Terms of Reference (TOR)

Terms of Reference (TOR) for **Mobile App Development** and Other Necessary Services Provision for **Digital Agriculture Application**

1. Background

   Save the Children implementing partner organizations; Sabal Nepal and Save the Saptari are implementing the Samunnati Project in six Rural/Municipalities of Saptari District. In this working area the organizations are implementing the Child Poverty them under this project and both organizations are focusing on organic agricultural vegetable projection aiming to support families most impacted by inequality and discrimination. In total there are 24 farmers groups (StS 15 and SBL 9) and 486 (Female 403 Male 83) farmers actively engaging in the vegetables and crops production and the project aims to improve their income levels of so that can contribute to their children's nutrition and quality education.

   The project envisions that farmers engaged in crop production through their groups will receive technical support for better yields and greater benefits even after exit of implementing partners. Project aims to develop a Digital Agriculture application through a mobile application to empower farmers by providing essential technical agricultural services for better crop production. This initiative is designed to enhance access to timely and relevant agricultural information, facilitate market opportunities, and offer technical support to farmers, enabling them to make informed decisions and improve productivity to make them financially strong.

   In this initiative the mobile application will be included the key features such as pest and disease detection, a multilingual interface, an emergency helpline, a digital marketplace, and offline access to ensure inclusivity, efficiency, and user-friendliness. Additionally, the app will support to farmers to push notifications, bulk SMS alerts, and a voice-based assistant to cater to diverse user needs, including those with limited literacy.

2. Objectives:

The objective of this intervention is to develop user-friendly mobile application that will function as a Digital Agriculture Platform making the contextual. This platform will enable farmers to access essential agricultural services, market opportunities, and technical support. The application will be designed to enhance efficiency, accessibility, and usability, ensuring that farmers, including those with limited literacy or digital experience, can easily benefit from its features. In short here is mentioned specific objectives in bullet:

- **Pest and Disease Detection:** Provide plant protection insights for prevalent pests and diseases of 19 crops varieties. **Multilingual Interface:** Offer a multilingual interface in Maithili and Nepali.
- **Emergency Helpline:** Link with service provider call center primarily and with government call center either NARC or Department of Agriculture.

- **Knowledge Hub:** Serve as a knowledge hub by providing best practices in vegetable farming either seasonal or off seasonal.
- **Offline Access:** Ensure offline access to critical features to cater to areas with limited internet connectivity.
- **Digital Marketplace:** Develop a digital marketplace to connect farmers with buyers and facilitate agricultural market opportunities.
- **Timely Updates:** Enable push notifications and bulk SMS services to provide timely updates and alerts to non-android mobile phone set holder farmers.

2. **Scope of Work**

For digital agriculture application the selected firm will be responsible for developing a robust and scalable mobile application with the following key components:

Mobile App Development, the mobile application will:

1. **Facilitate Pest and Disease Detection:**
   - ❖ Provide an AI-based image recognition system or expert consultation support to help farmers identify pests and diseases affecting 19 key crops as listed below:
     - ➤ Crops (food grains): Rice, Maize, Wheat.
     - ➤ Food Stuff: Water Melon
     - ➤ Vegetables: Potato, tomato, cauliflower, bitter gourd, cucumber, bottle gourd, sponge gourd, pumpkin, okra, peas and beans, cabbage, radish, carrot and brinjal.
   - ❖ Offer recommendations for disease management, treatment based on scientific research and local agricultural guidelines and mobilize technical person on need basis for field support.

2. **Support Multilingual Accessibility:**
   - ❖ Ensure that the app is available in Maithili and Nepali, language to cater the diverse linguistic background.

3. Link with service provider call center and with government call center.
   - ❖ Integrate an Interactive Voice Response (IVR) system to connect farmers with agricultural experts for real-time assistance.
   - ❖ Provide instant responses to frequently asked questions on farming practices, forecasting weather conditions, and emergency pest outbreaks.

4. **Offer a Knowledge Hub for Agricultural Best Practices:**
   - ❖ Compile a repository of agricultural knowledge, including cultivation techniques, climate-smart farming, pest control etc.
   - ❖ Provide text, audio, and video content for better understanding.

5. **Enable Offline Access for Critical Features:**
   - ❖ Ensure that farmers can access key information even in remote areas with limited internet connectivity.

❖ Implement offline storage for essential resources, including major pest management guides.

6. **Develop a Digital Marketplace:**

❖ Facilitate seamless transactions between farmers and buyers by enabling the sale of agricultural products.

❖ Include user interface for agricultural inputs and tools.

❖ Interface includes location based real time information of local government program, subsidies, provisioning and announcements.

7. **Implement Push Notifications and Bulk SMS Services:**

❖ Deliver real-time updates on weather forecasts, market prices, government schemes, and agricultural best practices.

❖ Use push notifications and SMS alerts to keep farmers informed about time-sensitive information.

8. **Branding and Visibility**

❖ The mobile application must reflect the branding and visibility requirements of Sabal Nepal, Save the Saptari and Save the Children, ensuring that:

❖ The logos of Sabal Nepal, Save the Saptari and Save the Children appear prominently on the home screen, loading screen, and official communications.

❖ Colour schemes, themes, and fonts align with organizational branding guidelines.

9. **Deliverables**

The consultant/firm shall provide the following deliverables:

a. A fully functional mobile application (Android and iOS).

b. User manuals and training materials.

c. Regular progress reports and updates.

d. A detailed testing and debugging report.

e. Post-deployment support for a specified period.

10. **Duration and Timeline:**

The contract will have up to end of November 2025.

• 15 April to 15 June 2025: For app development, testing and orientation to farmers in the field.

• By end of July 2025 all real time information and farmers should be using the app.

• Up to end of November 2025 for post-launch support, maintenance, and upgrades.

A detailed implementation schedule will be agreed upon with the selected firm.

11. **Minimum Qualification Requirements for Bidding Firms**

Interested consultant/firms must meet the following minimum qualifications:

Technical Competence:

- ➢ Proven experience in mobile app development, preferably in agriculture development sectors.
- ➢ Expertise in AI-based image recognition and IVR system integration.
- ➢ Strong capability in multilingual application development and voice-based assistant integration.
- ➢ Experience in developing digital marketplaces and bulk messaging systems.

Legal and Financial Requirements:

- ➢ Must be a legally registered firm in Nepal with a valid business license.
- ➢ Must have at least 3 years of experience in IT solutions or mobile app development.
- ➢ Submission of audited financial reports for the last two fiscal years.
- ➢ Must provide VAT/PAN registration certificate and tax clearance for the last fiscal year.

Human Resource and Infrastructure:

- ➢ The firm must have **a dedicated team** of software developers, UI/UX designers, and testing professionals.
- ➢ Availability of **server infrastructure** to host the digital agriculture platform.

Previous Work Portfolio:

- ➢ Must submit **at least 1 completed mobile app development projects** in a relevant sector.

12. **Monitoring, Evaluation and Reporting:**

The app's effectiveness will be closely monitored by staff from the current partner organizations and Save the Children, who will assess how well the app is working and identify areas that need improvement. They will prepare a report based on their observations. If any technical issues arise during the app's use, the selected firm or consultant will be responsible for fixing and improving the app. After one full seasonal crop production period of using the app, the firm or consultant will prepare and submit a comprehensive report detailing the app's effectiveness, challenges faced, and key lessons learned during the process.