UBALE Development Food Assistance Project

EVIDENCE FROM IMPLEMENTING THE SMART SKILLS APPROACH IN MALAWI AUGUST 2024

Maria V Gottret,[1] Barbara Chisangano,[2] David Munthali,[2] Cara Raboanarielina,[2] and Phillip R. Best.[3]

INTRODUCTION

Catholic Relief Services' (CRS) Agriculture and Livelihoods Program strengthens the capacity of smallholder farmers around the world to engage with markets, manage financial and natural resources, and improve their livelihoods. To achieve this, CRS has developed an integrated and sequential approach to strengthening smallholder farmers' competencies called Skills for Marketing and Rural Transformation (SMART Skills). The SMART Skills curriculum focuses on five key competency areas that farmers need to improve their livelihoods: collective action, financial management, natural resource management, agricultural marketing, and innovation.

In 2018, the Agriculture and Livelihoods program launched an innovation study to develop and pilot new tools to evaluate the effectiveness of SMART Skills delivery in CRS projects in multiple countries, and to assess the impact of these skills at the individual and household levels. This brief focuses on one of the four cases included in the study: the United in Building and Advancing Life Expectations (UBALE) project implemented in Malawi. UBALE was a five-year (2014-2019) Development Food Assistance Project of the United States Agency for International Development (USAID) Office of Food for Peace.

The goals of the UBALE project were to increase smallholder farmers' productivity, profitability, and production of nutritious agricultural products; reduce stunting in children under five; and increase

1 Catholic Relief Services, Agriculture and Livelihoods, Program Impact and Quality Assurance (PIQA) Department.
2 Catholic Relief Services, Agriculture and Livelihoods, Southern Africa Regional Office (SARO).
3 Independent Consultant.

community resilience to shocks. The project worked with 233,619 vulnerable households (approximately 1.2 million people) in the Blantyre Rural, Chikwawa and Nsanje districts of Malawi. UBALE was led by CRS in collaboration with the Government of Malawi and implemented by its partners: Chikwawa Diocese (Cadecom) in Chikwawa District, CARE International in Nsanje District, Save the Children in Blantyre Rural, and the National Smallholder Farmers Association of Malawi (NASFAM), which supported marketing activities in all three districts.

The competency evaluations presented in this brief, conducted at project midterm (2018) and after project completion (2019), were designed to provide a deeper measure of the outcome of capacity strengthening on project participants' competency levels (behavior change) and its impact on participants' livelihoods. The evaluations aimed to address the following learning questions:

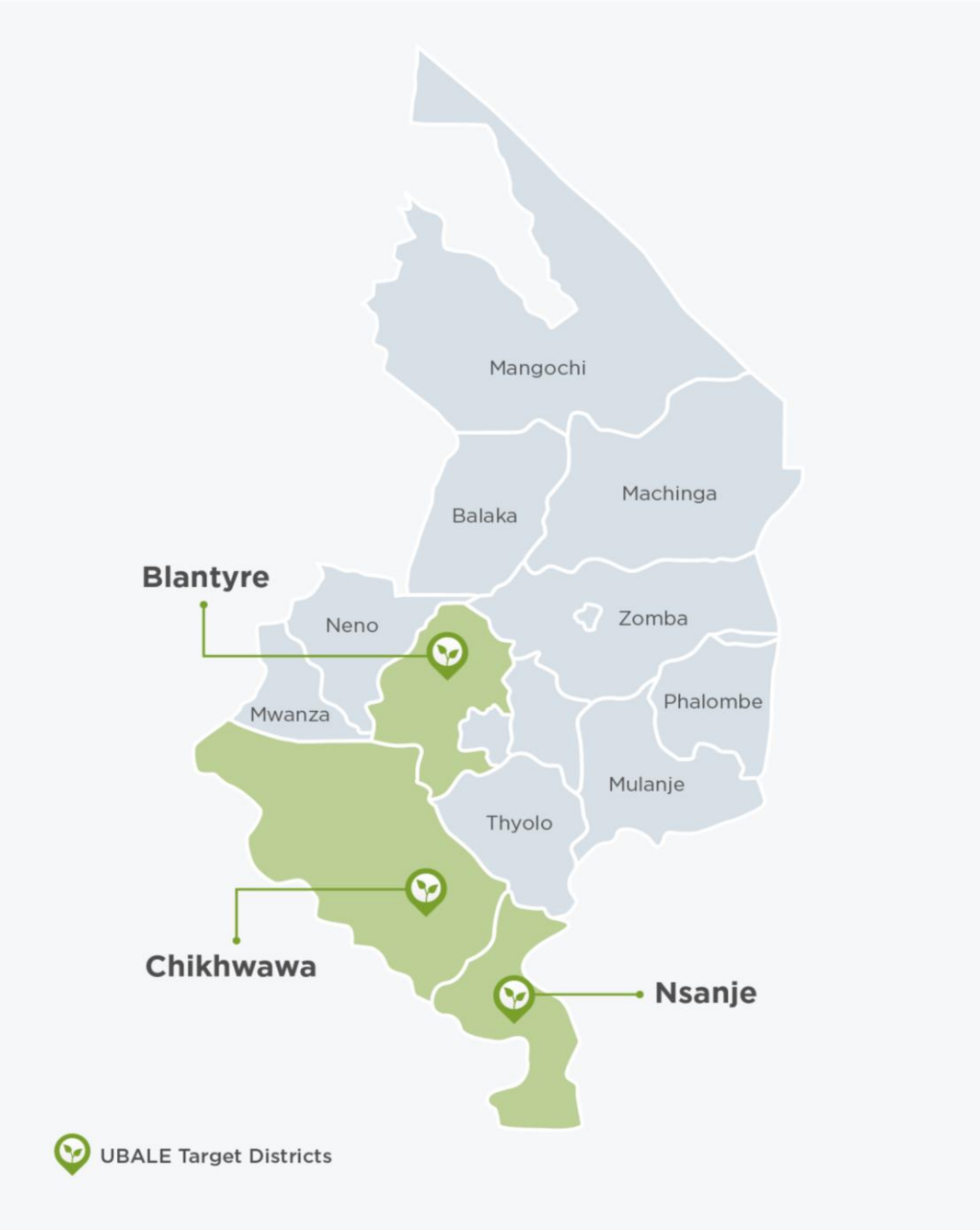
1. Was the project delivery model (extension agents who train field agents who train project participants) effective for building the capacity of large numbers of project participants and generating needed behavior changes?
2. Would the use of a more tailored delivery approach—based on an initial assessment of project participants' competencies, and periodic evaluations to learn and adapt content to fit project participants' competency gaps and interests—achieve the same or better behavior change and livelihood outcomes in a more cost-effective manner?
3. To what extent did the UBALE SMART skills delivery model lead to positive behavior changes that could be sustained after project closure, and to desired livelihood outcomes for project participants?

In Malawi, volunteer members of the community watershed committee are helping maintain a stony wall in the watershed area of Kublang. [Photo by Michael Stulman for CRS]

UBALE IMPLEMENTATION CONTEXT

Chikwawa and Nsanje districts are located in the hot, dry lowlands of the Middle and Lower Shire River Valley (60-600 masl), while most of Blantyre Rural is located in the Shire Highlands (600-1,200 masl). Blantyre Rural has a higher population density (253 per km^2) and smaller farm sizes (0.9 acres) than Chikwawa and Nsanje (118-154 per km^2 and 1.2 acres, respectively). In Blantyre Rural, farmers rely on rainfed agriculture, have relatively undiversified production systems, and are dependent on maize production with small livestock ownership.

In Chikwawa and Nsanje districts, farmers with access to wetlands along the Shire River grow a greater



diversity of crops in winter. Despite more favorable on- and off-farm income opportunities in these two

districts, very poor farmers face annual food deficits. Nsanje has the highest incidence of extreme poverty (76%) of Malawi's 28 districts. In addition, Nsanje and Chikwawa are two of the most flood- and drought-prone districts, experiencing natural disasters on an annual basis.

UBALE CAPACITY STRENGTHENING DELIVERY MODEL

The **goal** of UBALE's capacity building activities was to strengthen the ability of 134,000 smallholder farming families to secure food, improve their nutritional status, and successfully engage in markets to sell agricultural products. To this end, the project implemented a capacity strengthening delivery model that included three training cascades that brought together end-user farmers and other project participants in groups designed to facilitate hands-on learning and generate behavior change to achieve specific project development objectives (**Figure 1**). The training cascades were specific to each of the five end-user participant groups: Savings and Internal Lending Communities (SILC) groups, Market Clubs, Lead and Follower Farmers in Farmer Field Schools (FFSs), Farmer Learning Centers, and Village Natural Resource Management (NRM) Committees. Individuals or members of their respective households could participate in more than one group, with the intention that competency areas, or types of skills, could be aggregated in a household.

