

Key achievements in Nigeria

- 2020: A High-Level UN Joint Programming Mission on Non-Communicable Diseases and Tuberculosis was conducted to launch the national roadmap for the diseases.
- 2018: Diagnostic capacity of the National Veterinary Research Institute to tackle avian influenza using nuclear-derived techniques is enhanced.
- 2017: IAEA fellowship training, scientific visits and expert assistance supports the installation of a new research reactor to enhance national socioeconomic development.
- 2015: The Gamma Irradiation Facility is upgraded at the Nuclear Technology Centre in Sheda, Abuja, improving its processing capacity.

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.

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.



With IAEA support, the Nuclear Instrumentation Division of Nigeria's Birine Nuclear Research Centre developed local maintenance services and now provides training for users in IAEA Member States within the AFRA region. (Photo: M Baaliouamer/COMENA)

Recent project successes

Radiation processing

Globally, radiation processing has proved to be a very effective and efficient tool in several areas such as the irradiation of healthcare products, pharmaceuticals and food. The Nigerian government therefore established a Gamma Irradiation Facility at the Nuclear Technology Centre in Sheda, Abuja, to provide such services and enable research in the country. The IAEA provided training for the facility's staff, as well as advisory support and analytical instruments to enhance effectiveness. With the improved capacities, quality assurance and control requirements for exporting products have been improved. Through its bulk irradiation capability, the facility has helped reduce large post-harvest losses and supported a tsetse and trypanosomiasis eradication campaign.

Research reactor

Nigeria's first research reactor – NIRR-1 – was installed at the Centre for Energy Research, with IAEA supported training for its staff conducted at the Ahmadu Bello University in Zaria, Nigeria. The NIRR-1 was configured for education and training use, neutron activation analysis and some radioisotope production. However, growing demand for radioisotopes for medical therapeutic applications and new material development, as well as requirements for basic research to support the planned Nuclear Power Programme is beyond the range of NIRR-1's design. Nigeria now plans to acquire a new higher capacity research reactor to meet these needs. In November 2017, IAEA supported the planning and development of a new multipurpose research reactor. The IAEA technical cooperation programme will also consolidate and reposition current research reactor needs and utilization strategy, and will support capacity development for planning, development, utilization and maintenance of the reactors.

Animal health

To improve animal productivity in Nigeria's small farms, the IAEA supported the use of nuclear and molecular techniques to detect and control parasitic and animal diseases. The project helped improve the capacities of the National Animal Production Research Institute of the Ahmadu Bello University in Zaria through staff training, advisory services and the provision of analytical equipment. The activity saw a reduction in the mortality rate of small ruminants (such as goats and sheep) and an increase in farmers' livestock.

Active national projects

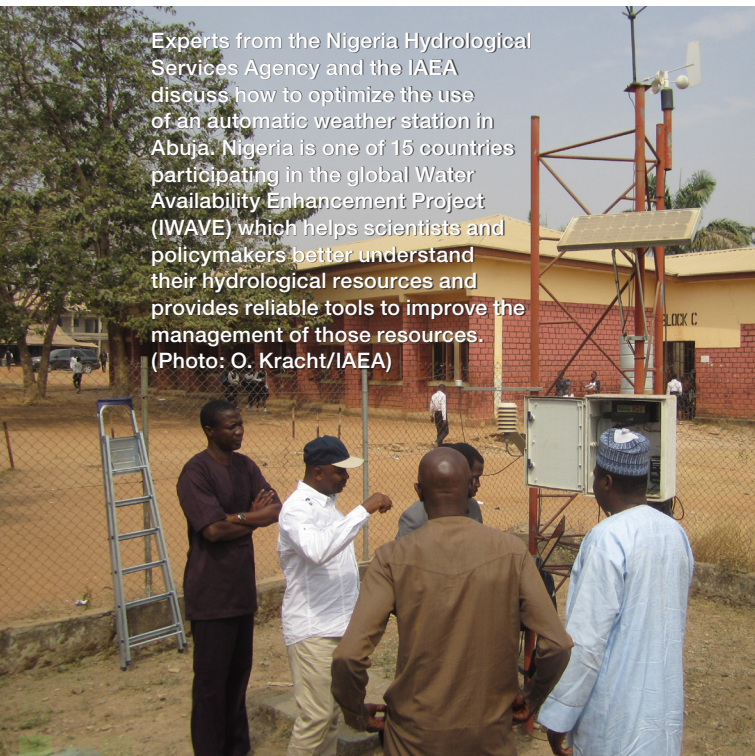
- Strengthening National Capacity for Nuclear Instrumentation, Repairs and Maintenance (NIR0010)
- Developing Nuclear Power Infrastructure for Education and Training and National Capacity for Radioactive Waste Management (NIR2008)
- Enhancing Dietary Exposure Assessment of Chemicals in Food (NIR5039)
- Controlling Parasitic and Transboundary Animal Diseases to Improve Animal Productivity in Smallholder Farms Using Nuclear and Molecular Techniques (NIR5040)
- Planning and Establishing a National Post-Graduate Programme in Nuclear Medicine (NIR6026)
- Strengthening the National Framework for Post-Graduate and Clinical Training in Radiotherapy (NIR6027)
- Designing and Developing a National Ambient Air Quality Monitoring Network for Potential Mega Cities (NIR7004)
- Developing National Capacity for Regulating the Siting and Construction Phases of Nigeria's Nuclear Power Programme (NIR9012)

Nigeria also participates in 28 regional and 7 interregional projects, mostly in the area of energy planning and nuclear power.

Previous IAEA support to Nigeria

In recent years, IAEA support focused on nuclear power, control of parasitic and transboundary animal diseases, urban air quality monitoring, the analysis of chemical contaminants in food, and on the establishment of a national post-graduate programme in nuclear medicine.

Experts from the Nigeria Hydrological Services Agency and the IAEA discuss how to optimize the use of an automatic weather station in Abuja. Nigeria is one of 15 countries participating in the global Water Availability Enhancement Project (IWAVE) which helps scientists and policymakers better understand their hydrological resources and provides reliable tools to improve the management of those resources. (Photo: O. Kracht/IAEA)



IAEA support to Nigeria, 2009–2019



847 trained
(including 159 women)

137 international experts provided

211 attended specialist meetings
(including 23 women)

Priority areas of support

- Improved human health and nutrition
- Developing the food and agriculture sector
- Protecting water resources and the environment
- Improving nuclear radiation safety and security
- Strengthening energy supply and industry
- Research reactors

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

82 expert and lecturer assignments provided by Nigeria

313 training course participants

41 fellows or scientific visitors hosted

Based on data available as of April 2020

Cancer control impact Review conducted: February–March 2011

Strategic documents supported

- United Nations Development Assistance Framework (2018–2022)
- 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.