VOL 22 NO 01 JANUARY 2025

# South Asia Biosafety Program

**NEWSLETTER FOR PRIVATE CIRCULATION ONLY - NOT FOR SALE** 

Draft Notification: Gazette ID CG-DL-E-02012025-259846

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### The South Asia Biosafety Program's Year in Summary: 2024

Dil Afroj Moni, Program Officer, South Asia Biosafety Program



Dr. Andrew F. Roberts (Keynote Speaker), Dr. Rehana Yasmin (Special Guest), Dr. Shaikh Mohammad Bokhtiar (Chief Guest), Dr. Zahurul Karim (Special Guest), Dr. Md. Abdus Salam (Chairperson), and Dr. Rakha Hari Sarker (Welcome Speaker) at the Conference on Genome Editing for Agriculture in Bangladesh (11 February 2024).

"Recognizing the importance of genome

editing and its potential role in addressing

food and nutritional security, the

**Bangladesh Agricultural Research Council** 

(BARC) and the South Asia Biosafety

Program (SABP) jointly organized the

**Conference on Genome Editing for Agriculture** 

in Bangladesh on 11 February 2024."

With great optimism and enthusiasm, the South Asia Biosafety Program (SABP) successfully concluded another eventful and successful year, organizing a series of initiatives aimed at empowering scientists and regulators with enhanced biosafety capacity and scientific knowledge. For many years, SABP has played a pivotal role in biosafety capacity building, collaborating with public research institutes and universi-

ties to ensure the effective implementation of biosafety regulatory processes. Through a consistent platform of awareness programs, educational workshops, and high-level conferences, SABP has fostered informed discussions on agricultural biotechnology and biosafety, driving progress in the field.

Throughout last year, SABP organized meetings, training programs, and workshops with

its partners and stakeholders to facilitate biosafety compliance with the regulatory framework for products of modern biotechnology in Bangladesh. SABP also undertook other initiatives to contribute to the biotechnology research community that will eventually benefit the country's sustainable development goals.

Recognizing the importance of genome editing and its potential role in addressing food and nutritional security, the Bangladesh Agricultural

Research Council (BARC) and the South Asia Biosafety Program (SABP) jointly organized the "Conference on Genome Editing for Agriculture in Bangladesh" on 11 February 2024 at the BARC auditorium. The event brought together experts, scientists, university faculty, and representatives from both public and private agricultural institutions. Speakers, including Dr. Shaikh Mohammad Bokhtiar, Executive Chairman of BARC,

and Dr. Andrew F. Roberts, CEO of the Agriculture and Food Systems Institute (AFSI), emphasized biotechnology's potential benefits for Bangladesh's agricultural sector.

A significant milestone highlighted during the conference was the approval of the *Stan*dard Operating Procedures (SOP) for the Research and Release of Genome-Edited Plants (Categories SDN-1 and SDN-2) by the Ministry of Agriculture

on 11 December 2023. This approval marks a crucial step in advancing biotechnological research in Bangladesh, facilitating the development and deployment of genome-edited crops. The initiative is expected to open new opportunities for agricultural innovation, supporting the country's efforts to enhance food security and sustainability.

To support ongoing developments in agricultural biotechnology, the Agriculture and Food Systems Institute's South Asia Biosafety Program

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"To support ongoing developments in

agricultural biotechnology, [...] SABP

designed a series of capacity-building

**Workshops on Standard Operating** 

**Procedures for Research and Release of** 

Genome Edited Plants in Bangladesh."

Participants at the first Workshop on Standard Operating Procedures for Research and Release of Genome Edited Plants in Bangladesh (13 February 2024).