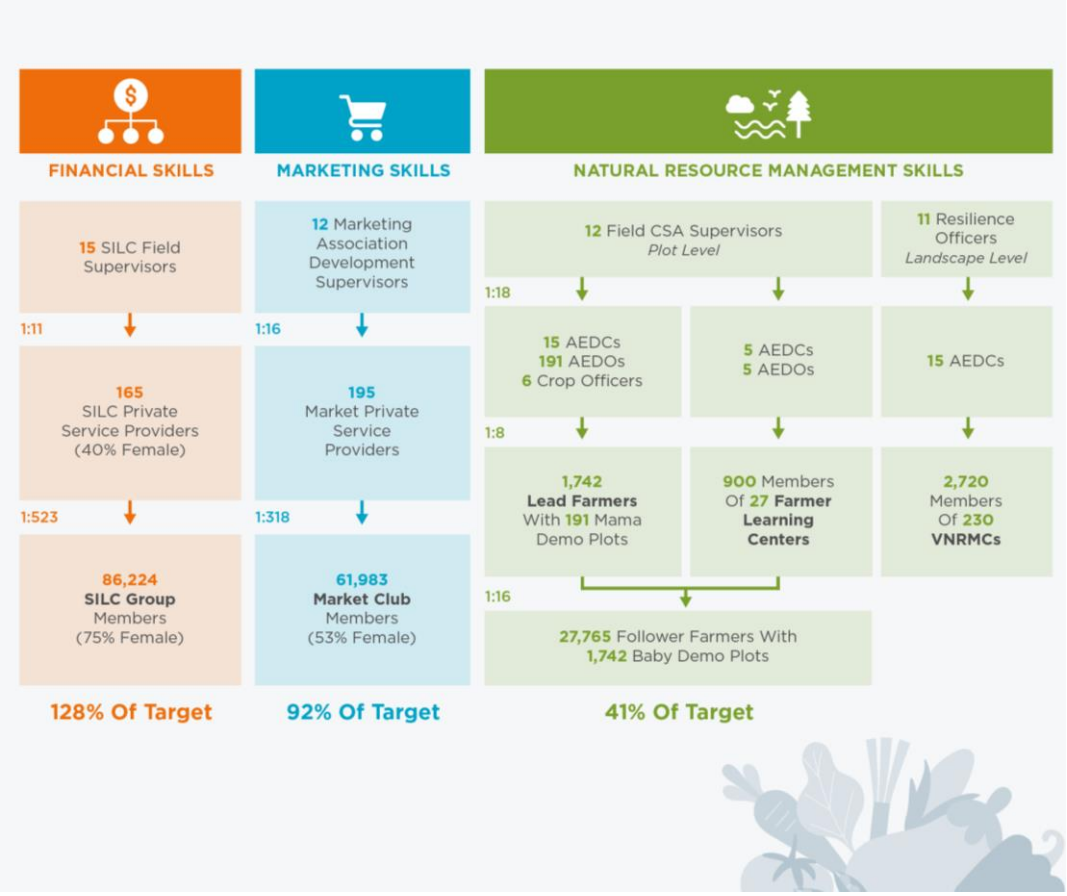
The **financial skills training cascade** involved 15 SILC field supervisors who trained and certified 165 SILC private service providers (PSPs) at a ratio of 1 SILC supervisor for 11 SILC PSPs, who then established SILC groups to provide community-based financial services to farmers and provided financial literacy training and advisory services on a fee-for-service basis. By project endline, 86,224 project participants (75% female) had joined SILC groups and had the opportunity to strengthen their financial literacy.

The **agricultural marketing skills training cascade** involved the National Smallholder Farmers' Association of Malawi (NASFAM) Market Development Supervisors who trained and certified 195 Market PSPs, also selected from participating communities, at a ratio of 1 Market Development Supervisor for 16 Market PSPs, who then trained and provided advisory services to Market Clubs on a fee-for-service basis.

The financial and marketing skills training cascades were effective in reaching a large number of farmers, with financial skills exceeding the target by 28% and marketing skills reaching 92% of the project target. These two cascades also integrated training in group organization and management.

The delivery of **natural resource management (NRM) skills** involved three cascades. The lead and follower farmer cascade involved climate-smart agriculture (CSA) field supervisors who trained district-level government Agricultural Extension Development Coordinators (AEDCs) and Agricultural Extension Development Officers (AEDOs), overseen by the Malawi Ministry of Agriculture, Irrigation, and Water Development (MoAIWD). Each coordinator and officer worked with 8 lead farmers to establish "mama" demonstration plots, who in turn supported 16 follower farmers to establish "baby" demonstration plots. It is estimated that this cascade reached 27,765 farmers, or 41% of the targeted 66,100 participants. The Farmer Learning Center cascade involved the establishment of centers, each with about 25 members, consisting of lead farmers, follower farmers, extension agents, and community leaders. Learning and innovations from these trials were then shared with other farmers and community stakeholders. The Village NRM Committee (VNRMC) cascade was supported by Resilience Field Officers (RFOs) who worked with government extension agents to train VNRMC members responsible for designing and implementing watershed management plans.

FIGURE 1. UBALE SMART SKILLS DELIVERY MODEL, PARTICIPANT GROUPS, DELIVERY AGENTS AND END-USERS



TRAINING CONTENT

Training curricula were developed for each of the participant groups, composed of one or more of the eight modules that make up the suite of SMART Skills.[4] Each module was accompanied by a manual for field agents developed by CRS SMART Skills subject-matter specialists. **Table 1** provides a breakdown of each competency area into its component competencies, the participant group that received training and coaching in each competency area, the source of content and how the content was delivered, and the project year in which the training content was delivered.

TABLE 1. COMPETENCY AREAS, COMPETENCIES, PARTICIPANT GROUPS, MEANS OF DELIVERY, AND SEQUENCING

Competency area	Competencies	Participant groups	Means of delivery	Project year initiated
Group organization and management	• *Good Governance.* • *Transformative. Participation and Leadership.*	SILC groups	Establishment of SILC groups for learning and practicing the SILC methodology set out in the SILC Field Agent Guide.[5]	Year 1 (2015)
		Market Clubs	Establishment of Market Clubs using the NASFAM approach, supported by lessons and exercises from the Organizing and Managing Farmers' Groups manual.[6]	Year 2 (2016)
Financial management	• *Saving for a Purpose.* • *Borrowing Wisely.*	SILC groups	Learning-by-doing using SILC methodology of the SILC Field Agent Guide.	Year 1 (2015)
	• *Effective Financial Management.*	SILC groups	Lessons and exercises from the Financial Education manual.	Year 3 (2017)
Agricultural marketing	• *Agricultural Marketing Opportunities Prioritization.* • *Effective Agricultural Business Planning.* • *Successful Agricultural Business Implementation.* • *Periodic Agricultural Business Performance Review.*	Market Clubs	Sequenced lessons and exercises on concepts, principles and terms used in marketing agricultural products from the Marketing Basics manual. Facilitation of Market Clubs' collective commercialization cycles using the lessons and exercises from the Seven Steps of Marketing manual.	Year 2 (2016) Years 3 and 4 (2017-2018)
Natural resource management	• *Conservation and Regenerative Agriculture.* • *Integrated Soil Fertility Management.* • *Efficient Water Resource Management.*	Lead Farmers and Following Farmers	Establishment and management of "mama" demonstration plots managed by Lead Farmers, and "baby" demonstration plots managed by Follower Farmers, as a focus for understanding the principles of natural resources management, using lessons and	Year 2 (2016)

4 For details of the content of each manual, see the SMART Skills website. The UBALE project translated all manuals from English into Chichewa, the local language. The text with "SMART Skills website" has the correct link to the main SMART Skills page in the CRS website. https://www.crs.org/our-work-overseas/program-areas/agriculture/smart-skills-smallholder-farmers

5 The SILC Field Agent Guide (Nov. 2019) provides the specifics of good governance and management for SILC groups.

6 The Organizing and Managing Farmers' Groups (Jun. 2022) manual is a generic guide to the principles and good practice of farmer group formation and management. Selected topics from this manual relevant to the organization of collective marketing, but not found in the Seven Steps of Marketing (Jun. 2022) manual, were used.

			exercises from the Understanding Natural Resources manual.	
	• *Holistic Plant Health and Productivity.*	Lead Farmers and Following Farmers	Demonstration of good practice for prioritized crops, complemented with DINER Fairs to support farmers' access to quality seed and other inputs, in response to a fall armyworm infestation.	Year 2 (2016)
	• *Sustainable and Integrated Watershed Management.*	VNRMC	Design and implementation of village or catchment-level natural resource management plans using lessons and exercises from the Managing Natural Resources manual.[7]	Year 2 (2016)
Innovation	• *Continuous Learning and Innovation.*	Farmer Learning Centers	Establishment of Farmer Learning Centers for the practical application of planning, setting-up, collecting and analyzing data from on-farm experiments, using sequenced lessons and exercises from the Promoting Innovation[8] manual.	Years 3 and 4 (2017 and 2018)

The capacity strengthening process was sequential, with lessons and hands-on activities programmed to coincide with household needs and agricultural cycles. For example, SILC members' saving and lending cycles were programmed to meet periodic financial needs of families; Lead Farmers and Market Club members' learning schedule coincided with seasonal production and marketing cycles; learning for VNRMC members was programmed prior to and during the development and implementation of NRM plans; and for Farmer Learning Center members it was prior to and during the design and setting up of field experiments.

7 The CRS' Managing Natural Resources (Jun. 2022) manual was combined with local content by CARE staff, who took the technical lead for this NRM module.
8 Promoting Innovation (Jun. 2012).

Assessment Methodology

The CRS SMART Skills competency model framed the assessment (CRS, 2021), which consists of a set of **competency areas** in which project participants' skills are to be strengthened, and a set of interrelated **competencies**, specific to each competency area, that project participants must exhibit in order to be successful in their livelihood activities. Each competency includes key **behavior change objectives** and associated **behavioral evidence**, or actions, used to assess the level of competency achieved by those who have been trained. CRS has established evaluation standards to measure and analyze the performance and results of its agriculture and livelihoods capacity strengthening activities using the following **levels of competency** to determine competency achievement:

- **Basic**: Participants demonstrating less than 40% of the behavioral evidence who need intensive training.
- **Developing**: Participants demonstrating at least 40% but less than 60% of the behavioral evidence who require further targeted training and reinforcement.
- **Functional**: Participants demonstrating at least 60% but less than 75% of the behavioral evidence who can successfully develop their livelihoods.
- **Advanced**: Participants demonstrating at least 75% of the behavioral evidence who can serve as role models for others.

