

Guidance for Gender Measurement in Agriculture Programs





Over the past decade, there has been growing recognition of the contribution that women make to agricultural production around the world. Projects designed to support smallholder farmers in developing countries are increasingly making an effort to understand and respond to the different roles that women and men play in farming, as well as the underlying gender issues that drive how agricultural production occurs. Despite this attention, many agricultural programs struggle to capture the difference—or the 'gender effect'—that gender integration makes on key outputs and outcomes. Even for projects that have incorporated clear gender goals and approaches, there may still be a challenge in designing monitoring and evaluation (M&E) systems that measure the effect of addressing gender-related issues and constraints. Questions about gender M&E often include: How do I know what to measure? What's a good gender indicator? How do I collect the data? What do I need to do at the outset of my project to make sure that I have good evidence at the end?

Fortunately, there are gender tools and approaches that can help answer these questions. The full measurement arc includes initial gender assessments that provide details on the local gender and social context of agricultural production, ongoing monitoring that tracks

the progress of gender-responsive activities, and project evaluations that determine the extent to which gender-related outcomes have been achieved. This technical brief is intended to provide agriculture practitioners with an initial grounding in gender measurement, highlighting some of the critical points to consider when developing and implementing gender M&E systems. Table 4 at the end of the brief identifies several resources that can help practitioners take their gender measurement ideas forward.

The first technical brief produced for the Tanzania Gender and Agriculture Forum (TaGAF) highlights two projects in Mbeya, Tanzania—Faida Mali's Integrated Soil Fertility Management and TechnoServe's Coffee Initiative—and presents some of the promising gender-responsive practices they have underway. This second brief continues to draw from the experiences of the two Mbeya projects, now focusing on the steps they have taken to measure the 'gender effect'.



Coffee farmers work together to apply new composting skills learned through TNS agronomy trainings.

¹ Cultivating Women's Participation Strategies for Gender Responsive Agriculture Programming: http://www.icrw.org/publications/cultivating-womens-participation-strategies-gender-responsive-agriculture-programming



Project Summaries

Both Faida Mali and TechnoServe are working to support smallholder farmers in the Mbeya region of Tanzania, an area that is important for producing several staples, including maize and rice, as well as cash crops like coffee and cocoa. Most households are engaged in agriculture, both for home consumption and for sale at local/regional markets. Both organizations focus on transferring critical information and skills on best practices, and recognizing the vital contribution that women farmers make, both have made it a priority to ensure that women participate in and benefit from these projects.

Integrated Soil Fertility Management Project

FAIDA MALI

Funded through AGRA's Soil Health Program (which is partly funded by the Bill and Melinda Gates Foundation) and in partnership with the Ministry of Agriculture, Food and Cooperatives (MAFC) and Farm Radio International, Faida Mali's Integrated Soil Fertility Management (IFSM) project is promoting improved soil health through intercropping cereals with legumes. Reaching women with ISFM information and skill-building is a priority, especially given that most legumes are generally categorized as a "woman's crop." The ISFM project, therefore, focuses on using existing information channels—community radio, mobile phones and agriculture extension workers—to facilitate women's understanding and application of better ISFM practices.

OVERALL GOAL: To improve the delivery of Integrated Soil Fertility Management knowledge to smallholder farmers in the southern highlands of Tanzania.

GENDER GOAL: To increase women's understanding and application of better ISFM practices using ICTs (radio and mobile phones), with assistance from agriculture extension workers.

For more on Faida Mali, see: http://www.faidamarketlink.or.tz/

Coffee Initiative

TECHNOSERVE

TechnoServe's Coffee Initiative, funded by the Bill and Melinda Gates Foundation, seeks to help farmers improve the quality and quantity of the coffee they produce. TechnoServe has taken steps to improve women's access to and participation in agronomy training, enhance their application of new knowledge and skills to coffee production, and, ultimately, increase the benefit obtained from the improved coffee quality and yields produced by the household. Given that coffee is generally perceived to be a "man's crop," TechnoServe has adjusted its agronomy model to address some of the gender-related norms and attitudes that typically constrain women from participating in coffee production.

