Colombia

IAEA Member State since September 1960

Selected achievements

2022: The Secondary Standards Dosimetry Laboratory installs a new Co-60 irradiator, boosting calibration capabilities for the safe use of radiotherapy equipment.

2021: The Colombian Chapter of Women in Nuclear (WIN) is established.

2020: The Pesticide Residues Analysis Laboratory at the National University of Colombia becomes fully operational.

National priorities

- Environmental monitoring and protection
- Agriculture and rural development
- Human health
- Nuclear safety and radiation protection
- Energy planning
- Nuclear knowledge management

Main areas of IAEA support

- Quality of life for cancer patients
- Access to radiotherapy services
- Staff skills in hospital radiopharmacy
- Capacity building for estimating sedimentation rates in water bodies
- Utilization of isotopic techniques for groundwater resource management
- Equipment and capacity building for analytical and calibration services
- Inspection equipment supply to regulatory authorities

Project successes

Marine and coastal environment

With IAEA support, Colombia has been applying nuclear and isotopic techniques to address marine and coastal pollution and manage harmful algal blooms.

Local staff of INVEMAR are trained through fellowships, training courses and expert missions, making INVEMAR an important resource for the Research Network of Marine-Coastal Stressors in Latin America and the Caribbean (REMARCO). (Photo: INVEMAR)

The José Benito Vives de Andréis Marine and Coastal Research Institute (INVEMAR) in Santa Marta, an important regional reference centre, received equipment to analyse ocean acidification, heavy metal contamination and algal toxins. The scientific data generated with these techniques has been serving as a basis for evidence-based decision making.

Food and agriculture

The IAEA helped Colombia to build plant breeding capabilities to develop crop varieties more resistant to disease, adaptable to climate change and with a greater dormancy to facilitate export.

The IAEA helped to procure genome sequencing and analytical laboratory equipment, as well as train national staff in irradiation techniques and data collection and analysis.

Through radiation-induced mutation, novel rice and potato mutant lines were created. These achievements have been helping to improve farmer livelihoods by boosting productivity and income.

Nuclear knowledge management

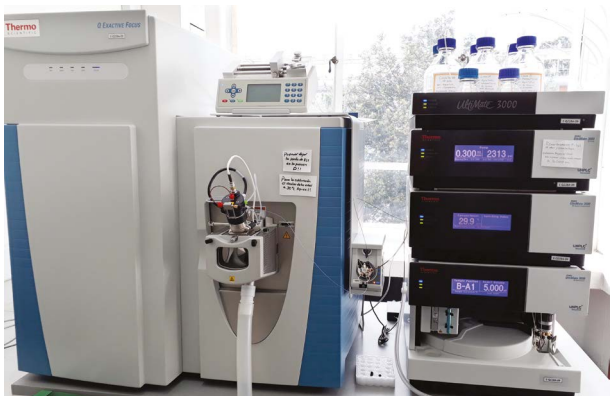
The Colombian Geological Service's (SGC) advises the national government on the formulation of nuclear policies, manages its own nuclear and radioactive facilities, coordinates nuclear research projects, and provides nuclear application services.

With IAEA assistance, SGC strengthened analytical, calibration and radiation protection services. The ISO 17025-accredited secondary standards dosimetry laboratory received a

new irradiator to expand calibration of radiotherapy equipment.

Additionally, a radiochemistry laboratory was established to carry out radiometric measurements of radionuclides in environmental samples.

Comprehensive reviews of the radiological protection programmes for various SGC facilities, including the nuclear reactor (IAN-R1) and radioactive waste storage, were conducted and emergency plans and training programmes in radiation protection were harmonized.



Analytical equipment at the Laboratorio de Residuos de Plaguicidas, Universidad Nacional de Colombia. (Photo: N. Schloegl/IAEA)

Participation in the major initiatives

- NUTEC Plastics
- Rays of Hope
- ZODIAC

Date of imPACT Review(s)

2022, 2011

IAEA support received in the 21st century

36 national TC projects implemented

178 fellows and scientific visits (59 women)

498 training participants (189 women)

615 meeting participants (251 women)

226 expert missions received (48 women)

Contributions to South-South and triangular cooperation

100 fellows and scientific visits hosted (46 women)

398 meeting participants hosted (182 women)

260 expert missions supported (161 women)

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