Global Livingston Institute (GLI): Sustainable Farming Collaborative/ Model Farm

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Presentation Outline:

1. **Project Summary: Objectives and Deliverables**

2. **Outlining a Theory of Change (TOC)**

3. **Survey Development: Outcomes and Indicators**

4. **Selecting a Suitable Data Collection Tool**

5. **Recommendations**

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Project Summary

Objectives and Deliverables

Overview: Sustainable Farming Collaborative/Model Farm

When interviews facilitated by past Capstone teams illuminated former child soldiers' need and want for a **capacity building initiative** centered on enhancing their agricultural proficiency, GLI launched the **Sustainable Farming Collaborative/Model Farm** initiative in **Spring 2018** with a cohort of **60 villagers**.

Working in partnership with **Development in Gardening (DIG)** and **Children of Peace Uganda (CPU)**, the Sustainable Farming Collaborative-Model Farm Initiative aims to **impart villagers with the agricultural know-how that allows them to cultivate and manage cash crops (i.e., sorghum)**.

The farmer training is to be facilitated over the **course of 18 months** and entails several modules ranging from soil fertility and pest management to the development of an action plan outlining what will be planted per season.

Objectives and Final Deliverables

The Fall 2018 International Capstone Team's **objectives** were the following:

- to develop a three-month follow-up survey, based on the baseline survey administered in spring 2018, that assesses the agricultural training process and its impact; and

- to recommend a data collection tool that can be used by GLI to digitize data collection efforts in Lira and Kabale, Uganda.
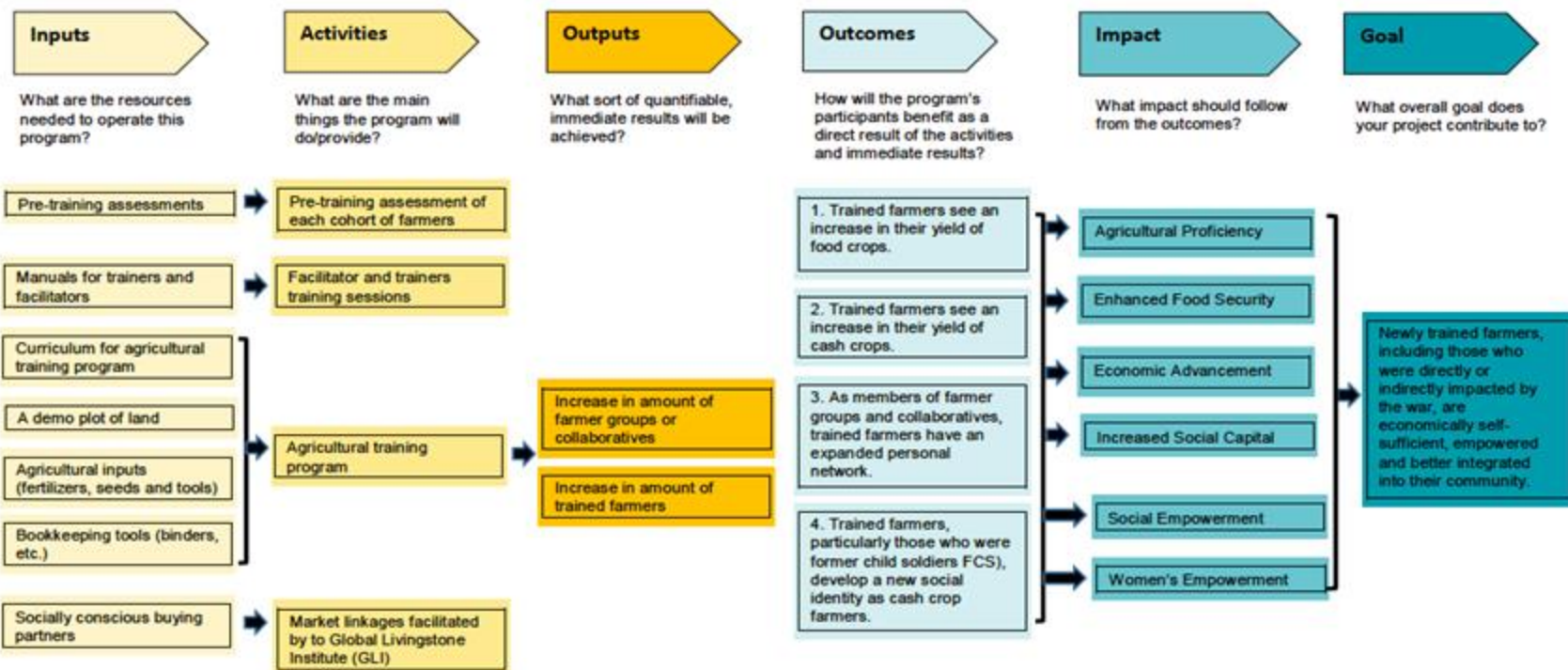
- **Modified Baseline Survey**