OVERALL GOAL: Inclusive, competitive, coffee value chain in Tanzania is leveraged to increase the incomes of 10,000 poor female and male smallholder farmers.

GENDER GOAL: To ensure that women can access and participate in coffee agronomy training and apply knowledge and skills to household coffee production.

For more on TechoServe, see http://www.TechnoServe.org/



Step 1: Identifying What to Measure

One of the common challenges in implementing gender M&E is identifying what should be measured in the first place: what pieces of information should be tracked and analyzed to capture the effect of addressing gender issues/constraints?

To answer this fundamental question, projects should take the time to understand how gender-related issues may affect planned outcomes and impact and also explore what feasible programming options may address or respond to these issues. This process of detailing the gender context—often referred to as a gender assessment—is critical to knowing if, why and how gender may impact on the project's ultimate success or failure. Gender assessments can use different methodologies to map out the gender context, including reviews of existing literature or data, as well as qualitative and/or quantitative research with potential project partners or beneficiaries.

Understanding the Gender Context: TechnoServe's project seeks to help small holder farmers improve the quality and quantity of coffee that they grow and process. Project staff knew from previous experience that women, although actively contributing to household coffee farming, do not generally attend agronomy trainings. Why? What is it about coffee farming in the local context that prevents women from participating? When expanding the project to Mbeya, TechnoServe took the time to explore these questions with new project communities and identify some of the fundamental gender issues that were inhibiting women's participation. These included gender norms that placed access to new information and technologies in the hands of male heads of households, as well as competing gender-driven priorities, such as child care or the farming of crops that typically fall within women's domain (e.g., household gardens, locally prescribed 'women's crops' like beans/legumes, vegetables, etc.). Once these were identified, TechnoServe was then in a position to determine which gender issues could be addressed as part of the project and, therefore, should be tracked through the M&E system.



A farmer group member shares her views on why ISFM information is important for both women and men farmers.

The following table maps points along a typical value chain that are commonly addressed by agriculture projects—crop production, processing and marketing—and illustrates some of the ways in which gender norms can influence smallholder farmers, thereby affecting anticipated project outputs, outcomes and overall impact. Each cell in the table flags areas that can have a gender dimension. For example, men and women often have different opportunities for land ownership due to gender-related factors—both direct (e.g., laws that only allow men to own or inherit land) and indirect (e.g., women may not have the financial resources to purchase land or do not have adequate collateral to obtain loans/credit to purchase land). Similarly, gender norms can affect how men and women are able to engage in production-related decisions, such as what crops are grown or how income is used. Projects should explore all relevant areas to understand any underlying barriers or inequities that may need to addressed to maximize results.