The study used a mixed methods approach. It combined the Situation, Task, Actions, and Results (STAR) model (Sanghi, 2016) to assess competency levels using the SenseMaker method (Guijt et al. 2022) to assess participants' internalization of behavior change for each competency and their perceptions of outcomes and livelihood impacts. The STAR model is a behavior-focused, semi-structured interview approach that uses open-ended questions about the respondent's concrete experience with the focus topic and probing techniques to assess whether respondents demonstrate the behavioral evidence for each competency. Interviewers record responses against a pre-established list of behavioral evidence items for each competency.

The SenseMaker method is also a narrative-based tool that complements the STAR model and encourages nuanced and thoughtful responses by framing questions that require respondents to think before they answer. This method provided additional layers of information to assess: (1) the extent to which participants have internalized the behavior changes for each competency; (2) the outcomes of these behavior changes; and (3) the impact of these outcomes on production, food availability (a proxy for food security), income, dietary diversity (a proxy for improved nutrition), and resilience.

The assessment was conducted in two phases. The first was conducted in Blantyre Rural district only, with data collected immediately after the midterm evaluation of the project (May-June 2018). The second was conducted in the three districts where the project was implemented - Blantyre Rural, Chikwawa, and Nsanje - with data collected after the completion of all project implementation activities (March-June 2019).

The SMART Skills Competency Model framed the design of the assessment tools, which targeted: (1) project participants who were involved in SILC groups and/or Market Clubs, and lead and follower farmers who participated in "mama" and "baby" demonstration plots; (2) SILC PSPs and Market PSPs; and (3) implementing partner project staff, who were designated by the UBALE project as SILC field supervisors, market association development supervisors, CSA field supervisors, and resilience field supervisors (**Figure 1** above).

Two tools were developed for project participants. One was designed to assess the organizational, financial, and marketing competencies of a representative sample of SILC members and Market Club members. The other was designed to assess the NRM and innovation competencies of a representative sample of lead farmers with “mama” demonstration plots, follower farmers, some of them with “baby” demonstration plots, and VNRMC members. Five tools were developed for field and extension agents, one for each type of agent, using the same approach described above for project participants.

Table 2 shows the sample sizes by farmer group for the midterm and endline assessments with corresponding confidence levels and margins of error, assuming a standard deviation of 0.50, which is the maximum possible variation for discrete variables. All
SILC and market PSPs who supported the groups randomly selected for the participant sample were interviewed at endline, representing 6% of all SILC PSPs and 16% of all market PSPs. Given the small number of supervisors for each of the three cascades, the target sample included the entire group of supervisors. The sample achieved was 70%
of the target.

TABLE 2. MIDTERM AND ENDLINE FARMERS’ SAMPLE SIZE, CONFIDENCE LEVEL, AND MARGIN OF ERROR

Farmer group type	Midterm assessment (2018)			Endline assessment (2019)		
	N	Confidence level	Margin of error	N	Confidence level	Margin of error
SILC and Market Club (Assessment tool 1)	454	95%	0.07	626	95%	0.06
Demo plot and VNRMC (Assessment tool 2)	468		0.07	490		0.08

Kaunde Village, Zomba district (Namadidi area), Malawi - Lucy Wyson, 45, picks mustard plant from her garden that will be used for lunch. Ms. Wyson is a care group promoter. [Photo by Ric Francis for CRS]

Findings

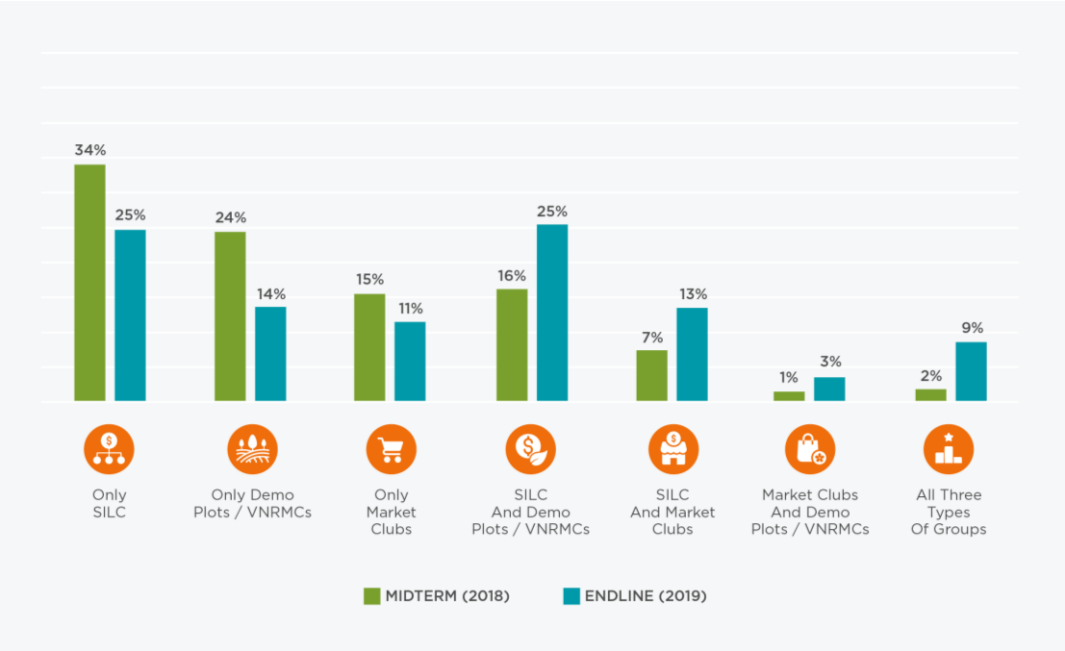
INTEGRATION OF SKILLS

The opportunities for participants to develop skills were conditioned by the groups in which they participated, which was voluntary, and participants were not actively encouraged to participate in more than one group. To acquire all skills, a project participant would have to have participated in a SILC group (financial and organizational skills), a Market Club (marketing and organizational skills), and as a follower farmer and/or be associated with a VNRMC or Farmer Learning Centre (NRM skills). At the household level, therefore, skill integration depended on the same or different family members participating in different groups, with the assumption that skills would flow from one family member to another. Similarly, at the group level, for the group to have skills in the five skill areas, skills would have to be transferred from those members who had received training to those who had not.

Analysis of the results of the midterm assessment revealed the benefits to SILC members of mastering two foundational competencies, finance and organization, and therefore the desirability of having as many project participants as possible join SILC groups. Thus, after the midterm, the project team took concrete steps to encourage project participants to participate in more than one group, but especially to encourage participants who had not yet done so to join SILC groups. As a result, the percentage of participants who belonged to only one group decreased and the percentage of participants who belonged to more than one group increased (**Figure 2**). The most significant changes occurred among Market Club members and participants in VNRMC and demonstration plots. At midterm, 36 percent of Market Club members were also members of SILC groups, increasing to 60 percent at endline. For VNRMC or demonstration plot participants, the corresponding percentages were 41 percent belonging to a SILC group at midterm and 67 percentat endline.

In Mchacha, Nsanje, Malawi, farmers applied new climate-smart agricultural practices taught by the USAID-funded UBALE project, which helped communities cope with shocks like drought. Background: The United in Building and Advancing Life Expectations (UBALE) project was a five-year, USAID-funded development and food assistance project managed by Catholic Relief Services (CRS). [Photo by Michael Stulman for CRS]

FIGURE 2. PERCENTAGE OF RESPONDENTS PARTICIPATING IN ONE OR MORE GROUPS AT MIDTERM AND ENDLINE



As a result of the UBALE capacity strengthening delivery model and the adjustments made to this model after the midterm evaluation, the percentage of project participants who reported receiving training in financial skills increased from 22% at midterm to 57% at endline, those who reported receiving training in NRM skills increased from 29% to 33%, those who reported receiving training in marketing skills increased from 11% to 28%, and those who reported receiving training in all three types of skills increased from 2% to 6%. Despite efforts in the final year of project implementation to provide more participants with opportunities to strengthen their skills in all three competency areas, the fact that only 6% received training in all competency areas raises the question of whether more households would have benefited from increased skills in all three competency areas and the underlying constraints that prevent project participants from achieving competency in multiple areas. These findings, and the questions they raise, confirm the value of periodic competency assessments to inform the adaptive management of SMART Skills capacity strengthening initiatives.

