FNCA 17TH MINISTERIAL LEVEL MEETING

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Country Report: Bangladesh

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Additional Secretary
Ministry of Science and Technology

Presentation Outline

- FNCA Projects at a glance
- Nuclear Science & Applications
  - Policy
  - some achievements
  - Stakeholder involvement
- Nuclear Energy….
  - Policy
  - Current Status
  - Stakeholders involvement

FNCA Projects in Bangladesh

Sl. No.	Name of the project	Name of the Project Leader
1.	Mutation Breeding	Dr. A.N.K. Mamun, CSO, BAEC
2.	Biofertilizer	Dr. Md. Kamruzzaman Pramanik, PSO, BAEC
3.	Electron Accelerator Application	Dr. Salma Sultana, PSO, BAEC
4.	Radiation Oncology	Dr. A .F.M.Kamal Uddin, Ast. Prof., NIENT
5.	Research Reactor Network	Dr. Md. Jahirul Haque Khan, CSO, BAEC
6.	Neutron Activation Analysis	Dr. Kamrun Nahar, PSO, BAEC
7.	Safety Management Systems for Nuclear Facilities	Dr. Engr. Md. Abdus Salam, CE, BAEC
8.	Radiation Safety and Radioactive Waste Management	Dr. M. Moinul Islam, CSO, BAEC
9.	Human Resources Development	Dr. Syed Mohammod Hossain, CSO, BAEC
10	Nuclear Security and Safeguards	Dr. Abid Imtiaz, PSO, BAEC

Nuclear Sciences and Applications

Policy

- **Vision:**
  - Promotion of nuclear science and technology for peaceful uses of atomic energy to achieve self-reliance for socio-economic development of Bangladesh
- **Mission:**
  - Promotion of fundamental, advanced and applied research programs involving nuclear science and technology in various fields of physical, biological and engineering disciplines
  - Implementation of nuclear power programme
  - Rendering nuclear technology based services to various stakeholders
  - Application of nuclear technology in agriculture, industry, health and environment
  - Development of human resources in the area of nuclear science and technology
  - Establishment of radiation safety culture
  - Application of nuclear technology in exploration of mineral resources

Recent Achievements

Nuclear Sciences and Applications

Nuclear Medicine

Press Centre Employment Contact

IAEA International Atomic Energy Agency

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Home / News / How Bangladesh is Breaking Down Barriers to Nuclear Medicine

How Bangladesh is Breaking Down Barriers to Nuclear Medicine

Nicole Jawerth, IAEA Office of Public Information and Communication

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Bangladesh is building a nuclear medicine system with well-trained medical staff, advanced imaging tools and a cost-effective source of essential radiopharmaceuticals. (Photo: N. Jawerth/IAEA)

Dhaka, Bangladesh – The number of people who can affordably access diagnostic medical care in Bangladesh has increased three times over the last ten years, as the country has expanded and strengthened its nuclear medical services. Health officials have worked steadily, with the support of the IAEA, to build a nuclear medicine system with well-trained medical staff, advanced imaging tools and a cost-effective source of essential radiopharmaceuticals.

Related Stories


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Related Resources

- Bangladesh National Institute for Nuclear Medicine and Allied Sciences (NINMAS)
- Bangladesh Institute of Nuclear Science & Technology (INST)
- IAEA Human Health Campus
- Training the Medical Staff

This article presents - how Bangladesh enhanced affordable Nuclear Medicine services three times within a decade with the help of it's self produced cost-effective Radiopharmaceuticals