TABLE 1: Potential Gender Influences Across the Value Chain

TABLE 1: Potential Gender Influences Across the Value Chain				
	PRODUCTION	PROCESSING & STORAGE	MARKETING	
GENDER DOMAINS				
ASSETS & RESOURCES	Ownership of or access to: Land Farming inputs Information technologies (radios, cell phones) Credit	 Ownership of or access to: Land Information and processing technologies (equipment) Credit 	Ownership of or access to:Markets (and market information technologies)TransportCredit	
DECISION- MAKING	Intra-household communication, negotiation and decision-making about: Production roles (vary by crops) Purchase/use of inputs Obtaining or use of credit Land allocations/use What to grow Expenditures and savings	Intra-household communication, negotiation and decision-making about: • Processing roles • Obtaining or use of credit • Land allocations/use • Expenditures and savings	Intra-household communication, negotiation and decision-making about: • Marketing roles • What/when/how much to sell • What markets or sellers to access • Price setting and negotiations • Expenditures and savings Communications and negotiations with market agents	
ACCESS & PARTICIPATION	Access to information and skill-building opportunities (via mass media, trainings, etc.) Competing demands for time/resources: • Different agriculture priorities (e.g., food vs. cash crops) • Different gender roles/responsibilities within family/ community • Different 'incentives' (or threshold of benefits) needed to warrant participation	Access to information and skill-building opportunities (via mass media, trainings, etc.) Competing demands for time/resources: Different agriculture priorities (e.g., food vs. cash crops) Different gender roles/responsibilities within family/ community Different 'incentives' (or threshold of benefits) needed to warrant participation	Access to information and skill-building opportunities (via mass media, trainings, etc.) Access to market information Mobility: Norms restricting travel to markets Lack of finances for transport Safety concerns Competing demands for time/resources: Different agriculture priorities (e.g., food vs. cash crops) Different gender roles/responsibilities within family/ community Different 'incentives' (or threshold of benefits) needed to warrant participation	
INCOME USE	Control or share of income earned Competing agricultural priorities and gendered responsibilities for expenditures (education, health.)	Control or share of income earned Competing agricultural priorities and gendered responsibilities for expenditures (education, health.)	Control or share of income earned Competing agricultural priorities and gendered responsibilities for expenditures (education, health.)	



Understanding the Gender-Responsive Potential:

In addition to assessing gender roles and norms within a particular agricultural effort, projects should also explore options for gender-responsive programming. To promote ISFM, Farm Radio International (FRI) and Faida Mali (FM) are reaching out to farmers to address their priority information needs, thereby improving soil health and, ultimately, increasing overall agricultural productivity. However, like Technoserve, FM and FRI knew from previous experience that women are less likely to be able to access critical agriculture-related information and apply best practices. Therefore, FM/FRI conducted formative research with project communities to identify if and how community radio could be used to overcome traditional gender barriers. This entailed reaching out to potential project participants—especially women—to identify any gender-related issues that might inform radio programming content and structure. Among other



Legumes and beans—the focus for the ISFM project—are important crops for women farmers in Mbeya, as they typically manage production and control any income earned.

topics, FM/FRI asked women (and men) about their crop farming and soil practices as well as their access to and control of radios, listening habits and preferences, and their ability to apply information from the radio.

To collect these data, FM/FRI facilitated focus group discussions and conducted interviews with leaders, men, women and youth from target communities, as well as implementing partners (e.g., radio stations, agricultural extension workers, etc.). Input from these different groups helped FM/FRI determine how best to leverage radio as a channel for reaching women farmers with critical ISFM information and skills. For example, FRI provided wind-up radios to listening groups (which include women), so that broadcasts could be recorded and played when convenient and as often as needed—thereby increasing opportunities for women to receive information on better ISFM practices. This foundational research also yielded insights on how to link radio listeners to other project activities that can provide more direct, "hands-on" exposure to better ISFM practices.

Step 2: Selecting Gender Indicators

Based on the findings from the gender assessment, the next step is to consider the most appropriate indicators that will capture the effect of gender-responsive programming. As broadly defined, an indicator is a basic concept or measurement that can assess change over time. Gender indicators are typically measurements that describe women's and men's statuses, how women and men are participating in different aspects of the project, what barriers they have to participation, and what women and men are gaining or losing from the project. Some gender indicators may be about individual women or individual men, while others can describe gender dynamics within a group of people like a household or farmers' group.

It is useful to have indicators that measure gender at different levels, from overarching gender goals and impacts (e.g., increased income among women farmers from crop sales where ISMF has been applied), to outcomes of project activities for women and men (e.g., increased acreage where better ISFM practices are applied), and indicators that measure the processes of how the project is including women and men as it rolls out (e.g., increased listenership of women farmers to ISFM radio programming). Most projects will need a combination of gender indicators to understand how women and men are engaging with and benefitting from project interventions.



