Atoms for peace and development

The International Atomic Energy Agency is the world’s central intergovernmental forum for scientific and technical cooperation in the nuclear field. It works for the safe, secure and peaceful uses of nuclear science and technology, contributing to international peace and security.

Key achievements in Lesotho

2. 2019: The Central Veterinary Laboratory enhances its capacity to diagnose foot-and-mouth disease, peste des petits ruminants (sheep and goat plague), rabies, Newcastle disease, anthrax and brucellosis.
3. Progress towards establishing first radiotherapy facility by 2024:
   - 2016: Development of the bankable document for the Lesotho Radiotherapy Facility.
   - 2019: Development of roadmap to operationalize the facility developed.

The IAEA’s technical cooperation programme helps countries to use nuclear science and technology to address key development priorities, 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.

Recent project successes

Livestock development

With IAEA support, the Central Veterinary Laboratory in Lesotho gained the capacity and required competencies to diagnose animal diseases such as brucellosis, anthrax and Newcastle disease, using molecular and enzyme-linked immunosorbent assay (ELISA) technology. The new capacity has improved turnaround time, reduced reliance on other countries for disease diagnosis, enhanced data collection and analysis for improved disease control, and facilitated access to international markets according to the World Organisation for Animal Health’s requirements.

Livestock reproduction

An IAEA project helped the Central Veterinary Laboratory to adopt technology to evaluate animal semen with the goal of enhancing livestock production and health. Previous artificial insemination practices which had resulted in poor rates of conception. Research into the conception rates identified difficulties in maintaining nitrogen levels in semen storage cans and the repeated or prolonged exposure of the storage straws to environmental temperatures, which resulted in a high percentage of the samples dying. IAEA assistance led to better management of semen for livestock in small-scale farming communities.

Water resource management

Lesotho has acquired basic capacities in integrating isotope hydrology into water management, with IAEA support. Valuable information concerning the role of ground versus surface water in the Maputsoe and South Phuthiatsana catchment areas has been generated as a result.

Analysing animal semen samples at the Central Veterinary Laboratory to improve livestock production and health (Photo: Felix Omonya/IAEA)
Active national projects

- Enhancing the Energy Databank and Building Human Capacity to Support Energy Policy Framework - Phase II (LES2002)
- Enhancing Livestock Production and Health (LES5007)
- Improving Soil Fertility for Enhanced Cereal Production (LES5008)
- Establishing a Radiotherapy Facility and Building Human Resource Capacity for its Operation, Phase I (LES6002)
- Developing Isotopic Techniques for the Assessment of Hydrological Processes (LES7003)
- Establishing a National Regulatory Infrastructure for Radiation Safety (LES9005)

Lesotho also participates in 16 regional and 1 interregional projects.

Previous IAEA support to Lesotho

The IAEA recently assisted Lesotho to plan for the establishment of its first radiotherapy facility, and supported human resource development in the radiotherapy field. In food and agriculture, the IAEA worked with the Government to improve livestock productivity and the health of goats and sheep, using nuclear techniques in artificial insemination and for monitoring animal diseases. Mutation breeding and related biotechnology have been used to develop and improved varieties of potatoes and beans. Capacity development in energy planning was also provided.

www.iaea.org/technicalcooperation

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