power and energy planning
- Industrial applications

Main areas of IAEA support

- Nuclear regulatory infrastructure
- Radioactive waste management
- Cancer management
- Mutation breeding
- Soil and water management
- Operational safety of research reactors and nuclear power reactors

Project successes

Human health

The IAEA has been providing capacity building in nuclear medicine and radiopharmaceutical development. This has included radiopharmaceuticals $^{225}\text{Ac}/^{177}\text{Lu}/^{68}\text{Ga}$ -Dotatate (NOC/TOC) and $^{225}\text{Ac}/^{177}\text{Lu}/^{68}\text{Ga}/^{18}\text{F}$ -PSMA and diagnostic peptides labelled with gamma and positron emitting radionuclides.

In 2024, the IAEA also sponsored the participation of five Iranian health professionals in the International Symposium on Trends in Radiopharmaceuticals (ISTR) 2023 and in the training course “Innovative Radionuclides and Radiopharmaceuticals”. Through this, the country has remained abreast of the latest international radiopharmaceutical development and trends.

With IAEA support, Iran has increased its self-sufficiency in producing high-quality radioisotope products, notably for treating prostate, eye, and brain cancers.

Soil management

With IAEA support, Iran has been addressing land degradation in the country’s Hirkani Forest, an area that has been highly impacted by population growth and logging.

Using nuclear techniques, Iran has adopted sustainable conservation practices to combat deforestation. The IAEA-led courses in Tehran and Vienna, coupled with expert missions, have empowered Iran’s Forests, Rangelands, and Watershed Management Organization to accurately determine the deterioration of land.

By implementing effective conservation practices, it is expected that flash floods will decrease in affected areas and the amount of sediment deposits in lakes will be lowered.

Nuclear power

Iran's first nuclear power plant in Bushehr became operational in 2011. Since then, the IAEA has consistently contributed to its safety and reliability.

Through ongoing training initiatives, the IAEA has been helping the power plant build maintenance practices that meet the latest international standards, codes, and best practices to elevate nuclear safety measures at the plant.



Using stable nitrogen isotope to tackle climate change and enhance food security. (Photo: Nuclear Science and Technology Research Institute)

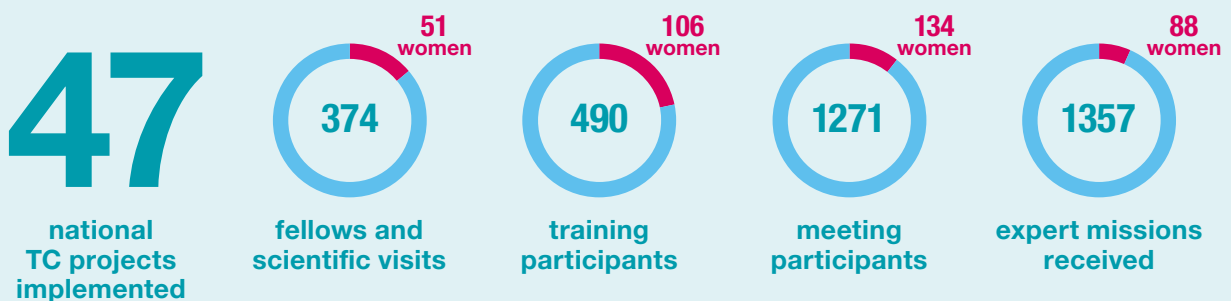
Participation in the major initiatives

- NUTEC Plastics
- ZODIAC

Date of imPACT Review(s)

2012

IAEA support received in the 21st century



Contributions to South-South and triangular cooperation

