



CARE Pathways
Project –Global
Baseline Report

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ACRONYMS

CSI	Coping strategy index
FANTA	Food and nutrition technical assistance
FGD	Focus group discussions
FTF	Feed the Future
GBV	Gender-based violence
HDDS	Household dietary diversity score
IGA	Income generating activity
KII	Key informant interview
M&E	Monitoring and evaluation
PDA	Personal digital assistants
PDS	Public distribution system
PPS	Probability proportionate to size
SHG	Self-help group
SII	Strategic impact inquiry on women's empowerment
ToC	Theory of Change
USD	United States Dollar
VSLA	Village savings and loan association
WEAI	Women's Empowerment in Agriculture Index
WEI	Women's empowerment index

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EXECUTIVE SUMMARY

CARE's Pathways program focuses on improving poor women farmers' productivity by empowering them to more fully engage in equitable agriculture systems. The program is funded by the Bill and Melinda Gates Foundation and implemented in Bangladesh, Ghana, India, Malawi, Mali, and Tanzania. Aligned with other CARE initiatives, such as CARE Australia's WE-RISE program, Pathways is designed to overcome the constraints to women's productive and equitable engagement in agriculture. Utilizing a strong gender focus, the program's Theory of Change posits that marginalized, poor women farmers will be more productive, and their families more food secure when:

- women have increased capacity (skills, knowledge, resources), capabilities (confidence, bargaining power, collective voice), and support
- local governance and institutions have/implement gender-sensitive policies and programming that are responsive to the rights and needs of poor women farmers
- agricultural service, value chain, and market environments of relevance to women are more competitive, gender-inclusive, and environmentally sustainable.

TANGO International, Inc., a consulting firm based in Tucson, Arizona, USA, was contracted to design and is supporting the implementation of an evaluation plan for CARE Pathways. Baseline studies in Bangladesh, Ghana, India, Malawi, Mali, and Tanzania are one element of the broader evaluation plan.

This synthesis report describes the baseline methodology and process, highlights quantitative and qualitative findings, and offers key considerations for program implementation. A compendium of Supplementary Annexes accompanies this report.

Methodology

The main purpose of the baseline studies is to enable an evaluation of program performance through implementation of directly comparable endline surveys; ultimately this comparison of baseline and endline results will answer the key questions posed in CARE Pathways Theory of Change. Additionally, findings may be used for refining and/or prioritizing project activities in the operational areas.

The baseline field activities took place between July 2012 and November 2012. All country teams employed a mixed-methods approach, using quantitative and qualitative research and survey instruments. Pathways **quantitative baseline research** used a quasi-experimental design for pre-post comparison of results. The surveys are "beneficiary-based" in that the samples were drawn randomly from sample frames composed of all households with a female member in a collective with which Pathways is working. The sample sizes were determined to provide statistically representative results for household and individual level indicators at the project level. Using a combination of participatory methods and tools, the **qualitative studies** offer complementary information on norms that affect women's empowerment and power relationships, particularly as these factors relate to poor women's ability to actively engage in and have control over agricultural production and marketing activities.

Budgetary limitations precluded a stratified sample design that would allow for cross country comparison; thus, although indicator results from each country baseline are presented in common tables, the reader is cautioned against making such comparisons. No statistical tests were carried out to compare results between the six countries.

Limitations: As might be expected in a complex mixed-methods study spanning six countries, several limitations to the baselines were identified. While not constant across the six countries, these limitations include: the accuracy of sampling frames in Malawi, Mali, and Tanzania; an insufficient sample size of female farmers and potential selection bias in Bangladesh; the scope of qualitative information in Ghana, India, and Tanzania; the timing of fieldwork in Tanzania; and the duration of the interview for all countries.

SUMMARY OF BASELINE FINDINGS

Food and Nutrition Security

The main food preparer was asked to report on 12 different food groups consumed by any household member over a 24-hour period. The responses produce a HDDS between 0 and 12, with the higher score demonstrating access to diverse food groups.

The mean household dietary diversity score varies from 4.0 in India to 7.3 in Tanzania. In Malawi, Tanzania, Ghana, and Bangladesh, very small but significant differences are noted for the number of food groups consumed by members of male-headed households compared to female-headed households, with female-headed households accessing slightly fewer foods. Within households, females have, on average, access to the same number of food groups as other household members.