Nuclear Sciences and Applications

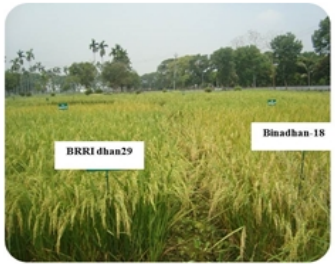
Mutation Breeding Project

IAEA | MVD Mutant Variety Database

Home | Search | Variety | Registration | Joint FAO/IAEA Division | FAO

Binadhan-18

Mutant Variety ID	4452
Latin Name	Oryza sativa L.
Common Name	Rice
Country	Bangladesh
Contact	Md. Abul Kalam Azad
Description	Four hills were selected in the M2 generation from 40 Gy irradiated seeds of BRRI dhan29 in irrigated Boro season of 2010 (year of mutagenic treatment: 2009). The M3 plant populations were transplanted in the following rainfed season (T.aman season) of the same year in separate plots following hill to progeny-rows and all together 28 hills were further selected from the plants of the four hills. M4 and M5 were grown in irrigated Boro and rainfed T. aman seasons, respectively, of 2011. In 2012 preliminary yield trial was conducted with 10 M6 mutants in the irrigated Boro season and the mutant RM(2)-40(C)-1-1-10 was finally chosen for Advance Trial in the following irrigated Boro season in 2013. Zonal Yield Trial was conducted in Boro season of 2014 and finally released in 2015 by the National Seed Board of Bangladesh.
Development Type	Direct use of an induced mutant



Binadhan-18 is registered recently in the Joint FAO/IAEA Mutant Variety Database.

Nuclear Sciences and Applications

Mutation Breeding Project

- **Binadhan-14 & Binadhan-18 :**

  This two varieties are developed through carbon ion beams irradiation with the help of FNCA

Characteristics	Binadhan-14	Binadhan-18
Year of release	2013	2015
Maturity	**120-130 days**	**148-153 days**
Yield (max.)	**7.6 t/ha**	**10.5 t/ha**
Yield (avg.)	**6.85 t/ha**	**7.25 t/ha**

NUCLEAR SCIENCES AND APPLICATIONS

Mutation Breeding Project

Stakeholder Involvement

MEMORANDUM OF UNDERSTANDING (MoU)

BETWEEN

BAEC & LAL TEER SEED LIMITED

BAEC provides irradiation, other scientific facility to develop new varieties.
Lal Teer Seed ltd. provides field facility and help to release new varieties.

Nuclear Sciences and Applications

Stakeholder Involvement

- **BAEC has bilateral agreement for cooperation with the following countries :**
  - Japan
  - USA
  - Russian Federation
  - Republic of Korea
  - China
  - Malaysia
  - India
  - Belarus

Nuclear Energy

National Vision for Nuclear Power

Policy

- ✓The Government of the People's Republic of Bangladesh envisaged vision to transform the country into a middle income country by 2021 and a developed country by 2041;
- ✓Based on several studies conducted so far, nuclear energy has been identified as a viable option;
- ✓National energy planning includes improving electrical grid, installing nuclear generation capacity of about 2400 MW by 2021;
- ✓National decision on introduction of nuclear power becomes a reality for Bangladesh;
- ✓Necessity for implementation of NPP project was reflected in the electoral manifestos of all major political parties in 2008;
- ✓A decision for immediate implementation of the NPP was taken by the national parliament in 2010;
- ✓A National Committee on RNPP, headed by the Honourable Prime Minister was formed in 2010;

Nuclear Energy

Current Status

Status of Rooppur NPP Project

- ✓ General Contract for the Main Stage of Rooppur NPP Contraction has been signed on 25th December 2015;
- ✓ Inter-governmental credit agreement (IGCA) for financing the Main stage construction of Rooppur NPP has been signed on 26th Jun 2016.
- ✓ Preparatory Phase of Rooppur NPP construction will be completed by the middle of 2017.
- ✓ The Construction License of RNPP is expected in June 2017.
- ✓ First Concrete Date is scheduled on 01 August 2017.

Nuclear Energy

Stakeholder Involvement

- **BAEC is working with all the relevant stakeholders some of which are as given below:**
  - Bangladesh Power Development Board (BPDB).
  - Power Grid Company of Bangladesh (PGCB).
  - Bangladesh Telecommunications Company Ltd.(BTCL).
  - Department of Public Works (PWD)
  - Bangladesh Railway (BR).
  - Bangladesh Inland Water Transport Authority (BIWTA)
  - Dhaka University
  - Bangladesh University of Engineering and Technology (BUET), etc.

Concluding Remarks

- Bangladesh believes that peaceful applications of nuclear technology is very much needed for the socioeconomic development of the country.
- Government is providing strong support to the NE program and also to the programs that involve application of radioisotopes such as Nuclear medicine, Nuclear agriculture, Hydrology and Industry.
- Bangladesh is thankful to its international strategic partners, such as, IAEA/RCA, FNCA for their help and cooperation in NE applications and expects that these will be continued in days to come as well.

Thank You all