LEVEL OF COMPETENCIES ACHIEVED BY PROJECT PARTICIPANTS

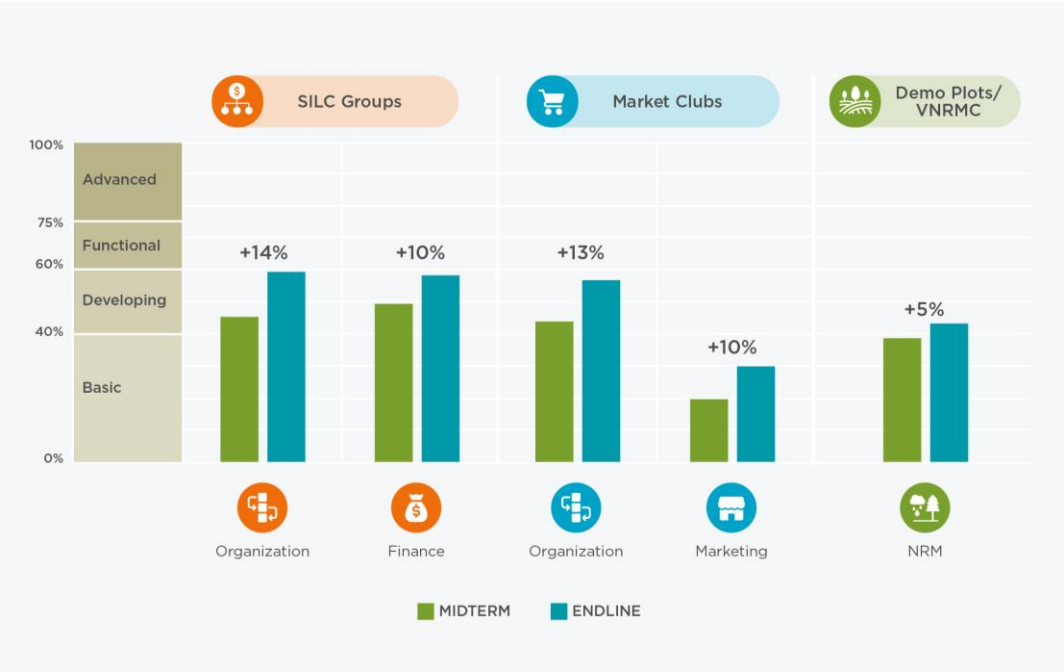
At endline, project participants who were members of SILC groups achieved, on average, nearly functional levels of organizational (59%) and financial (59%) competencies, with increases in these competencies of 14% and 10%, respectively, between the midterm and endline evaluations (**Figure 3**). Project participants who were members of Market Clubs increased their level of organizational and marketing competencies between the midterm and endline evaluations by 13% and 10%, respectively. However, at endline, on average, they were only able to achieve a developing level of organizational competencies (57%) and remained at a basic level of marketing competencies (30%). NRM competencies among lead and follower farmers increased by only 5% between midterm and endline, but at endline, farmers on average reached a developing level of competency (43%).

These results showed that, on average, project participants who accessed capacity building opportunities implemented with the SMART Skills approach were able to improve their organizational, financial, marketing, and NRM competencies over a one-year period. However, since the midterm assessment was conducted in the third year of implementation and after the project midterm evaluation, it is not possible to

determine how much of the midterm competency level achieved can be attributed to UBALE's implementation of the SMART Skills approach.

Nevertheless, subsequent use of the same assessment tools in Central America in 2021 and in southern Madagascar in 2024 showed that farmers who have not participated in SILC groups or Village Savings and Loans Associations (VSLA) demonstrated a very basic level of financial competencies (10%). These assessments also showed a very basic level of marketing competencies (7%) among farmers who are not members of producer organizations, and an average baseline level of NRM competencies of 15%, also at a basic level. This suggests estimated improvements from baseline to midterm of about 39% in financial competencies (from 10% to 49%), 13% in marketing competencies (from 7% to 20%), and 23% in NRM competencies (from 15% to 38%), in addition to those calculated from midterm to endline.

FIGURE 3. CHANGES IN COMPETENCY LEVELS ACHIEVED BY PROJECT PARTICIPANTS, ON AVERAGE, AT MIDTERM AND ENDLINE



ADAPTIVE MANAGEMENT FOR INCREASED EFFECTIVENESS AND EFFICIENCY

One of the primary goals of conducting competency assessments is to generate periodic data on the effectiveness of SMART Skills delivery to enable informed adjustments to capacity-strengthening activities during the course of a project. Following the midterm evaluation, the Blantyre Rural project team analyzed the results and took corrective action where they identified gaps in participants' behavioral evidence. Two examples of adaptive management based on the results of the midterm assessment of the financial and organizational competency areas in Blantyre Rural are described here.

STRENGTHENING FINANCIAL COMPETENCIES

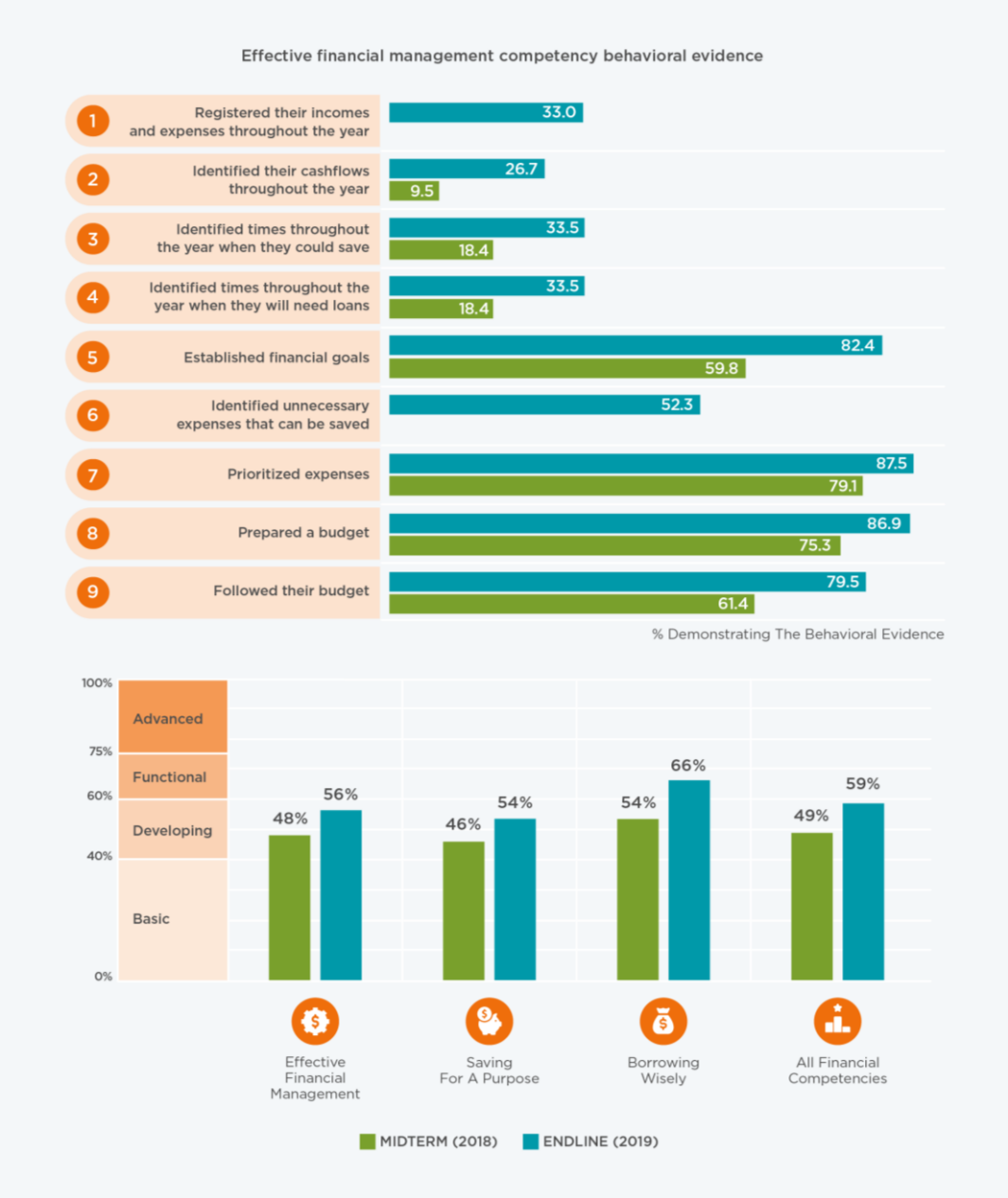
The midterm results showed that over 75% of SILC members were budgeting and prioritizing their expenses, and over 60% were following their budgets and setting their financial goals. However, there were significantly fewer members, less than 10 percent, who were identifying their cash flow and based on that, the times throughout the year when they could save and the times when they would need to borrow (see the top four behavioral evidence in the **top chart of Figure 4**).

These findings led the project team to take two actions. First, they translated the financial education training materials into Chichewa, the local language, so that the verbal skills transfer by SILC PSPs was supported by

written training materials. Second, the team reinforced the SILC PSPs on the *seasonal financial calendar* content of the financial education curricula through targeted trainings, revised training materials, and coaching of PSPs as they trained SILC members. Over a one-year period following these interventions, the percentage of SILC members demonstrating this behavioral evidence increased significantly. In addition, by endline, the average level of the effective financial management competency among project participants increased by 8%, and the overall level of financial competencies increased by 10% (**bottom chart, Figure 4**).