- **Six-Month Follow-Up Survey**

- **DCT Recommendation**

- **Best Practices**

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Outlining a Theory of Change (ToC)

Mapping Long-Term Goals and Modeling Desired Outcomes

SUSTAINABLE FARMING COLLABORATIVE/MODEL FARM

Inputs
What are the resources needed to operate this program?

- Pre-training assessments
- Manuals for trainers and facilitators
- Curriculum for agricultural training program
- A demo plot of land
- Agricultural inputs (fertilizers, seeds and tools)
- Bookkeeping tools (binders, etc.)
- Socially conscious buying partners

Activities
What are the main things the program will do/provide?

- Pre-training assessment of each cohort of farmers
- Facilitator and trainers training sessions
- Agricultural training program
- Market linkages facilitated by to Global Livingstone Institute (GLI)

Outputs
What sort of quantifiable, immediate results will be achieved?

- Increase in amount of farmer groups or collaboratives
- Increase in amount of trained farmers

Outcomes
How will the program's participants benefit as a direct result of the activities and immediate results?

1. Trained farmers see an increase in their yield of food crops.
2. Trained farmers see an increase in their yield of cash crops.
3. As members of farmer groups and collaboratives, trained farmers have an expanded personal network.
4. Trained farmers, particularly those who were former child soldiers FCS), develop a new social identity as cash crop farmers.

Impact
What impact should follow from the outcomes?

- Agricultural Proficiency
- Enhanced Food Security
- Economic Advancement
- Increased Social Capital
- Social Empowerment
- Women's Empowerment

Goal
What overall goal does your project contribute to?

Newly trained farmers, including those who were directly or indirectly impacted by the war, are economically self-sufficient, empowered and better integrated into their community.

3

Survey Development

Outcomes and Indicators

Research Q1: **What indicators can be included in a survey to measure the intended social impact outcomes outlined in the Sustainable Farming Collective/Model Farm's theory of change?**

To answer this question, the Fall 2018 team used the following data sources:

- Literature: Retrospective evaluation reports of agricultural training programs that share core similarities with the Sustainable Farming Collective's program.

- Consultative Discussions with Academics and Faculty Members at Cornell University
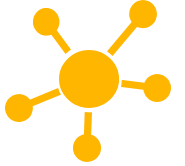
Outcome #1: Agricultural Proficiency

Definition: Agricultural proficiency refers to each farmer's competence or skill in sustainable agricultural practices.

Indicators (How will this be measured?)	Explanation	Source
Adoption of Sustainable Agricultural Practices	The sustained application of techniques taught within the training curriculum (e.g. soil fertility management, planting seeds to optimize land by area)	World Bank/Global Donor Platform for Rural Development
Crop Rotation and Diversification	Increase in production of cash and food crops	Global Donor Platform for Rural Development

Outcome #1: Agricultural Proficiency

Insights from Interviews and Consultative Discussions

- Simplify phrasing of the questions. Directly ask if they have become more proficient as a consequence of the training (Mark Constas).

- Gather meaningful data with less questions (Mark Constas).

- Explain the context of the questions or respondents may feel threatened or avoid honest reporting (Mark Constas).

- Define crop diversification according to the objectives of the program and the nature of the crop market (Mark Constas).

Outcome #2: Better Food Security

Definition: Food security is defined as a state in which "all people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life" (USAID, 1992).