Livelihoods Resilience

The **Coping Strategy Index (CSI)** measures behavior change in households when they experience food and income shortages. Often used as a food security and early warning indicator, it can also be used as an indicator of **longer-term food security resilience**. The vast majority (93%) of Bangladeshi households reported food insecurity in the three months prior to the survey, which was conducted at the end of the lean season. Almost three-fourths (74%) of households in Ghana reported the same; however, notably, despite this very high percentage of food insecure households, the survey in Ghana was not carried out during the lean season (May–July). In Malawi and Tanzania few households (5% and 11%, respectively) reported food and income shortages in the past three months. The survey was conducted just after the harvest of staple crops in both countries, thus, many households would have still been well-supplied with harvested crops and findings will not accurately reflect the depth of food insecurity experienced during leaner months.

The mean CSI is highest in Mali and in India (50 and 34 out of a possible 100, respectively), suggesting households must frequently alter their food consumption patterns in order to deal with temporary food shortages. The scores for Malawi and Tanzania are relatively low (2.0 and 2.5 respectively), as would be expected as both surveys were conducted at the end of the harvest season.

In the three months prior to the baseline survey, the majority of households in Bangladesh (89%) and in Ghana (73%) had to employ at least one coping strategy that is more likely to contribute to longer-term irreversible effects (**negative coping strategies**), such as sale of productive assets, sale of land, or selling seed held for next season. In Mali and India about one-fourth of surveyed households reported resorting to such means (29% and 25%, respectively). Fewer than 10% of households in Malawi and Tanzania reported employing any negative coping strategy in the three previous months.

To measure resilience to shocks such as drought, illness, or a steep increase in food prices, households were asked about strategies employed to try to reduce the impact of future shocks (**adaptation strategies**). Among households who had experienced at least one shock, the majority in all countries except Tanzania report having employed one or more adaptation strategy. Percentages range from 59% of households in India to 95% of households in Ghana. In Tanzania, 52% of households reported doing nothing to mitigate the impact of any future shock, which is consistent with input from focus groups.

When assets are measured over time, conclusions can be drawn on overall household wealth and resilience to shock. Baseline results suggest that **asset ownership** with land included is highest in Mali, Tanzania, and Ghana, and is considerably lower in India, Malawi, and Bangladesh. In Malawi, Ghana, Bangladesh, and India, female-headed households have fewer assets with which to offset potential shocks than male headed-households.

When land assets are removed from the equation, the gaps between the index values of the various countries shrink somewhat. Households in Mali still appear to have the greatest mean index value without land. Context must be taken into consideration as this high overall mean is predominantly due to the prevalence of large livestock ownership among pastoralist populations (almost six per household), an asset with one of the highest index values.

Economic Poverty Reduction

Mean **monthly per capita income** from farm and non-farm sources appears lowest in Bangladesh and Mali (\$12 USD) and highest in Malawi and Tanzania (\$21/\$19 USD). In all countries for which income data were collected, non-farm income vastly exceeds farm income, ranging from two and a half times higher in Mali to 7.5 times greater in India. These findings imply that the primary use of crop production is for household consumption rather than for sale.

The mean for **monthly per capita expenditures** ranges from a high of \$29 USD in Tanzania, to a low of \$12 USD in Bangladesh. Mean and median expenditures greatly exceed mean and median income for surveyed households in Malawi, Tanzania, and Mali. The relationship between households' income and expenditures may be due to under-reporting of income; however, it may also suggest an accumulation of debt. If so, it is likely that debt contributes to increased vulnerability to both food and livelihood insecurity.

The majority of surveyed households (72% to 97%) and women (78% - 97%) in all countries except Tanzania and Mali report they have **savings in a formal or informal institution**. Qualitative findings suggest that the low percentages of women reporting savings in Mali, may be due to recent seasonal expenditures; in Tanzania, qualitative findings indicate that the low income-generating capacity within communities limits women's ability to save.

Women's Empowerment

The baseline index score for women's aggregate empowerment ranges from lows of 0.29 in Bangladesh and 0.32 in Mali to a high of 0.66 in Malawi. Less than 1% of all women surveyed in Bangladesh are empowered (defined as achieving an empowerment score of .80 or greater); fewer than 5% are empowered in Ghana, Mali, and India. Even in Malawi, the country with the highest aggregate empowerment score, less than one-fourth of surveyed women are considered to be empowered.

Outcome indicators for CARE Pathways offer detailed information on level of empowerment for various domains such as decision-making related to production, control over resources and income, participation in groups and politics, self-confidence, and mobility; the results are presented in subsequent pages.