Savings and Internal Lending Communities (SILC) members gather for a meeting in Njolomole, Blantyre, Malawi. The SILC model is a micro-finance tool CRS uses to help households and communities build wealth and earn money through saving, lending, investing, and financial education. SILC groups are often the only access people in rural communities have to financial services.
[Photo by Tsee Dooshima for CRS]

FIGURE 4. CHANGES IN PARTICIPANT'S BEHAVIORAL EVIDENCE AND LEVEL OF FINANCIAL COMPETENCIES



STRENGTHENING ORGANIZATIONAL COMPETENCIES

The midterm results showed that three-quarters of SILC members ensured the application of their group constitution, but only half participated in the design of the group constitution, and only 10% considered the time and financial constraints of women and youth when designing their group constitution (see behavioral evidence 4, 2, and 3, respectively, in the **top chart of Figure 5**). These findings demonstrated the need to develop a shared and comprehensive group vision and to revise group constitutions to make them more inclusive of the needs and interests of women and youth. To this end, refresher training and coaching was provided to SILC and market PSPs as they worked with SILC groups and Market Clubs to review and revise their group constitutions. As a result, at endline, two-thirds of group members were able to explain what motivated them to be part of the group and had participated in drafting or revising their group constitution,

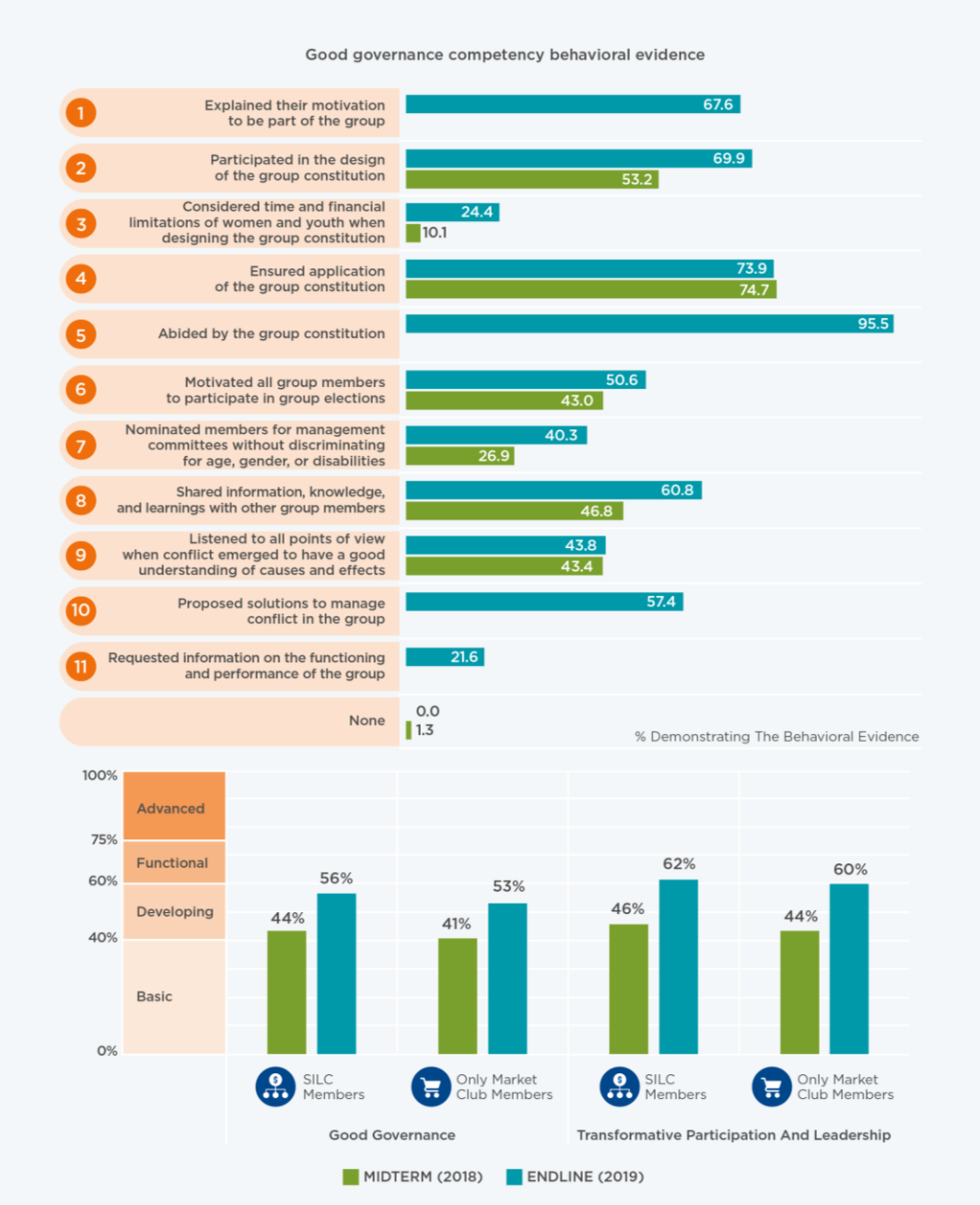
and more groups were beginning to consider the needs and interests of women and youth when revising their constitution.

The results also showed at midterm that Market Clubs had a higher percentage of members with basic organizational skills (55%) compared to SILC group members (43%). This finding led NASFAM to appreciate

The United in Building and Advancing Life Expectations (UBALE) project was a five-year, USAID-funded development and food assistance project managed by Catholic Relief Services (CRS). CRS and implementing, technical, and learning partners collaborated with the Government of Malawi to sustainably reduce food insecurity and build resilience among 250,000 vulnerable households in the Blantyre Rural, Chikwawa, and Nsanje districts of southern Malawi. [Photo by Michael Stulman for CRS]

how well organizational skills were embedded in the SILC methodology and to replicate this with Market Clubs. As a result of the actions taken by the UBALE team in response to the findings, the average level of good governance among SILC group and Market Club members increased by 12% and the average level of transformative participation and leadership increased by 16% between the midterm and endline assessments (**bottom chart, Figure 5**).

FIGURE 5. CHANGES IN PARTICIPANT'S BEHAVIORAL EVIDENCE AND LEVEL OF ORGANIZATIONAL COMPETENCIES



GENDER EQUITY

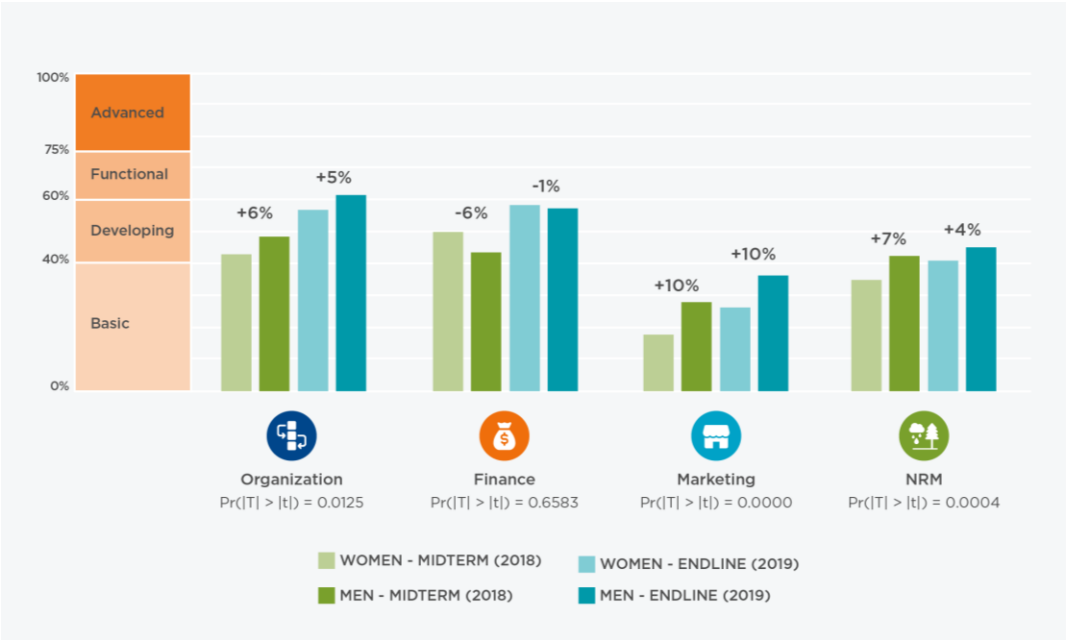
As shown in **Figure 1**, at project endline, 75% of SILC members and 53% of Market Club members were women, because of the intentional design of the UBALE delivery model to reach women and provide them

with opportunities to develop their organizational, financial, and marketing skills. Although the demonstration plots and VNRMC monitoring systems did not monitor the gender of participants, based on the endline assessment, it is estimated that 58% of the follower farmers participating in FFS were women. This means that women farmers were reached by the project, but the other important question is the outcome of this participation in terms of the level of competence achieved by women compared to men.

Without a baseline assessment of women's and men's competencies, it is not possible to determine what the competency gap was between these two groups of participants at the start of the project. However, midterm and endline data show that the gender gap in organizational and NRM competencies was reduced after the gap was identified at midterm and addressed. Despite the reduction in the gap in these two competency areas, the competency gap between women and men at endline was still statistically significant. In the case of marketing competencies, both women and men experienced a significant increase in their competency level between midterm and endline, but the gap was maintained.

The experience with financial competencies was different. At midterm, the gap was in the opposite direction, with women demonstrating higher levels in this competency area, but the gap was completely closed by endline. Qualitative data showed that men were less interested in joining SILC groups at the beginning of the project, but after observing the benefits of participating in these groups, more men joined or started new SILC groups and quickly increased their level of financial competencies. These findings confirm the importance of disaggregating competency assessments by gender. Simply tracking the number of women in groups does not provide a clear picture of whether interventions are closing gender gaps.