Indicators (How will this be measured?)	Explanation	Source
Food Stability	Anxiety and uncertainty about the household food supply	Food and Agriculture Organization (FAO): Food Insecurity Experience Scale (FEIS)
Food Availability	Whether any household member was not able to eat according to their preference due to a lack of resources	Food and Agriculture Organization (FAO): Food Insecurity Experience Scale (FEIS)
Food Access	Access by individuals to adequate resources (entitlements) for acquiring appropriate foods for a nutritious diet.	Food and Agriculture Organization (FAO): Food Insecurity Experience Scale (FEIS)

Outcome #2: Better Food Security
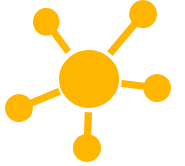
Insights from Interviews and Consultative Discussions

- Refer to FAO guidelines and definitions of food security. This will ensure standardized report and help make the survey transferable across different projects and regions (Mark Constas).

- Data collectors must be cognizant of the fact that the timing of the survey may change the answers to these questions significantly. To control for seasonal variation, select a reasonable frame of reference i.e. "in the last four weeks…". (Mark Constas).

Outcome #3: Economic Advancement

Definition: Improved financial capabilities of individuals, to improve their present and long-term financial well-being.

Indicators (How will this be measured?)	Explanation	Source
Increased Income and Savings	Measurable increases in reported income and savings as a direct result of the training	United Nations Development Program - Human Development Index
Increased Ownership of Productive Assets	Change in ownership status of inputs for income generating activities	Food and Agriculture Organization of the United Nations
Household Improvements	Increase in household space per person and household connection to electricity and electrical appliances	Innovations for Poverty Action

Outcome #3: Economic Advancement
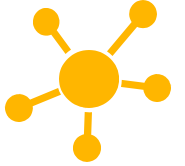
Insights from Interviews and Consultative Discussions

- Include a range for 2 million UGX and above for reported annual income. The lifestyle of an individual earning 1 million UGX as compare to another earning 2 million UGX is significantly different and should be recorded appropriately (Cyprian Kaziba).

- The range of 0-25,000 UGX is too low. It can be retained in the survey but data collectors must be cognizant of the reality that respondents will rarely earn within this range in any given year (Cyprian Kaziba).

- Exclude questions about household items that everyone owns (metal cooking pots) or no one owns (refrigerators). This is not a meaningful measure of economic status (Cyprian Kaziba).

- Questions about employment and earnings may not capture relevant data as most individuals do not work consistently throughout the year and have multiple sources of income (Marcia Greenberg)

Outcome #4: Increased Social Capital

Definition: Those features of social organization, such as networks of individuals or households, and the associated norms and values, that create externalities for the community as a whole. (Robert Putnam, 1993)

Indicators (How will this be measured?)	Explanation	Source
Membership in Local Associations and Networks	Consider the nature and extent of a household member's participation in various types of social organizations and informal networks, and the range of contributions that one gives and receives from them	World Bank
Trust and Sociability	To explore trust towards neighbors, key service providers, and strangers, and how these perceptions have changed over time.	World Bank
Communal Engagement	Explores whether and how household members have worked with others in their community on joint projects and/or in response to a crisis	World Bank

Outcome #4: Increased Social Capital

Insights from Interviews and Consultative Discussions

- To address sustainability of the program "trust and transparency" can be a problem - usually collective actions and groups can be solution. Collective actions and involvement as groups rather than individuals give locals more confidence and trust in the system. (Cyprian Kaziba)

Outcome #5: Empowerment
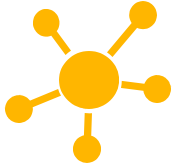
Definition: Empowerment is understood as the process of developing a sense of autonomy and self-confidence, and acting individually and collectively to change social relationships and the institutions and discourses that exclude poor people and keep them in poverty (GSDRC, 2014).

Indicators (How will this be measured?)	Explanation	Source
Happiness	Explore each individual sense of happiness	World Bank
Personal Efficacy	Explore each respondent's perception of their control over their daily life and well-being	World Bank
Local Impact	Explore each respondent's perception of their capacity to influence local events and outcomes	World Bank

Outcome #5: Empowerment

Insights from Interviews and Consultative Discussions

- Considering the context, differentiate between macro and micro level measures of empowerment. Micro level measures individual efficiency over informal institutions while macro level assesses the individuals impact on bigger context of political and formal institutions (Cyprian Kaziba).

