Selected achievements

2023–2024: The government passes Radiation Safety Directives to strengthen radiation safety infrastructure in Nepal.

2023–2024: Nepal improves its national radiation safety profile in the IAEA's Radiation Safety Information Management System (RASIMS), with particularly strong progress made in TSAs 2 and 3.

2020: Nepal adopts and puts into effect its law on the use of regulation of radioactive materials.

National priorities

- Radiation safety and nuclear security
- Food and agriculture
- Human health and nutrition
- Water and the environment

Main areas of IAEA support

- Radiotherapy and nuclear medicine imaging
- Food and agriculture
- Animal health
- Uranium exploration
- Radiation safety
- Nuclear physics and chemistry
- Non-destructive testing
- Radiation monitoring

Project successes

Nuclear techniques for childhood malnutrition

With support from the IAEA, Nepal has advanced its use of nuclear techniques to address childhood malnutrition. Responsible for over 50 per cent of childhood mortality in Nepal, this is a critical issue for the country.



Meeting with the staff of Bir Hospital in Kathmandu, supported through technical cooperation projects. (Photo: D. Subbotnitskiy/IAEA)

In 2022, following a series of discussions to identify the most important national needs, a high-performance liquid chromatography (HPLC) and a microwave plasma atomic emission spectrometer (MP-AES) were procured.

As well as enabling the measurement of body composition in young children, this additional laboratory capability has facilitated a comprehensive analysis of the factors affecting the recovery of malnourished children, in particular the composition of food used to nourish them.

Animal health

Nepal has strengthened its programme for analysing pesticide residues in agricultural products with IAEA support. This is a national priority due to the impact of pesticides on food safety and consumer health.

Following comprehensive discussions on current gaps and an estimation of future needs, priority items for biosafety and diagnostics were procured for the national laboratory. These are expected to significantly strengthen the country's capacity to address future challenges.

Diagnostic kits for brucellosis were deployed for better disease surveillance and management. This has resulted in a significant reduction in brucellosis incidence through strategic testing and awareness programmes among farmers.

In addition, fellowships and scientific visits were implemented to build local expertise in managing zoonotic diseases.

Nuclear technology for crop productivity

In collaboration with the IAEA, Nepal has been improving its capabilities to increase crop and fruit productivity using nuclear and molecular techniques.

The IAEA helped Nepal to identify and prioritise laboratory equipment needed to strengthen the capacity of the National Biotechnology Research Centre (NBRC). This is intended to deliver long term benefits on the country's food self-sufficiency and economic stability.

In addition, efforts were made to measure pesticide residue, including training staff and establishing a database for the continuous monitoring of pesticide residues in agricultural products.



Plant Quarantine and Pesticide Management Centre in Nepal supported by the IAEA. (Photo: D. Subbotnitskiy/IAEA)

Participation in the major initiatives

Date of imPACT Review(s)

2020, 2012

IAEA support received in the 21st century 22 women **7** women 29 29 women women 243 330 48 national fellows and training meeting expert missions **TC projects** scientific visits participants participants received implemented

Contributions to South-South and triangular cooperation





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