FIGURE 6. CHANGES IN COMPETENCY LEVELS ACHIEVED BY PROJECT PARTICIPANTS DIFFERENTIATED BY GENDER



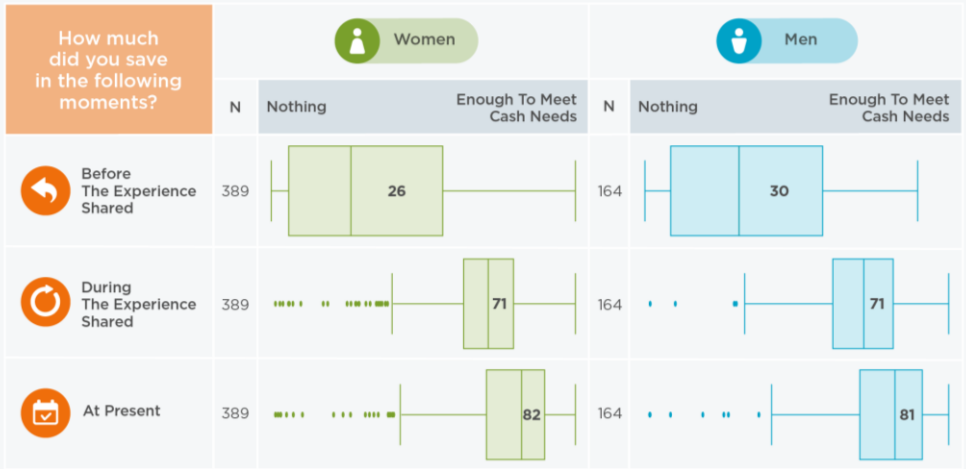
CHANGES IN FINANCIAL, FARMING AND MARKETING PRACTICES

This section examines the direct results of implementing the SMART Skills approach to capacity strengthening and the corresponding level of competence achieved by project participants at endline. For this purpose, project participants were asked to reflect on some concrete changes in their financial management, farming, and marketing practices that resulted from their experience of participating in the UBALE capacity strengthening activities, using a SenseMaker tool called a slider.

SAVING LEVELS AND LENDING OUTCOMES

Project participants who engaged in SILC groups to strengthen their financial literacy demonstrated important outcomes that contribute to their well-being. In terms of their **level of savings**, both women and men perceived significant progress from saving little to saving enough to cover about 80 percent of their cash needs (**Figure 7**). As shown above in **Figure 6**, both women and men achieved a near-functional level of financial competence at endline, resulting in the same level of progress for both groups, with the only difference being that women perceived their starting point to be lower than that of men ($Pr(|T| > |t|) = 0.2768$), but after joining their SILC groups they were able to achieve the same level of savings as men, only with a higher number of outliers who were unable to increase their savings.

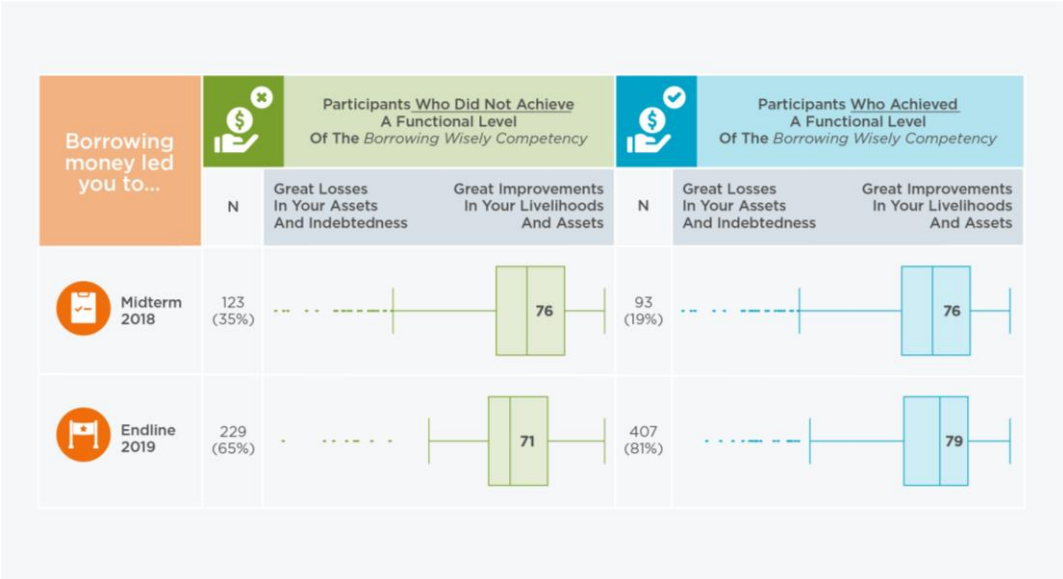
FIGURE 7. RESPONDENTS' PERCEPTION OF CHANGE IN THEIR ABILITY TO SAVE FOR MEETING THEIR CASH FLOW NEEDS



In terms of the contribution of financial literacy to making good decisions about **when to borrow and how much to borrow,** the results show that all project participants who participated in SILC groups and had the opportunity to strengthen their financial literacy and take out loans have a median positive perception that the loans they took out enabled them to improve their livelihoods and assets and did not lead them to debt and loss of assets (**Figure 8**). The percentage of participants who achieved a functional level of the *Borrowing Wisely* competency increased from 65% at midterm to 81% at endline. Not only did those who achieved a functional level at endline perceive a significantly better outcome of borrowing ($Pr(|T| > |t|) = 0.0073$), but their perceived outcome continued to improve from midterm to endline, while those who did not achieve this level of competency perceived a less positive outcome at endline.

This suggests that the outcomes of participants who achieved a functional level of competency tended to be more sustainable.

FIGURE 8. RESPONDENTS' PERCEPTIONS OF HOW TAKING LOANS HAVE IMPROVED THEIR LIVELIHOODS AND ASSETS

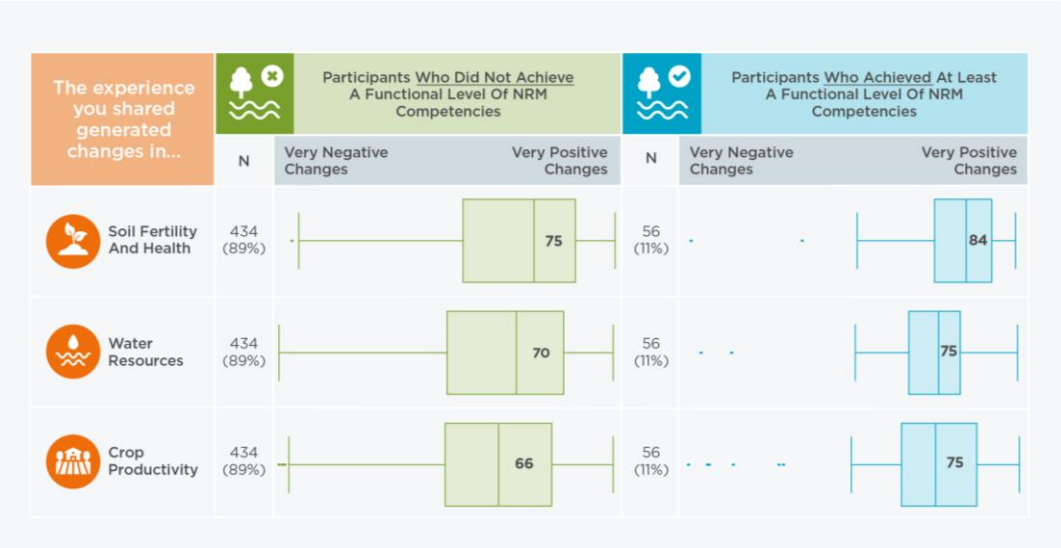


CHANGES IN SOIL FERTILITY, WATER RESOURCES AND CROP PRODUCTIVITY

At the median, all farmers who participated in learning experiences to strengthen their NRM competencies through FFS and/or designing and implementing NRM plans for their villages perceived positive changes in soil fertility and health, water resources, and crop productivity (**Figure 9**). Among these farmers, those who achieved at least a functional level of NRM competence not only perceived more positive changes in their soil fertility and health ($Pr(|T| > |t|) = 0.0009$), their water resources ($Pr(|T| > |t|) = 0.0074$), and their crop productivity ($Pr(|T| > |t|) = 0.0072$) than those who did not reach a functional level, but their responses are also more consistent, do not spread to the negative side of the slider, and have fewer outliers. This may indicate that the results achieved by those farmers who have achieved at least a functional level of NRM competencies are more sustainable.

difficult to get enough food from her farm to feed her family for a quarter of a year. [Photo by Michael Stulman for CRS]

FIGURE 9. RESPONDENTS' PERCEPTION OF CHANGES IN SOIL FERTILITY AND HEALTH, WATER RESOURCES AND CROP PRODUCTIVITY



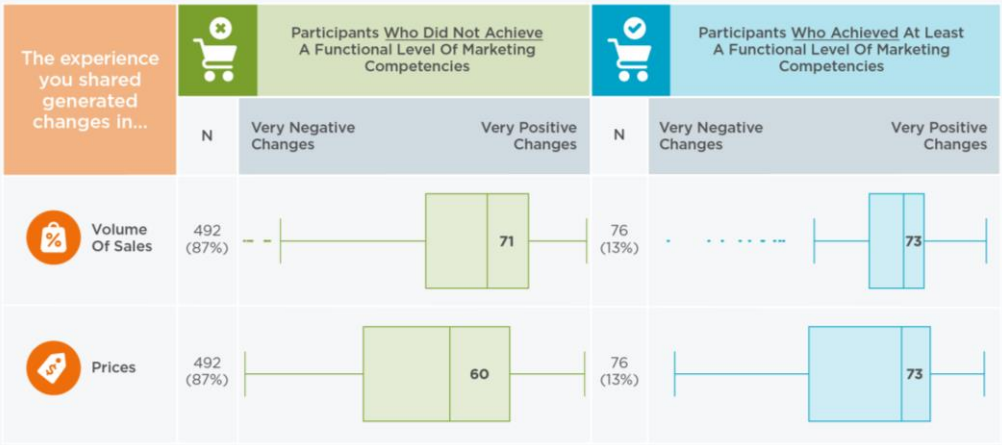
MARKETING

Farmers joined Market Clubs to market their produce, buy inputs collectively, and improve their access to technical and business services. The evaluation shows that farmers perceived improvements in their ability to implement the practices needed to meet buyers' requirements and, to a lesser extent, to meet the volumes of produce they agreed to sell through their Market Club. This has led to progress in strengthening relationships with buyers. Overall, 74% of the farmers felt that they had benefited from being a member of a Market Club, mainly by selling their produce collectively and, to a lesser extent, by accessing services and buying inputs collectively.