(SABP) designed a series of capacity-building "Workshops on Standard Operating Procedures for Research and Release of Genome Edited Plants in Bangladesh" to facilitate knowledge-sharing among scientists and regulators on genome editing. Three workshops were organized

under the auspices of the SABP, in collaboration with the Bangladesh Academy of Sciences (BAS), Biotech Consortium India Limited (BCIL), and the Agriculture and Food Systems Institute (AFSI). These workshops aimed to enhance researchers' understanding of regulatory guidelines, SOPs, and necessary steps for developing

and releasing genome-edited crops in Bangladesh. The first workshop was held on 13 February 2024, and two more were organized on 22 and 23 April 2024. Discussions during these workshops centered around the favorable regulatory framework for the release of SDN-1 and SDN-2 type of genome edited plants in Bangladesh. Experts talked about practical

considerations of genome editing in plants, techniques for identifying transgene-free genome-edited plants prior to release, the global regulatory landscape for this suite of technologies, and the complexities related to intellectual property of genome edited plant varieties.

On 4 December 2024, the United States Department of Agriculture (USDA), in collaboration with the Agriculture & Food Systems Institute (AFSI) and the South Asia Biosafety Program (SABP), hosted the "Bangladesh Stakeholder Consultation on Agricultural Biotechnology". The day-long stakeholder consultation gath-

ered 54 participants from the National Agricultural Research System (NARS), private seed companies, and universities, from whom feedback was solicited to assess Bangladesh's operational needs for advancing biotechnology. Details about this event are covered in a separate article in this issue of the newsletter.



Participants at the second Workshop on Standard Operating Procedures for Research and Release of Genome Edited Plants in Bangladesh (22 April 2024).



Participants at the third Workshop on Standard Operating Procedures for Research and Release of Genome Edited Plants in Bangladesh (23 April 2024).

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The Bangladesh Biosafety Portal (bangladeshbiosafety.org) serves as a crucial online resource for researchers and regulators working on agricultural biotechnology in Bangladesh. It provides comprehensive information on biosafety regulations, policies, and guidelines, helping stakeholders navigate the regulatory framework for genetically engineered and genome-edited plants. Launched in 2017 by SABP, the portal has undergone multiple updates, including a major revision in 2021 that enhanced its usability and accessibility.

In 2024, the portal was further updated to include newly approved documents, such as the *Standard Operating Procedures (SOPs)* for *Research and Release of Genome Edited Plants (SDN-1 and SDN-2)*, which was approved by the Ministry of Agriculture in December 2023. Additionally, the third installment in the SABP Resource Book Series, *Frequently Asked Questions: Genome Edited Plants*, was published on 4 April 2024 and featured on the homepage.

The portal organizes biosafety-related documents into sections covering agriculture, biotechnology, environment, and food safety. The *National Biosafety Policy (2024)* gazette on 22 August 2024, is included in the Biosafety Regulatory Documents section, alongside other key policies such as the *National Seed Policy (2018), National Agricultural Extension Act (2020)*, and *National Biotechnology Policy (2024)*. Updates also include the final versions of the SOPs for GE cotton and the approval document for Bt cotton (2023). Users can also access national and international regulatory resources, e-learning modules from AFSI, the *SABP Newsletter*, and information about past awardees of the Biosafety Research in Bangladesh Grants Program (BRBGP). The portal also houses 61 crop biology

documents from Australia, India, Canada, and the OECD, along with links to the AFSI Crop Composition Database (CCDB).

Since its 2021 update, the portal has recorded over 46,317 active users (as of 31 December 2024), highlighting its role in facilitating regulatory compliance and advancing biotechnology research. The latest updates aim to further strengthen Bangladesh's agricultural biotechnology landscape by providing easy access to essential regulatory and technical resources.

The South Asia Biosafety Program proudly continues to publish its monthly *SABP Newsletter*, reaching 1,500 Bangladeshi and over 29,000 international recipients. The newsletter highlights SABP's activities in South Asia and updates on biosafety and biotechnology. For 19 years, SABP has been working to establish transparent, efficient, and responsive regulatory frameworks in Bangladesh, and this has only been made possible through collaboration with stakeholders and partners. SABP expresses gratitude for immense support and commitment from our stakeholders and partners, which continues to enable us to deliver impactful events.