The following criteria may help to develop or prioritize gender indicators:

- Indicators should be closely tied to the project's objectives, desired outcomes and key activities
- Indicators should capture the most critical issues arising in the gender assessment
- Indicators should realistically be measured within the project's timeline and budget

Below are illustrative gender indicators that build from the FM/FRI and TechnoServe examples, both of which are seeking to increase women's access to and application of key agriculture information. The examples below pull from gender domains used in Table 1 (Access and Participation, and Income Use).

TABLE 2: Illustrative Gender Indicators

	FM/FRI—ISFM	TECHNOSERVE—COFFEE
GENDER DOMAINS		
ACCESS TO INFORMATION/ SKILLS	 Control of radio during ISFM programming Listenership throughout the duration of awareness-raising campaigns Participation in listening groups Contact with agriculture extension worker to address any ISFM questions 	 Participation of women farmers in agronomy training (by module, over time) Trained government extension officers that are women
APPLICATION OF INFORMATION/SKILLS	 Knowledge of better ISFM practices Adoption of better ISFM practices during farming 	 Feedback on training modules and ease of applying the taught best practices Adoption of best practices to household coffee crop Application of best practices to other crops
BENEFIT FROM INFORMATION/ SKILLS	 Soil fertility measures Crop yields (legumes, rice, maize) in farms where ISFM technologies were applied (by men and women) Amount of legumes and other crops sold (by men and women) 	 Reported effectiveness of the agronomy program (in assisting the farmer to control pests, improve health of coffee trees, reduce produce costs, gain access to agro inputs, create a support network and increase coffee yields) Yield increases (changes in coffee volume and number of trees) Amount of household coffee sold (by men and by women) Amount of household coffee income earned (by men and by women) Reported control of coffee income and decision-making within the household



Step 3: Tracking Gender Indicators

When thinking through gender indicators, it is also important to consider what would be involved in collecting, analyzing and applying the information gained by tracking those indicators. Projects should think through the specific information and frequency of measurement required for each indicator. By having a clear vision of how each gender indicator will be used, projects will be able to determine what data to collect, how, how often, and from whom.

Mapato kwa	mwaka: Ijazwe na Mkulima			10000	N 100
марато		2011	2012	2013	2014
SHS	Mapato yatokanayo na kahawa ya maganda				
	Mapato yatokanayo na kahawa kavu iliyozindikwa nyumbani				
A	JUMLA YA MAPATO				
MATUMIZI					II GENERAL CO.
SHS	Gharama za mbolea				
	Gharama za viuatilifu				
	Gharama za matandazwa				
	Gharama za vibarua			-	
	Gharama za wachumaji				
	Gharama nyinginezo				
8	JUMLA YA MATUMIZI				
A-B	FAIDA KWA MWAKA (Jumla ya mapato toa jumla ya matumizi)				

Women and men farmers record their coffee income and expenditures in logbooks provided by TechnoServe.

MONITORING vs. EVALUATION

As a guide for determining whether an indicator is intended more for monitoring or for evaluation, consider the following questions and examples:

- Monitoring: Is the indicator intended to show how a project is rolling out or being implemented and progressing along the way? (e.g., participation in radio listening groups)
- Evaluation: Is the indicator intended to show the impact of a project or what it is changing? (e.g., increase in agricultural yield due to application of better practices learned through radio programming)

Table 4 provides links to gender M&E resources, as well as examples of qualitative and quantitative data collection tools.

Many agricultural projects—like the efforts led by TechnoServe and FM/FRI—are concerned with demonstrating that women are included in any economic (e.g., great productivity, higher incomes) and social (e.g., promoting inclusion and equity) impact achieved. Tracking women's participation in project activities—like trainings, radio listening groups, extension visits, or cooperatives—can be done regularly throughout the project's life. It is especially important during the initial stages of a project to understand if intended audiences are being reached and if activities need to be adjusted. Capturing information to measure rates of women's participation in the project over time can be done as part of ongoing monitoring using training logs, extension logs, attendance sheets, and project forms and reports. Most of this information will be quantitative (e.g., numbers of women and men trained), but it could also include qualitative information (e.g., women's and men's impressions of the relevance of information/skills addressed through trainings). Measuring the difference that women's participation makes to desired outcomes (e.g., increased women's empowerment or household food security) requires an impact evaluation that generally measures key indicators at the start and end of a project. There are multiple methodologies available for conducting impact evaluations, and the challenge often lies in finding a design that meets project needs within available budgets and timelines.

