

Bangladesh

IAEA Member State since September 1972

Selected achievements

2021: Bangladeshi experts develop improved cotton varieties in a record time of five years with the help of nuclear techniques.

2017: Bangladesh begins the construction of its first nuclear power plant in Rooppur.

2017: Bangladesh triples its rice production through the introduction of plant mutation breeding, doubling yields in a shorter time with more harvests.



Bangladesh's first nuclear power plant (NPP), Rooppur NPP, under construction in December 2022. (Photo: J. Liou/IAEA)

National priorities

- Nuclear power applications
- Food and agriculture
- Human health
- Environment, soil and water resources
- Radiation protection, nuclear safety and security

Main areas of IAEA support

- Development of nuclear power infrastructure
- Introduction of nuclear power
- Establishment of a national nuclear technology training center

Project successes

Energy planning and nuclear power

With IAEA support, Bangladesh is making progress towards its goal of producing 9 per cent of its electricity from its nuclear power plant in Rooppur by 2025.

Since 2017, the IAEA has helped Bangladesh to revise its draft nuclear law to align with international conventions and legal instruments.

Support was also provided for the development and review of regulations, site evaluations and the establishment of a radioactive waste management system.

In 2022, the IAEA supported Bangladesh in organizing an Integrated Regulatory Review Service (IRRS) Mission to review and strengthen regulatory infrastructure required for ensuring the safety of the country's nuclear power programme. Based on the mission's findings and report, the country has updated its action plan for improvement of its regulatory system.

This assistance has enhanced Bangladesh's long term capacity for safe and sustainable nuclear energy production, reducing reliance on fossil fuels and contributing to the energy needs of millions of homes.

Food and agriculture

With support from the IAEA and the FAO, Bangladesh has been able to develop new and improved cotton varieties in just five years using nuclear techniques.

Thanks to concerted efforts, the Cotton Development Board of the Ministry of Agriculture employed mutation breeding to enhance yields and increase farmers' income by 40 per cent.

The new cotton variety CDB Tula 1 was officially released and registered in 2021, providing an impressive example of the effectiveness of nuclear techniques and demonstrating its potential for accelerating agricultural innovation and increasing productivity.

Human health

The dengue virus affected all 64 districts of Bangladesh in 2023, with around 45 per cent of the confirmed dengue cases reported in Dhaka district. The IAEA helped the country to apply the sterile insect technique as part of their area-wide integrated pest management programme.

The IAEA helped establish a basic rearing protocol and build a rearing insectary to enable rearing and release of sterile male mosquitos in Dhaka.

Support was also provided through fellowships and scientific visits to build capacity on mass rearing insects and the use of the sterile insect technique.



With IAEA support, Bangladesh applies nuclear techniques to increase its production of crops. In Mymensingh, farmers have tripled their rice production using new varieties of rice. (Photo: IAEA)

Participation in the major initiatives

- NUTEC Plastics
- ZODIAC

Date of imPACT Review(s)

2013

IAEA support received in the 21st century



Contributions to South-South and triangular cooperation