LINKS

More information about the events described in this article can be found at:

foodsystems.org/sabp

Access the Bangladesh Biosafety Portal and resources mentioned in this article at: bangladeshbiosafety.org

### INDIA

## Draft Notification on the Manufacture, Use, Import, Export and Storage of Hazardous Micro-Organisms/Genetically Engineered Organisms or Cells (Amendment) Rules, 2024

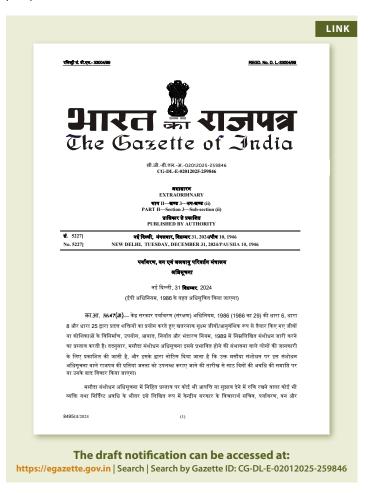
Dr. Vibha Ahuja, Chief General Manager, Biotech Consortium India Limited (BCIL)

The Ministry of Environment, Forest and Climate Change (MoEF&CC) issued the "Draft Manufacture, Use, Import, Export and Storage of Hazardous Micro-Organisms/Genetically Engineered Organisms or Cells (Amendment) Rules, 2024," to further amend the Manufacture, Use, Import, Export and Storage of Hazardous Micro-Organisms/Genetically Engineered Organisms or Cells Rules, 1989, on 31 December 2024

Any objections or suggestions to the draft rules should be sent to: Secretary, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh road, New Delhi - 110003, and/or to the e-mail: <a href="mailto:geac.secretariat@gov.in">geac.secretariat@gov.in</a>, on or before sixty days after the publication of this notification.

The following has been stated, namely:

- In rule (3), after sub-rule (v), a new sub-rule shall be inserted:
   (vi) "Conflict of interest" means any personal interest or association of a Member, which is likely to influence the decision of the Committee in a matter, as viewed by an independent third party.
- 2. After rule 4, a new rule shall be inserted:
  - 4(A) Code On Conflict Of Interest For Expert Members
  - The Expert member of the committees, as specified at Rule 4, who participate in any decision-making process, shall abide by the code on conflict of interest as specified in schedule II.
- 3. Wherever the word 'Schedule' is mentioned in the principal notification, it shall be read as:
  - Schedule-I
- 4. After Schedule-I, a new Schedule-II shall be inserted, namely: CODE ON CONFLICT OF INTEREST FOR EXPERT MEMBER(S) OF THE COMMITTEES IN RULE 4A.



### **Bangladesh Stakeholder Consultation on Agricultural Biotechnology**

Dil Afroj Moni, Program Officer, South Asia Biosafety Program (SABP)



Ms. Sarah Gilleski, USDA Foreign

Agricultural Service Agricultural Attache,

spoke about the United States-Bangladesh

relationship and their mutual interest

in agricultural biotechnology

research and development.

Group photo of speakers, guests, and participants at the Bangladesh Stakeholder Consultation on Agricultural Biotechnology (4 December 2024)

On 4 December 2024, the United States Department of Agriculture (USDA), supported by the Agriculture & Food Systems Institute (AFSI) and the South Asia Biosafety Program (SABP), organized a one-day stakeholder consultation to engage with researchers within the National Agricultural Research System (NARS), private sector seed industry developers, and other stakeholders in Bangladesh.

Dr. Rakha Hari Sarker, Professor in the Botany Department at Dhaka University and Country Coordinator for SABP, opened the inaugural session. Dr. Andrew Roberts, CEO of AFSI and Lead for SABP, provided remarks on the worldwide context of biotechnology and biosafety. Ms. Sarah Gilleski, USDA Foreign Agricultural

Service Agricultural Attache, spoke about the United States-Bangladesh relationship and their mutual interest in agricultural biotechnology research and development. The event was attended by 52 participants from private and public colleges, national agricultural research organizations, and seed firms.