Outcome #6: Women's Empowerment
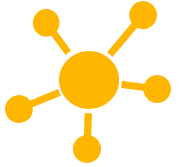
Definition: A woman who has adequate achievements in four of the five domains (production, resources, income, leadership, time) is empowered. (WEAI)

Indicators (How will this be measured?)	Explanation	Source
Production	Sole or joint decision-making over food and cash-crop farming, livestock, as well as autonomy in agricultural production	Women's Empowerment in Agriculture Index (WEAI)
Resources	Ownership, access to, and decision-making power over productive resources such as land, livestock, agricultural equipment, consumer durables, and credit	Women's Empowerment in Agriculture Index (WEAI)

Outcome #6: Women's Empowerment

Definition: A woman who has adequate achievements in four of the five domains (production, resources, income, leadership, time) is empowered. (WEAI)

Indicators (How will this be measured?)	Explanation	Source
Income	Sole or joint control over income and expenditures	Women's Empowerment in Agriculture Index (WEAI)
Leadership	Membership in economic or social groups and comfort in speaking in public	Women's Empowerment in Agriculture Index (WEAI)

Outcome #6: Women's Empowerment
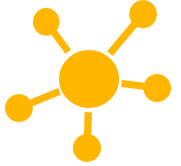
Insights from Interviews and Consultative Discussions

- Refer to Women's Empowerment in Agriculture Index guidelines and definitions of women empowerment in agriculture. . This will ensure standardized report and help make the survey transferable across different projects and regions (Mark Constas).

- Consider gender-sensitive data collection methods: females interview females and separately from men participants (Marcia Greenberg)

- Consider gender sensitive language and its interpretation in the survey ex. head of household if it is a female, the reaction from males? (Marcia Greenberg)

- Do not underestimate the small changes that could have happened as a result of the program in behaviour, actions of participants and etc (Marcia Greenberg)

- Recommended periodic updates on indicators to maintain a relevant baseline survey (Marcia Greenberg)

Survey Overview: Structure and Purpose

Section	Name of Section	Purpose
A	**Demographic Information**	To understand diversity of individuals entering the program and record baseline demographic data for analysis across different categories at a later stage.
B	**Agricultural Proficiency**	To gauge the adoption of agricultural practices detailed during modules and the training's impact on agriculture.

Survey Overview: Structure and Purpose

Section	Name of Section	Purpose
C	**Attitudes Toward Program And Personnel**	To gauge the relationship of trust and comfort between program facilitators and program participants.
D	**Changes in Food Security**	To measure the household ability to meet dietary needs and food preferences

Survey Overview: Structure and Purpose

Section	Name of Section	Purpose
E	Economic Advancement	To assess the respondent's income generating capability and quantify economic improvement in the respondent's life
F	Social Capital	To measure and assess personal networks and relationships, sociability and trust

Survey Overview: Structure and Purpose

Section	Name of Section	Purpose
G	Empowerment (Shifts in Self-Perspectives)	To measure the respondent's control over what directly affects their wellbeing
H	Women Empowerment	To measure women's decision making power in the household and assess their leadership in the community

4

Selecting a Suitable Data Collection Tool

Digitizing GLI's Monitoring and Evaluation (M&E) Efforts

Research Q2: **What comprehensive data collection systems and tools have been used in similar development contexts?**

To answer this question, the Fall 2018 team used the following data source(s):

- Literature: Project documents and evaluation reports highlighting the use of mobile data collection technologies (DCT) in similar development contexts for monitoring and reporting on an intervention.

Guidelines for Selecting Mobile Survey Tools (MSTs)

(Fisher, Mann, Cronk, Shields, Klug & Ramaswamy, 2016)

Functionality ⟹

- Degree to which an MST meets stated and implied user needs when used under specified conditions. (Suitability)

- Degree to which MSTs can exchange information with other systems and use information that has been exchanged. (Interoperability)

Usability ⟹

- Degree to which the features and functions of an MST can be understood by users with a wide range of backgrounds and levels of expertise. (Understandability)

- Degree to which users with a wide range of backgrounds and levels of expertise can efficiently learn to use an MST to achieve specific goals. (Learnability)

- Degree to which an MST is easy to operate and control (Operability)

Guidelines for Selecting Mobile Survey Tools (MSTs)

(Fisher, Mann, Cronk, Shields, Klug & Ramaswamy, 2016)