Participation in a Market Club made a difference in strengthening farmers' competencies. While only 4% of farmers who were not members of a Market Club achieved a functional level of marketing competence at endline, 19% of those who were members achieved a functional level, and this difference is statistically significant (Pearson chi2(1) = 32.5875 Pr = 0.000). On the other hand, participation in a Market Club alone did not make a difference in farmers' positive perceptions of the changes they achieved in their sales volumes or the prices they received for their crops; it was the level of marketing competence achieved that made this difference.

As shown in **Figure 10**, those farmers who have achieved a functional level of marketing competence perceive, to some extent, more positive changes in their sales volume (Pr(|T| > |t|) = 0.3183), but more in the prices received for their crops (Pr(|T| > |t|) = 0.0218), showing that this type of competence gives them better bargaining power. Moreover, responses among those farmers who have achieved a functional level of competence are more concentrated and closer to the median indicating a lower standard deviation, especially as it relates to their perceived changes in the volume of sales. This may indicate that the results achieved by those farmers who have achieved
a functional level of marketing competencies are more sustainable.

FIGURE 10. RESPONDENTS' PERCEPTIONS OF CHANGES IN THE VOLUME OF THEIR SALES AND PRICES



CONTRIBUTION TO ACHIEVING AND SUSTAINING FAMILIES' LIVELIHOOD GOALS

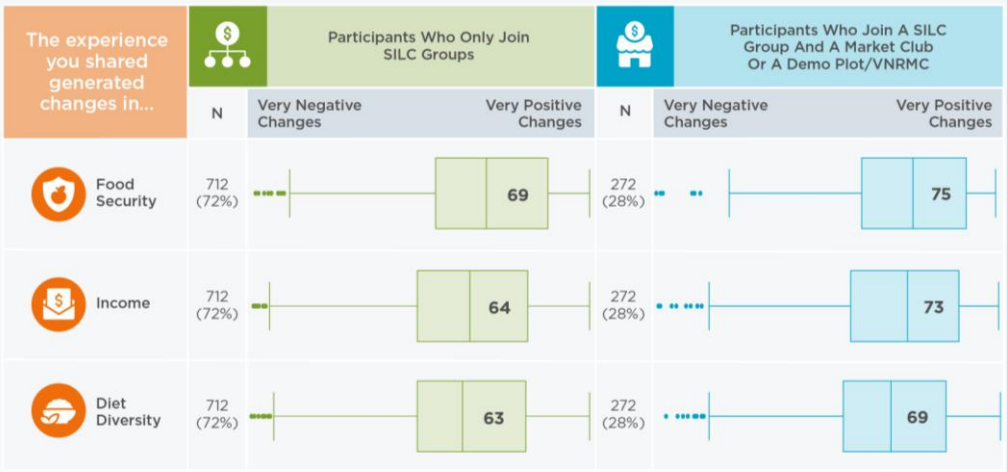
LIVELIHOOD OUTCOMES

Strengthening project participants' competencies for financial inclusion, regenerative agriculture and market engagement was a means to sustainably improve crop productivity to ensure food availability, and to engage farmers in markets in an effective, sustainable, and inclusive manner to improve and stabilize their income streams, both
of which to contribute to dietary diversity. At endline, over 90% of female and male project participants perceived that their participation in the UBALE project had brought about positive changes in their food security, income, and dietary diversity, with no difference in the magnitude of the positive change in income between women and men ($Pr(|T| > |t|) = 0.9282$).

To test the assumption that farmers need a combination of competency areas (financial, NRM, organizational, marketing, and innovation) to be successful, the responses of participants who only participated in SILC and thus only had the opportunity to strengthen their financial and organizational skills were compared with those of participants who participated in SILC but also in demonstration plots/VNMRCs or
Market Clubs, or all three types of groups and thus had the opportunity to strengthen their NRM and/or marketing competencies (**Figure 11**).

Results showed that participants who had the opportunity to strengthen their NRM and/or marketing skills, in addition to their financial skills, perceived more positive changes in their food security ($Pr(|T| > |t|) = 0.0014$), income ($Pr(|T| > |t|) = 0.0000$),
and dietary diversity ($Pr(|T| > |t|) = 0.0008$) than those who only had the opportunity
to develop their financial skills. This shows that farmers experienced multiple livelihood benefits from strengthening their skills in group organization, finance, plot, farm, and community NRM, and collective marketing.

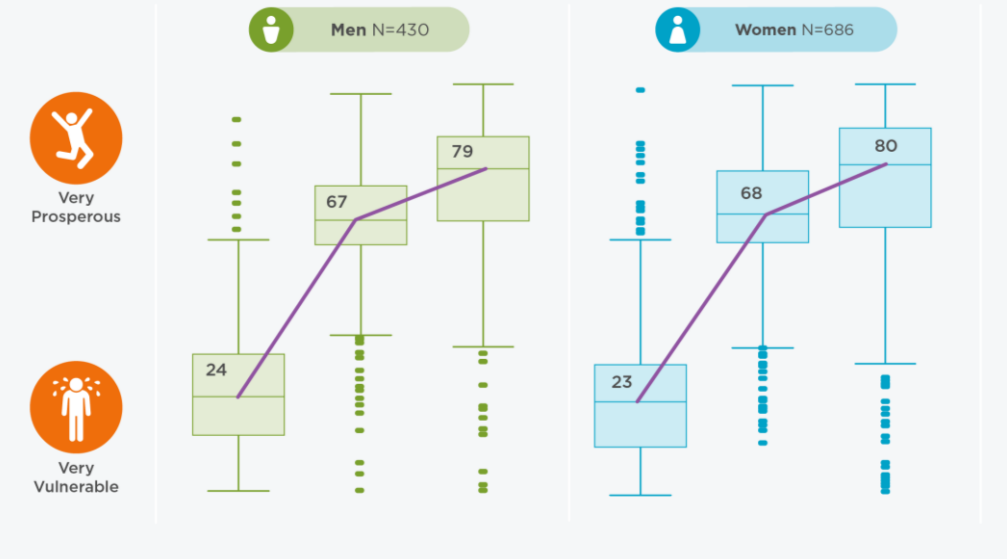
FIGURE 11. RESPONDENTS' PERCEPTIONS OF CHANGES IN THEIR LIVELIHOOD OUTCOMES



ADVANCEMENT ON THE PATHWAY TO PROSPERITY

The evaluation has shown how, over the course of the project, participants progressed from feeling vulnerable before joining the UBALE project to feeling relatively prosperous at the end of the project (**Figure 12**). The results show that, at the median, men and women have progressed to the same level of relative well-being ($Pr(|T| > |t|) = 0.8716$), illustrated by the purple pathways, even though women felt more vulnerable before joining the project ($Pr(|T| > |t|) = 0.0796$).

FIGURE 12. MEN AND WOMEN'S PERCEPTIONS OF PROGRESS ALONG A PATHWAY TO PROSPERITY

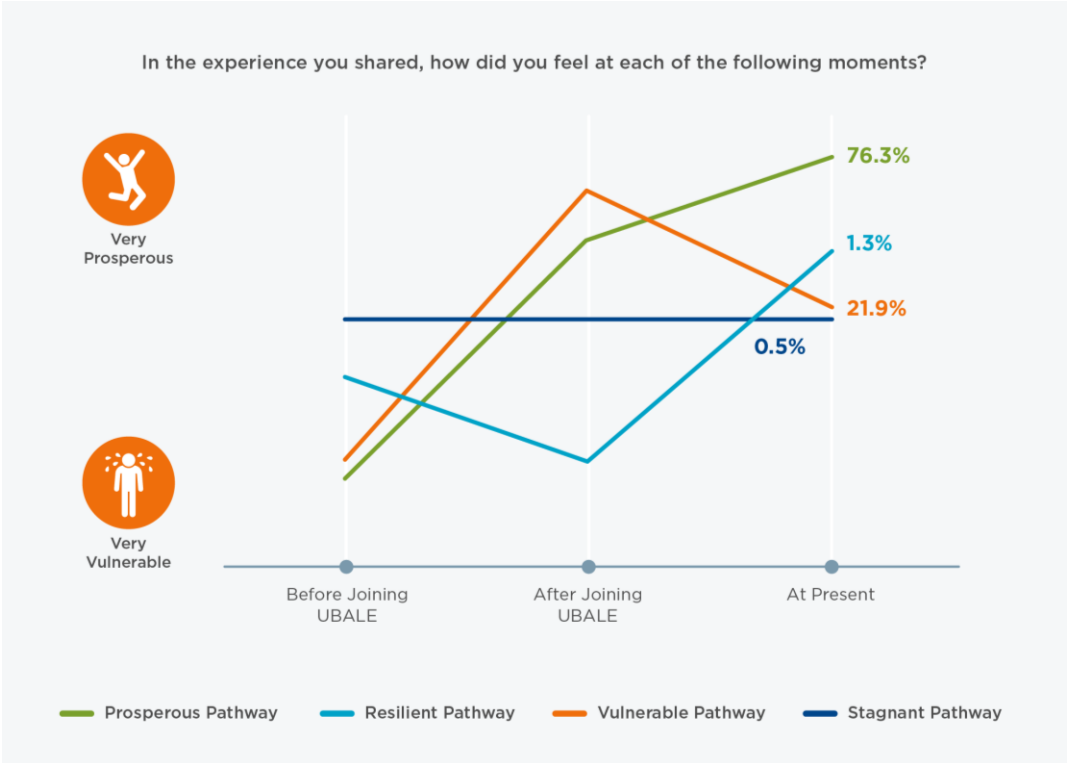


RESILIENCE

It is noteworthy that project participants perceived a median positive trajectory in their well-being, even though 99 percent of all respondents reported facing at least one shock or stressor during the 5-year period of UBALE implementation. The types of shocks and stresses faced by project participants included climate-related shocks (80% or more of participants reported unpredictable and erratic rainfall and drought before midterm, and 83% and 31% reported floods and strong winds, respectively, after midterm and before endline); crop pests and diseases (including a major fall armyworm infestation reported by 89% of project participants at midterm and 83% at endline); market and price fluctuations (25% of participants), particularly a drop in demand and prices for pigeon peas (a crop prioritized for farmer market engagement); and personal stressors, such as illness and accidents (28% of participants), theft or insecurity (17% of participants), and death of family members (15% of participants).

