

Terms of Reference

For the Deployment, Operation, and Sustainability of an Automated Voice Alerts System for Mung Bean Farmers in Southern Bangladesh

Background: The International Maize and Wheat Improvement Center (CIMMYT) is a cutting-edge, non-profit international organization committed to addressing tomorrow's challenges today. As a core CGIAR Research Center, part of a global research partnership working toward a food-secure future, CIMMYT is dedicated to reducing poverty, enhancing food and nutrition security, and improving natural resource management.

Focusing on the highly profitable yet weather-sensitive mung bean-producing areas of south-central coastal Bangladesh, CIMMYT has developed a farmer-friendly, demand-driven climate advisory dissemination system. Since 2019, CIMMYT has been delivering automated voice-call warnings to women and men farmers at least five days before heavy rainfall events, based on a localized weather forecasting model developed for Patuakhali and Barguna Districts. These alerts help farmers harvest ahead of extreme rainfall, reducing crop damage and minimizing economic loss. The service has delivered an additional income of BDT 16,000 (USD 191) to BDT 52,500 (USD 615) per hectare, saving 40–50% of yield losses through timely harvesting.

CIMMYT is now seeking social enterprises or technology companies to operate and deploy rainfall-based voice advisory messages to mung bean farmers through an automated voice alerts system and to propose a viable business model (B2B, B2C, or subscription-based) for sustaining the service beyond 2026.

Objective:

- To deploy and operate a customized automated voice alert system that delivers rainfall forecast-based advisory messages to mung bean farmers at the union level in Patuakhali and Barguna Districts during the 2026 harvesting season (March–June).
- To build a sustainable business model (e.g., B2B, B2C, subscription, telecom partnership, or hybrid) to support long-term continuation of the service.

Scope of work: The selected company will be responsible for the development, installation, operation, and maintenance of the automated voice alerts system, including:

System Setup

- Establish an automated voice alerts system capable of handling more than 15,000 registered calls (incoming and outgoing).
- Establish an **incoming call service**, allowing registered users to call the system and listen to voice messages through a menu-based interface.
- Record **750-800 voice clips** in Bengali language using a female voice artist for the voice alerts system.
- Develop a web-based interface that can display the status and history of outgoing and incoming calls, provide detailed call reports, and allow CIMMYT staff to upload, check, and edit voice clips. The interface should also enable scheduling of broadcasts, downloading of call reports, and performing other related system-management activities.

Voice Alert System Menu

- Welcome message
- Rainfall forecast and mungbean harvesting advisory
- Ending message
- Option to return to the main menu to listen again

Condition:

- A new customized voice alerts system will be developed according to the requirements of the International Maize and Wheat Improvement Center (CIMMYT), and all campaigns shall run through this customized system
- CIMMYT will provide the API, which must be integrated into the automated system to broadcast voice calls.
- The company will be responsible for registering a new long-code number for CIMMYT's voice alerts system from which all calls will be broadcasted.
- CIMMYT will provide the message scripts, and the company will record the required 750–800 voice clips in the Bengali language using a female voice artist
- The voice alerts service will operate from March to June 2026 (4 months).
- Incoming/outgoing calls will be allowed only for registered users.
- The current number of registered users is approximately 14,546.
- Voice calls must be broadcast whenever CIMMYT's model predicts rainfall (light/heavy/very heavy rain) within the next 5 days.
- If no rainfall is predicted for 5 consecutive days, the system must broadcast a no-rainfall update every 5 days.
- Voice calls must be deployed/broadcast within 4–5 hours, tentatively between 2:30 PM and 9:00 PM, from March 7 to June 7, 2026 (pausing during Islamic prayer times).
- Female registered users must receive voice calls first, starting at 2:30 PM.
- Length of each outbound call must be 60 to 120 seconds.
- The number of call deployment days must be a minimum of 15 days and a maximum of 40 days.
- Outgoing call listening limit: Users may listen to each call a maximum of 2 times (up to 160 seconds per user per call).
- The incoming call service (menu-based alerts) must be available from March 7 to June 15, 2026.
- Incoming call listening is unlimited (users may call anytime at their own cost)
- The Voice Alert System panel will be hosted at the company/company's data center, and the company will manage all outgoing and incoming calls, system operations, and reporting. The company must share monthly call records and reports with CIMMYT.
- The company must ensure data security, uptime reliability, and uninterrupted service.
- The company will collect and report data generated from system interactions (including polls, if applicable) and provide clear, accessible reports along with any additional insights required by CIMMYT.
- CIMMYT will provide the message scripts, registered farmer lists, and rainfall forecast/advisory content needed for the service. CIMMYT will also review and approve all recorded voice clips and finalize the broadcast schedule before deployment.
- The viability of the proposed business model to sustain the mungbean voice alert system is a key criteria of selection.