TechnoServe tracks women's participation in its agronomy program in detail, logging each individual who attends a training session and tracking attendance over time. Attendance is recorded for each farmer and each training module, which enables TechnoServe to determine how a woman's attendance varies between modules, over time and by trainer (including see if the sex of the trainer makes a difference). Program staff use this information regularly to encourage women (and their husbands) to stay engaged, and to adjust project activities to maximize women's participation. The monitoring system also measures progress in applying coffee agronomy practices at the household level. These Best Practice Adoption surveys are executed and back-checked by village-based data collectors, with oversight by TechnoServe's M&E department.



Technoserve has realized that women and men may be applying practices differently, which suggests different benefits for different participants—ultimately affecting project impact. The team has been gathering more information on women's and men's coffee agronomy skills and practices and may adjust its program and M&E accordingly. Technoserve is also exploring some of the deeper gender issues related to coffee production, including control and use of income earned. Even if the program is unable to tackle these issues, the information gathered provides important context for current activities and potential impact, as well as data for the design of any future programming.

FM/FRI has also made an effort to measure the effect of gender-responsiveness in its program. The team conducted a baseline survey with men and women farmers on current ISFM attitudes, information resources, knowledge and practice—all areas that the project intended to tackle directly through multiple interventions. In addition, FM/FRI collected data on broader land ownership and allocation, as well as crop yields and livestock ownership, which will help the project track changes in production and income over time.

Table 3: Examples of Data Collection for Gender Indicators

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	INFORMATION REQUIRED	INFORMATION SOURCE(S)	DATA COLLECTION METHOD	FREQUENCY
EXAMPLE INDICATOR				
# OF WOMEN REACHED BY PROJECT'S EDUCATION ACTIVITIES (FM) (TECHNOSERVE)	# of women attended each education activity	Project staff	Quantitative • Attendance sheets	Data are collected every time there is an activity and consolidated quarterly
SATISFACTION WITH EDUCATIONAL ACTIVITIES (SEX-DISAGGREGATED) (FM) (TECHNOSERVE)	Opinions about relevance of activity, how well information was communicated, participant felt included	Female participants and male participants	Qualitative • Interviews/surveys • Short narrative questions	Data are collected every time there is an activity. The indicator is made quarterly.
			QuantitativeRatings of satisfaction along a scale	OR Participants are interviewe annually about their experiences (TechnoServe)
LEAST ONE NEW AGRICULTURAL TECHNIQUE/ VARIETY technique/varie most recent cro season Had s/he used t	Farmer use of the new technique/variety in the most recent cropping	Females and males in the household involved in the relevant crop/activity	Quantitative • Did the farmer use the technique/variety?	Start of project (before project's educational activities); planting season after first set of educational activities; and end of project
	Had s/he used the technique/variety before?		• On how much land area or share of area did the farmer use the new technique/variety?	
HOUSEHOLD FOOD SECURITY (FM)	Depends on measurement	Persons most familiar with food purchase and preparation	Qualitative • Use of coping strategies • Perceptions of hunger	At the start and end of the project
		Women (who often adjust their own consumption to preserve the family's consumption)	Perceptions of vulnerability	
			Quantitative% income spent on foodAnthropometryDietary diversity	



Tips for Gendered Data Collection:

- It is often useful to interview women and men separately. Both women and men, especially couples, may censor their responses when their partner is present, but speak more freely when their partner is not there. To collect such information, it may be necessary to use teams or a pair of data collectors to interview the man and woman at the same time in separate spaces.
- Be mindful that the sample may need to include different kinds of women and different kinds of men. A widowed head of household and a married mother in a large family compound may have different access to productive resources, different autonomy and relationships in making agricultural decisions, and different degrees of interactions with agents and buyers.