Maintainability ➡

- Degree of effectiveness and efficiency with which it is possible to assess the impact on an MST of an intended change to one or more of its parts, or to diagnose an MST for deficiencies or causes of failures, or to identify parts to be modified. (Analyzability)

- Degree to which an MST can be effectively and efficiently modified by users without introducing defects or degrading existing product quality. (Changeability)

- Degree to which an MST performs free from failures, interruptions, and unexpected effects. (Stability)

Portability ➡

- Degree to which an MST can effectively and efficiently be adapted for different or evolving hardware, software or other operational or usage environments. (Adaptability)

- Degree of effectiveness and efficiency with which an MST can be successfully installed and/or uninstalled in a specified environment. (Ease of Installation)

- The capability of an MST to exist and operate on systems on which other software simultaneously exists and operates. (Co-Existence)

Data Collection Tool: ZERION iFormBuilder

ZERION's iFormBuilder is a universal mobile data collection platform for iOS and Android, endorsed by the Food and Agriculture Organization (FAO) and the World Bank that is currently being used in over **110 countries** by companies and organizations who need enterprise-grade solutions that are flexible, secure and offline-enabled.

Features

Advanced Form Building: With more than 35 element types, powerful smart logic, and enhanced features like smart table search, users enjoy an environment where they can go beyond simple forms and build robust business applications.

Ultra-Disconnected: FormBuilder allows data to be saved securely on the device until a connection and data sync is available.

GPS and Location Information: Every record that is captured with iFormBuilder will contain metadata. The metadata includes, time and date stamp, user information, etc.

Powerful API: Redefinition of how data flows through your organization.
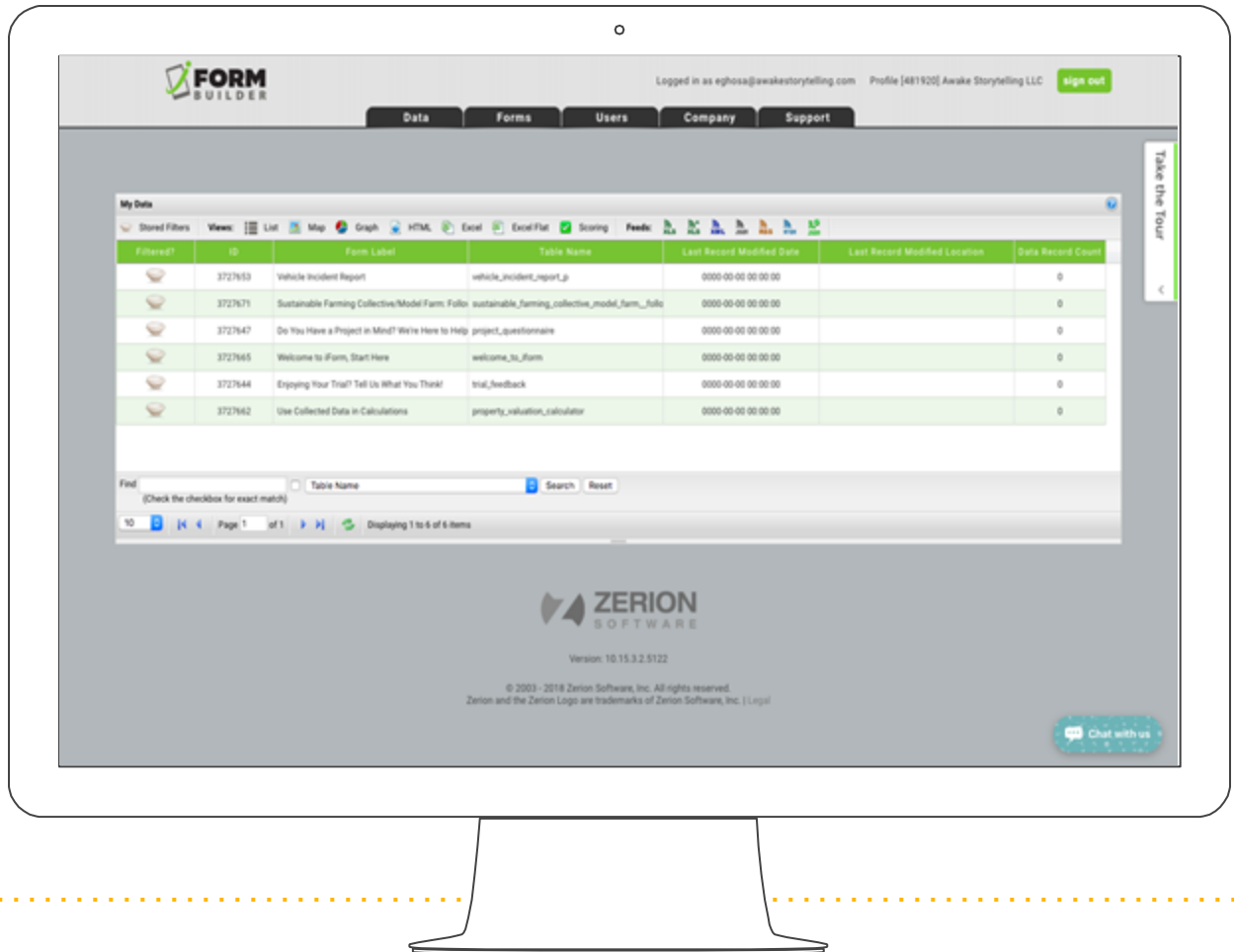
Logged in as eghosa@awakestorytelling.com   Profile [481920] Awake Storytelling LLC   sign out