Dr. Md. Abdus Salam, Member Director, Crop Division, Bangladesh Agricultural Research Council (BARC), gave the keynote speech, providing a summary of Bangladesh's National Agricultural Research Institutions and current agricultural biotechnology research and development projects. The Chief Guest, Dr. Mohammad Emdad Ullah Mian, Honorable Secretary of the Ministry of Agriculture, Bangladesh, and

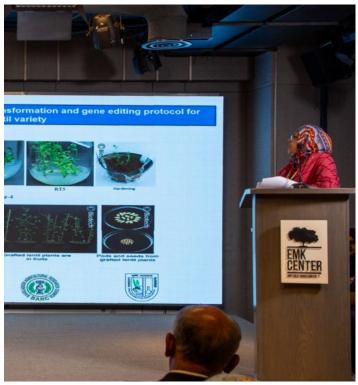
the Special Guest, Dr. Nazmun Nahar Karim, Executive Chairman, Bangladesh Agricultural Research Council, concluded the inaugural ceremony with closing remarks.

Dr. Mahmuda Khatan, Chief Scientific Officer of the Bangladesh Agricultural Research Institute (BARI), Dr. Mohammad Khalequzzaman,

Director General of the Bangladesh Rice Research Institute (BRRI), and Dr. Md. Fakhre Alam Ibne Tabib, Executive Director of the Cotton Development Board (CDB), gave presentations on research and development during the first session. These talks provided information on a range of ongoing agricultural biotechnology research and development



Dr. Md. Abdus Salam delivering the keynote presentation (4 December 2024)



Dr. Mahmuda Khatun speaking about research at BARI (4 December 2024).

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Dr. Andrew Roberts moderating the questions and discussion session at the stakeholder consultation (4 December 2024).

initiatives, such as advancements in cell culture, transgenic crops, and genome editing methods.

The second session included a talk from Mohammad Mizanur Rahman, Business Operation Manager at ACI Seed. Mr. Rahman talked about the efforts of ACI Seed to provide farmers in Bangladesh with improved varieties for a number of important crops and highlighted the potential for the private sector to contribute more, if enabled by a supportive regulatory system. Dr. Andrew Roberts' talk in this session focused on the fundamentals of safety while conducting research and development. Dr. Roberts also talked about initiatives at the OECD and other organizations that document the types of non-regulatory methods developers employ to make sure their research projects are carried out in

a way that satisfies social and governmental expectations for the safety of researchers, as well as the environment.

The goal of this consultation was to identify operational needs that Bangladesh should take into account as the country continues to advance in biotechnology. The participants were intently engaged during Q&A sessions and the open discussion session intended for the workshop's conclusion. Researchers from the NARS institutes shared technical concerns and questions, especially regarding current research and development initiatives. The discussions during the workshop indicated that research on agricultural biotechnology is of interest. The consultation served as an appropriate platform for research institutions and a diverse set of stakeholders to share information about ongoing research and development.

#### INDIA

### Pocket Guide: Promoting Effective Access to Information and Public Participation Regarding Living Modified Organisms/Genetically Modified Organisms

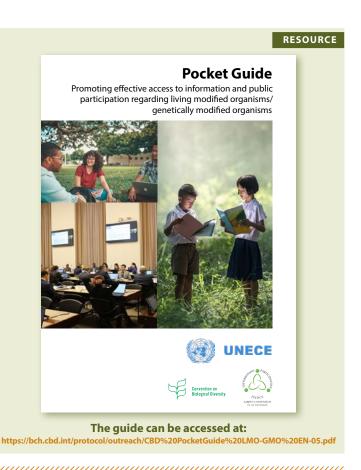
Dr. Vibha Ahuja, Chief General Manager, Biotech Consortium India Limited

The Pocket Guide: Promoting Effective Access to Information and Public Participation Regarding Living Modified Organisms/Genetically Modified Organisms was prepared jointly by the Secretariats of the Aarhus Convention and the Convention on Biological Diversity (CBD), the latter also serving as Secretariat of the Cartagena Protocol on Biosafety. The joint work aligns with the objectives of the Kunming Montreal Global Biodiversity Framework and important targets on biosafety and biotechnology (Target 17) and access to justice (Target 22).