Timeline:

- System Development & Setup: February 2026
- Service Deployment: March 7 – June 7, 2026
- Incoming Call Service: March 7 – June 15, 2026
- Final Reporting: July 2026

Additional conditions: Business Model Development

The interested company must propose a practical and financially sustainable business model for future continuation of the voice alert service. This may potentially include:

- Business-to-Business (B2B) partnerships
- Business-to-Consumer (B2C) subscription packages
- Collaboration with seed companies, agro-input dealers, or microfinance institutions
- Telecom or VAS (Value-Added Service) partnerships
- Corporate social responsibility funds
- Other innovative revenue-generation models

The proposal must include:

- Feasibility analysis
- Expected cost structure and revenue streams
- Potential partners
- Operational workflow

Evaluation Criteria: Companies will be evaluated based on:

- Technical experience and capacity
- Prior experience with automated call systems
- Quality and reliability of proposed infrastructure
- Proposed sustainability/business model
- Cost-effectiveness of the financial proposal
- Data security measures
- Quality of customer support

Submission Requirements: Interested companies must submit:

- Company profile
- Technical proposal
- Financial proposal
- Experience with similar systems
- Work plan and implementation timeline
- Proposed business/sustainability model

Submission Instructions and Deadline: Interested companies are requested to submit their **Technical Proposal, Financial Proposal and Business Model Proposal** by email to:

Email: t.amjath@cgiar.org; f.khanam@cgiar.org

CC: ta.hussain@cgiar.org; shahida@cgiar.org

Subject Line: *Proposal for Automated Voice Alerts System – CIMMYT 2026*

Submission Deadline:

All proposals must be submitted no later than December 31, 2025 .

Late or incomplete submissions will not be considered.

Annexes

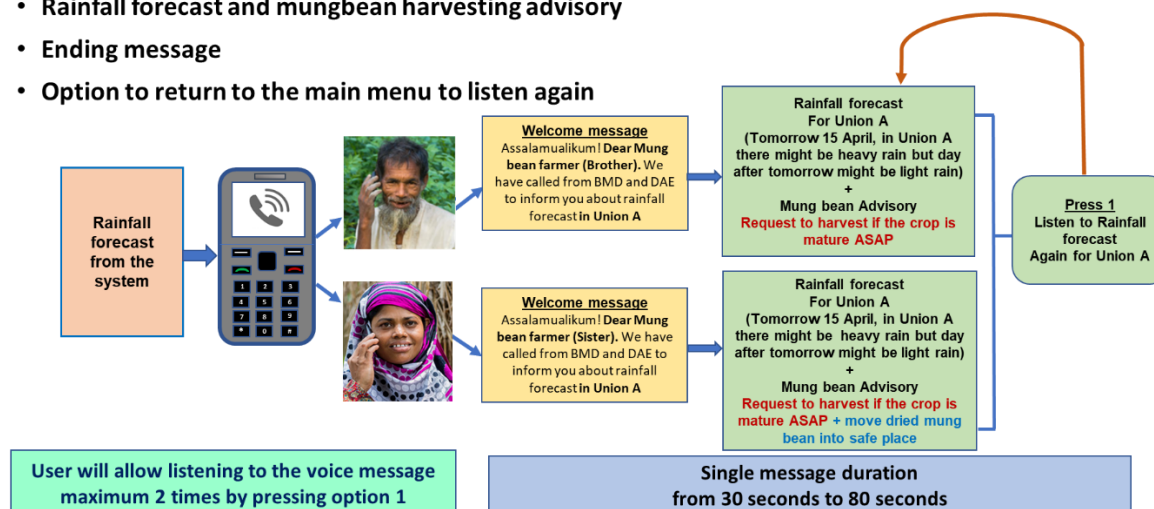
Annex 1: Sample Voice Messages for outgoing & incoming call:

- To listen the sample of the outgoing voice call, please click the following link:
[Outgoing voice-call for woman farmer CIMMYT.mp3](#)
- To listen the sample of the incoming voice call, please click the following link:
[Incoming voice-call for woman farmer CIMMYT.mp3](#)

Annex 2: Flowchart of outgoing voice call from the system to CIMMYT's registered farmers:

Voice Alert System Menu for CIMMYT mung bean farmers

- Welcome message
- Rainfall forecast and mungbean harvesting advisory
- Ending message
- Option to return to the main menu to listen again



Annex 3: Flowchart of incoming voice call when CIMMYT's registered farmers dial to the system :