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Take the Tour

My Data

Stored Filters   Views: ☰ List 🗺 Map 📊 Graph 🌐 HTML 📊 Excel 📊 Excel Flat ✅ Scoring   Feeds:

Filtered?	ID	Form Label	Table Name	Last Record Modified Date	Last Record Modified Location	Data Record Count
	3727653	Vehicle Incident Report	vehicle_incident_report_p	0000-00-00 00:00:00		0
	3727671	Sustainable Farming Collective/Model Farm: Follo	sustainable_farming_collective_model_farm__follo	0000-00-00 00:00:00		0
	3727647	Do You Have a Project in Mind? We're Here to Help	project_questionnaire	0000-00-00 00:00:00		0
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	3727644	Enjoying Your Trial? Tell Us What You Think!	trial_feedback	0000-00-00 00:00:00		0
	3727662	Use Collected Data in Calculations	property_valuation_calculator	0000-00-00 00:00:00		0

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ZERION
SOFTWARE

Version: 10.15.3.2.5122

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Data Collection Tool: ZERION iFormBuilder

Use in Similar Development Contexts:

1. A 2017 assessment of farmers' local practices and their knowledge of the biotic constraints to sweet potato production in Uganda, Rwanda, Kenya and Tanzania.

2. A 2016 assessment of the incidence of untreated surgically correctable disease in Burera District, Rwanda to accurately plan for surgical services at a district hospital.

5

Recommendations

Recommendation #1: Best Practices for Administering the Survey

Ensure all interviewers are familiarized with the purpose of each question

Survey facilitators must be aware of the theory of change, the intended social impact of the training and how the survey's questions attest to these outcomes, in order to ensure relevant answers

Conduct the follow-up survey six months after the agricultural training program ends.

At this new half year mark, social impact outcomes are more likely to be more visible and, therefore, more evaluable.

Given the personal nature of some of the surveys questions, a situation analysis assessing community levels of trust is necessary to guide selection of survey teams.

In some contexts, using an outsider to administer the survey can help in avoid any potential discomfort the respondent might feel in answering sensitive questions in front of someone from their community. If the community is generally distrustful of outsiders, it may be helpful for each survey team to have at least one local community member.

Recommendation #2: Female Focus Groups to Gauge Women's Empowerment

Conduct a semi-structured focus group (SSFG) with the women who were members of the first cohort of farmers trained by GLI and Development in Gardening (DIG).

The team recommends facilitation of a focus group discussion with female farmers that allows for the exploration of their experiences.

Questions asked during the SSFG should center on changes that have occured in their lives, households, families and communities since participating in the initiative.

The qualitative data that this discussion will yield will provide directional insights for which indicators should be included in an amended baseline and follow-up survey.

Recommendation #3: Best Practices for Mobile Data Collection and API Integration

Use solar-powered backups to ensure mobile devices and tablets are adequately charged for field-level data collection.

Survey teams should be led by survey administrators who have completed full training on the data collection tool (Zerion iFormBuilder).

Employ photos where translation challenges are anticipated.

Thank you!

Any questions?