Women farmers participate in a focus group to explore their current agricultural challenges and practices—and where better ISFM practices may enhance their productivity for both home food security and for earning income.

- Consider asking about women's and men's roles in agricultural decision-making, beyond asking whether or not a person makes the decision or is the main decision-maker. Some agricultural decisions, for example what to grow or when to harvest, involve multiple people. Roles can include but are not limited to no involvement in decision, is informed of decision, approves decision, gives opinion, makes decision jointly with others, makes decision by self.
- Protocol in entering communities and households is especially important when information will be collected from both women and men. It may be customary for partners or elder males in the family to give permission before a woman can participate in an interview. There may be suspicion or confusion as to why women would be interviewed, especially about topics typically seen as pertaining to men, such as land, managing sales and money, or particular crops. When it is time to collect data in communities (such as surveys or focus group discussions) it is helpful to talk with families together, being respectful of local protocols and hierarchies, to explain and answer questions about what information is being collected and why women are involved. Having this conversation with local community leaders earlier to gain their acceptance and endorsement also eases community members' minds.



Table 4: Links to Gender M&E Resources

	TITLE	LINK TO DOCUMENT
	MONITORING AND EVALUATION	
1.	Gender in Agriculture: Gender Issues in Monitoring and Evaluation, Module 16 (The World Bank)	http://go.worldbank.org/5Z9QPCC7L0
2.	Understanding and Measuring Women's Economic Empowerment—Definition, Framework & Indicators (ICRW)	http://www.icrw.org/publications/understanding-and- measuring-womens-economic-empowerment
3.	Creating an M&E Framework (ICRW)	Document posted in the TaGAF website: https://spaces.gatesfoundation.org/docs/DOC-3306
4.	Conducting an Impact Evaluation, Innovative Activity Profile (The World Bank)	http://siteresources.worldbank.org/INTGENAGRLIVSOUBOOK/ Resources/Module16Innovation2.pdf
5.	Preparing a Case Study: A Guide for Designing and Conducting a Case Study for Evaluation Input–2006 (Pathfinder International)	http://www2.pathfinder.org/site/DocServer/m_e_tool_series_ case_study.pdf?docID=6302
6.	Tracking results in agriculture and rural development in less-than-ideal conditions: A sourcebook of indicators for monitoring and evaluation (The World Bank)	www- wds.worldbank.org/external/default/WDSContentServer/ WDSP/IB/2009/03/25/000333038_20090325005751/Rendere d/PDF/479050ESW0whit1B01OFFICIAL0USE0ONLY.pdf
	ASSESSMENTS / TOOLS	
7.	Gender Assessment DEG/GTZ Cotton Sector Program: Topic Guide for Discovery Process- March 2010	Document posted in the TaGAF website: https://spaces.gatesfoundation.org/docs/DOC-1864
8.	Gender Audit for USAID/Tanzania—August 2006 Gender Assessment for USAID/Tanzania—Sept 2003	Document posted in the TaGAF website: https://spaces.gatesfoundation.org/docs/DOC-1866 Document posted in the TaGAF website: https://spaces.gatesfoundation.org/docs/DOC-1865
9.	Evaluation Tools—Detailed Presentation of the Case Study Tool (European Commission)	http://ec.europa.eu/europeaid/evaluation/methodology/tools/ too_cas_som_en.htm
10.	Toolkit: Gender Issues in Monitoring and Evaluation in Agriculture (The World Bank)	http://www.genderinag.org/sites/genderinag.org/files/Gender %20Issues%20in%20Monitoring%20and%20Evaluation%20 in%20Agriculture.pdf









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For more information about this project or technical brief, please contact akanesathasan@icrw.org.

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