Further analysis revealed that 76 percent of participants followed a **prosperous path**, but the remainder followed three other types of pathways (**Figure 13**). A **vulnerable pathway**, followed by 22 percent of participants, shows an initial steep progression from feeling vulnerable to feeling prosperous, followed by a decline, but to a level of wellbeing at the end of UBALE that is higher than before they joined the project. A very small proportion of participants followed a **resilient pathway** (1.3 percent) or a **stagnant pathway** (0.5 percent). Those who followed a stagnant path perceived that their status did not change over the course of the project.

FIGURE 13. TYPES OF PATHWAYS FOLLOWED BY PROJECT PARTICIPANTS DURING THEIR PARTICIPATION IN THE UBALE PROJECT



LESSONS LEARNED

UBALE was the first major food security project to develop and implement the competency model approach to assessing the effectiveness of SMART Skills delivery. The project had completed its midterm review when the competency model development process began. There was sufficient time to conduct two competency assessments, one at the beginning of the 4th year, just after the midterm review, and the other in the 5th year of the project. The implementation experience, which was rich in learning about the process of implementing the model, and the findings revealed areas for improvement that informed a new generation of SMART Skills 2.0 guidance and training materials.

Incorporating the competency model approach in project design. The late introduction of the competency model approach in UBALE meant that the results of this study tell a partial story about the potential of the model to achieve its objectives, since the approach was not introduced at the beginning of the project. The definition of the goals and targets
of a capacity strengthening strategy, the curriculum structure, and the selection of training materials and tools require a baseline competency assessment of the actors in the delivery model (e.g., lead trainers, extension agents, field agents, and project participants). The collection of this information would be best embedded in
assessments conducted as part of the design phase or the baseline evaluation at the start of the project.

The information generated by conducting these assessments will help design a capacity strengthening program that is tailored to the needs of each actor and that aims to leverage farmers' existing knowledge, correct weaknesses, fill gaps, and introduce new knowledge and practices where appropriate. Subsequently, by integrating competency assessment into a project's Monitoring, Evaluation, Accountability and Learning (MEAL) system, periodic competency assessments at the end of each training and learning cycle can provide a feedback mechanism for adjusting capacity strengthening activities to
the needs of project participants.

The human and financial resources invested in introducing a competency model approach to UBALE's capacity strengthening activities demonstrated the value of this investment. The generation of rigorous data on the effectiveness of SMART Skills delivery showed improvements in participants' competency levels and identified gaps that required reinforcement through training and mentoring. And at endline, changes in participants' practices could be linked to financial, social, and environmental benefits perceived by project participants. In addition, the focus achieved through a tailored strategy ensured that those delivering the training - extension and community-based field agents - were able to achieve the desired outcomes with less time and effort, effectively reducing costs and the burden on both trainers and trainees.

Reducing the gender gap. The study found that, compared to men, women's competency levels varied across competency areas and, to a lesser extent, across specific competencies within a competency area. By recognizing and addressing these gender gaps, the UBALE project was able to support women and men to achieve similar livelihood and resilience outcomes. Projects seeking to promote gender equity must identify the enabling factors and constraints that prevent women from closing the capacity gap with men. Disaggregating assessments by gender is important for identifying competency gaps between women and men and whether projects are successful in closing some or all of them. Periodic competency assessments to monitor gender competency gaps support adaptive program management and ensure that capacity strengthening initiatives generate similar competency improvements for
female and male participants.

Quality and consistency in capacity strengthening activities. Over the life of the UBALE project, on average, delivery agents and participants achieved a functional level of financial competence, but delivery agents and participants achieved only a developing level of competence in their NRM and marketing competencies. This shows that ensuring quality and consistency in capacity strengthening activities starts with good selection and training of delivery agents, both extension agents (project and partner organization staff) and community-based agents. Therefore, the following are good practices for the delivery of capacity strengthening activities:

- Carefully select extension agents through competency-based interviews that emphasize their willingness to learn new skills, and who have the capacity to build trust with community-based agents and project participants and to facilitate adult learning with semi-literate audiences.
- Ensure that subject matter experts train, mentor, and coach extension agents to achieve advanced competency in their respective areas of expertise, as their level of competency is critical in determining the level of competency that can be expected from community-based agents and project participants at the end of a project.

Establish a certification process for extension agents who achieve advanced levels in their respective areas of competence to motivate extension agents and to ensure that they can continue to provide quality extension services after the project ends and support scaling efforts.

Sustainability and scale. The design of UBALE intentionally involved the MoAIWD, through its district extension services, and NASFAM to lead the delivery of NRM and marketing skills, respectively, as a means of promoting local ownership, institutional strengthening, and post-project sustainability. Financial skills were provided by the three implementing partners: Chikwawa Diocese (Cadecom), a local organization, and CARE International and Save the Children, both INGOs. Mutual learning between NASFAM, the project technical team, and the implementing partners was evident. The project adopted NASFAM's Market Clubs and Marketing Clusters methodology, and NASFAM, observing that organizational skills were well embedded in the SILC methodology, replicated this in Market Clubs. Similarly, AEDCs and AEDOs used the MOAIWD nationwide Lead Farmer model to deliver NRM skills. For this strategy to deliver on its promises, agreements between implementing INGOs and national organizations must be clear, realistic, and enforceable, and project teams must have sufficient staff time to follow up, fill gaps, and maintain collaboration.

The training cascade for financial skills and market skills used full-time Field Supervisors who selected and trained SILC PSPs and Market PSPs, who also have a financial incentive to work full-time. The PSP model reached large numbers of end-user participants. Each SILC PSP attended to 523 SILC members and each Market PSP to 318 Market Club members. For the NRM delivery cascade, AEDOs selected voluntary Lead Farmers as community-based agents. AEDOs had work responsibilities and Lead Farmers livelihood activities that occupied them beyond their UBALE duties. Consequently, the reach of the AEDO-Lead Farmer combination was lower, with each Lead Farmer working with a group of 16 Follower Farmers on average (see **Figure 1**).

These findings underscore the effect that trainer to trainee ratios (extension agent to community-based agent and community-based agent to project participant) have on
the ability of a project to reach the numerical targets set for reaching participants.
The ratios also have implications for the quality of the training itself and all-important post-training mentoring and coaching. These ratios, therefore, need careful consideration during project design to ensure a balance, rather than a trade-off,
between reaching scale and providing quality skills delivery. The ratios decided upon also have budgetary implications.

Multi-skill integration. Initially in UBALE, the integration of skills delivery to project participants was not intentional and participation in the different types of groups was voluntary. Following the midterm competency assessment, project staff became
aware of the importance of developing financial competencies for Market Club and demonstration plot/VNRMC members to be able to invest in their production and marketing activities. Therefore, members of these groups were encouraged to join
SILC groups, and financial literacy training was made available to Market Club members. At endline, the study found that project participants who joined a SILC group and a Market Club, or a SILC group and a demonstration plot/VNRMC, achieved better livelihood outcomes and were more resilient to external shocks and stressors. These
led to two important recommendations on sequencing, layering, and integration
(SLI) good practice:

- The integration of skills should be done intentionally and according to the objectives of the different groups (in UBALE's case SILC, Market Club, Demo Plots Groups, VNRMC and Farmer Learning Centers) and the specific needs of the members of
  each group.
- SILC methodology and financial literacy should be seen as foundational and used
  as the basis for subsequent layering of other competency areas, such as plot,
  farm, or community NRM and individual or collective agricultural marketing and enterprise development.

Embedding concepts, principles, and practices with hands-on learning. The SILC methodology combines organizational skills with financial skills for the establishment of SILC groups. NASFAM observed the benefits of this combination and used it to strengthen the organizational skills of Market Club members. Similarly, it would likely be beneficial for
all collective activities (e.g., NRM and marketing, and others) to have organizational
skills embedded in them rather than learned separately. It was also observed that teaching market concepts, terms, and principles (using the Marketing Basics manual)
in isolation from the collective marketing process (using the Seven Steps of Marketing manual) was too abstract for farmers to appreciate. Therefore, it will be better to introduce basic marketing concepts and superimpose them at appropriate points in the production-marketing cycle.

References

CRS (2021) SMART skills competency model: A theory of action for capacity building in agriculture and livelihoods programming. *CRS*, Baltimore, Maryland, USA, 25p.

Guijt, Irene, M. V. Gottret, A. Hanchar, S. Deprez and R. Muckenhirn. 2022. *The Learning Power or Listening: Practical Guidance for Using SenseMaker*. Practical Action Publications.

Sanghi, Seema. 2016. *The Handbook of Competency Mapping: Understanding, Designing and Implementing Competency Models in Organizations*. SAGE Publications.

Esther Yasini, a farmer and member of the watershed management committee, tills her farm in Lingoni community, Malawi. [Photo by Dooshmia Tsee for CRS]