Ghana

IAEA Member State since September 1960

IAEA Technical Cooperation Programme

Key achievements in Ghana

- 2016: Pelletron accelerator inaugurated at the Ghana Atomic Energy Commission.
- 2014: Ghana Technology Transfer and Marketing Centre established.
- 2006: Graduate School of Nuclear and Allied Sciences established.

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 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.

Recent project successes

Human resource development

The Graduate School of Nuclear and Allied Sciences was established with IAEA support at the Ghana Atomic Energy Commission (GAEC) in cooperation with the University of Ghana. It aims to develop specialist skills in nuclear science and technology in both Ghana and the rest of Africa.

The school currently offers 12 accredited Master's and PhD programmes, as well as postgraduate courses in Radiation Protection. In September 2014, the IAEA recognized the school as a Regional Designated Centre for Education in Medical Physics.

Agriculture

The IAEA has provided training, fellowships and scientific visits to build Ghana's capacity in modern plant propagation techniques, such as tissue culture and mutation breeding.

In collaboration with the Ghana Flower Growers Association, the GAEC has been training flower growers in propagation techniques in order to enhance their agricultural productivity. This newly strengthened agricultural capacity will potentially provide sustainable job opportunities, particularly to the nation's young.

Research reactor

With support from the IAEA, Ghana successfully completed the conversion of its only research reactor from using highly enriched uranium (HEU) fuel to low enriched uranium (LEU) fuel, in 2017, as part of an international project to decrease the proliferation risks associated with HEU fuel. This conversion reduced the enrichment level from over 90 percent uranium to below 20 percent without affecting the reactor's research capabilities. Ghana was the first of five countries operating a Chinese-supplied Miniature Neutron Source Reactor to successfully convert and repatriate its irradiated HEU core to China.

Ghana is actively working with the IAEA to promote female participation in science and technology education, research and innovation, to redress a gender imbalance at the professional level in the nuclear field.
(Photo: Thykingdom Kudesey/GAEC)

SUSTAINABLE DEVELOPMENT GOALS

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Active national projects

- Establishing Nuclear Power Infrastructure for Electricity Generation (GHA2005)
- Developing Human Resources Capacity to Support Education, Research and Training at the Graduate School of Nuclear and Allied Sciences (GHA0019)
- Sustaining Regulatory Infrastructure for the Control of Radiation Sources and Nuclear Materials (GHA9008)
- Using Irradiated Pollen for the Development of Provitamin A Rich, Drought Tolerant and Cassava Mosaic Disease Resistant Cassava Mutants (GHA5038)
- Developing Human Resources Capacity to Support Education, Research and Training at the Graduate School of Nuclear and Allied Sciences (GHA0018)
- Utilizing Ion Beam Analytical Techniques for Research and Training (GHA1013)
- Establishing Nuclear Power Infrastructure for Electricity Generation - Phase IV (GHA2004)
- Using Irradiated Pollen for the Development of Provitamin A Rich, Drought Tolerant and Cassava Mosaic Disease Resistant Cassava Mutants (GHA5037)

Ghana also participates in 52 regional and 8 interregional projects, mostly in the area of capacity building and programme knowledge sharing.

Previous IAEA support to Ghana

Previous IAEA support to Ghana targeted high priority areas in the utilization of nuclear science and technology. This included technical assistance provided to the Government for the possible introduction of nuclear power; the establishment of the School for Nuclear and Allied Sciences, which produces a large number of graduates in several nuclear science and technology related areas; and support for the recently commissioned ion beam accelerator facility at the GAEC, which is used to train young scientists in the use of advanced nuclear analytical methods.

IAEA support to Ghana, 2009–2019

784 trained (including 117 women)

97 international experts provided

246 attended specialist meetings (including 14 women)

Priority areas of support

- Improving human health and nutrition
- Supporting the food and agriculture sector
- Strengthening the management of water resources
- Improving energy supply

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

183 expert and lecturer assignments provided by Ghana

659 training course participants

316 fellows or scientific visitors hosted

Based on data available as of April 2020

Cancer control imPACT Review conducted: November 2005

Strategic documents supported

- United Nations Development Assistance Framework 2018–2022
- Country Programme Framework 2017–2021, signed in September 2016

www.iaea.org/technicalcooperation

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