This guide is a practical tool to support the implementation of relevant provisions in the two conventions, i.e., Article 23 of the Cartagena Protocol on Biosafety to the CBD and the United Nations Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision Making, and access to Justice in Environmental Matters (Aarhus Convention), including its amendment regarding GMOs.

Section 1 of the guide describes the benefits of providing effective access to information and public participation in decision-making and Section 2 highlights systemic challenges countries may come across when seeking to advance public participation and access to information. Priority areas to improve access to information and public participation to better implement the Aarhus Convention, its GMO amendment, and the Cartagena Protocol have been described in Section 3.

The guide is an important resource for governments and other stakeholders to strengthen their capacities in ensuring effective access to information and fostering meaningful public participation in decision making related to living modified organisms (LMOs)/genetically modified organisms (GMOs).



EVENT	ORGANIZED BY	DATE	WEBSITE
INDIA			
National Symposium on Harnessing Potato Innovations and Diversity for Food and Nutritional Security	ICAR-Central Potato Research Institute	27-29 January 2025 Modipuram	https://cpri.icar.gov.in/
Hands-On Training and Workshop on Genome Editing in Plants: Advanced Tools and Techniques	ICAR-Indian Agricultural Research Institute	3-7 and 10-14 February 2025 New Delhi	https://www.iari.res.in/bms/ announcements/training.php
International Conference on Science and Technological Innovations in Agriculture Life Sciences and Food and Nutrition	Swami Vivekanand University	4-6 February 2025 Barrackpore	https://www.swamivivekananda university.ac.in/
ICAR-Sponsored Short Course: Insecticide Resistance Management Strategies with Major Emphasis on Cotton Insect Pests	ICAR-Central Institute for Cotton Research	10-19 February 2025 Nagpur	https://cicr.org.in/
ICAR-Sponsored Winter School: Frontier Technologies in Crop Improvement, Production, and Extension for Horticultural Research & Its Industrial Application	ICAR-Central Potato Research Institute	12 February-4 March 2025 Shimla	https://cpri.icar.gov.in/
International Conference on Advances in Plant Health Improvement for Sustainable Agriculture	Tamil Nadu Agricultural University	14-16 February 2025 Killikulam	https://aphisa-2025.com/ https://tnau.ac.in/news-2/
National Conference-cum-Workshop on Sustainable Biotech Solutions for Global Challenges	Jamia Hamdard University	19-21 February 2025 New Delhi	http://jamiahamdard.edu
XVII Agricultural Science Congress	National Academy of Agricultural Sciences and G B Pant University of Agriculture & Technology	20-22 February 2025 Pantnagar	http://www.17asc2025.in/ https://www.gbpuat.ac.in
Indian Seed Congress 2025: Emerging Technologies– Propelling Seed Revolution	National Seed Association of India	23-25 February 2025 New Delhi	https://isc.nsai.co.in/
Second International Conference on Biological Control: Biocontrol Contributions to One Health (2icbc2025)	Society for Biocontrol Advancement (SBA) and the ICAR–National Bureau of Agricultural Insect Resources	25-28 February 2025 Bengaluru	https://www.nbair.res.in/
Winter School on Climate Smart Maize Agriculture for Food and Energy Security of India	ICAR-Indian Institute of Maize Research & ICAR-Central Institute of Post Harvest Engineering & Technology	5-25 March 2025 Ludhiana	https://iimr.icar.gov.in/



The South Asia Biosafety Program (SABP) is an international development program implemented in India and Bangladesh by the Agriculture & Food Systems Institute (AFSI). SABP aims to work with national governmental agencies and other public sector partners to facilitate the implementation of transparent, efficient, and responsive regulatory frameworks for products of modern biotechnology that meet national goals as regards the safety of novel foods and feeds, and environmental protection.



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