Pathways Outcome 1: Improved knowledge, skills, relationships, self-confidence and conviction of poor women farmers

Across the six Pathways countries, the majority of women report **participating in at least one formal or informal group** that exists in their community. Percentages range from 68% in Bangladesh to 99% in Malawi. This is not surprising given criteria for participation in the Pathways program is based, in part, on membership in a collective. Of women belonging to a group, the percentages holding a **leadership position** are relatively high in Malawi (53%) and Tanzania (43%). In contrast, just under one-third of surveyed women in Ghana and Mali, and one-fifth of surveyed women in India, report holding a similar position.

Key levers of change, important to the achievement of Pathways Objective 1 are the self-confidence and conviction held by poor women farmers. As one means for measuring these attributes, CARE has included the indicator - % of **women confident speaking about gender and other community issues** at the local level. Just over 70% of women in Tanzania and India meet the indicator threshold set by CARE¹; slightly more than half do so in Malawi. Approximately one-third of surveyed women are considered confident expressing their opinions in public in Ghana (34%) and Mali (33%), and fewer than one-fifth (19%) are considered so in Bangladesh.

As measured by the indicator - % of **women who express self-confidence** - Pathways beneficiaries in Mali and India appear to be most challenged (fewer than half achieved the threshold); women surveyed in Malawi and Ghana appear to be the least challenged (72% and 66%, respectively, achieved the threshold). Topics related to agricultural production (skills, information, resources, and services) were most often cited by women in the Ghana, Mali, and Tanzania areas in which women were not confident.

Pathways Outcome 2: Increased access to productive resources, assets, markets, and appropriate and reliable services and inputs for poor women farmers.

Female respondents from Ghana appear to have the greatest access and **control over loans for income-generating activities** (IGA) such as investments in a business enterprise, the purchase of agricultural inputs or production assets, or the lease or purchase of land for agricultural purposes (82% met the indicator criteria). In contrast, women from Tanzania, India, and Bangladesh appear to have the least access to and control of loans for this purpose, with 17% or fewer meeting the indicator criteria.

The low percentages of women who achieved this indicator in Tanzania and India can be explained by the very few who claimed they took out a loan in the last 12 months (19% and 29% respectively). This highlights an access rather than a control challenge, and is supported by the findings that among the small group of women who accessed a loan, the majority made their own decision to borrow, made their own decision of how to use the loan, and did indeed use the loans for IGA investment.

¹ Please refer to Annex 6 for country-specific thresholds related to women's empowerment.

In the five countries for which sufficient data are available,² the vast majority of women surveyed have used their own savings or credit from a VSLA or self-help group to **finance agricultural activities** in the last 12 months. Percentages range from 90% in Mali to 97% in Malawi and Tanzania. Of note, is the paucity of financial services outside of community savings groups from which women choose or are able to access funds to support agricultural production. Focus group input suggests that vast gender disparity exists for women who wish to obtain agricultural loans and also implies that lending terms restrict most women from obtaining loans.

CARE's Pathways program identifies collectives as an entry point for improving poor women's **access to appropriate agricultural inputs**, such as seeds and fertilizer. This effort appears well targeted as quantitative and qualitative data indicate that generally poor female farmers experience difficulty with access to agricultural inputs; this is true for financial and physical access to external input sources, as well as equitable intra-household access.

In Tanzania and India, less than two-fifths of female farmers report accessing inputs from at least one external source over the last 12 months (33% and 38% respectively). Notable for India, is that although the percentage of women accessing inputs is small, the primary source is a cooperative or producer group, cited by 14% of female farmers interviewed. In contrast over three-fourths (77%) of female farmers in Malawi state they have accessed inputs such as seeds and fertilizer in the past year (primarily from a government productive safety net program). In Mali, just over half (53%) of female farmers report access; in Ghana 59% report the same. Women in both countries are primarily sourcing inputs from agro dealers.

Qualitative findings from Tanzania reveal a lack of satisfaction by community members generally, and by women specifically, with "local" input suppliers. Key informant and focus group input from Malawi contradicts quantitative data underlining how the recently scaled-back government input subsidy program does not cover farmers' needs. Focus groups in Bangladesh indicate that, when accessed, agricultural inputs are under the control of male farmers.

In all Pathways project countries, CARE's plans for market assistance are well-targeted, as access is limited. Female Ghanaian farmers report the greatest **access to markets** outside of their local village; however this was still only 56% of the women surveyed. Only 40% of female farmers in Malawi report such access; and fewer than one-fourth in Tanzania and Mali. In India, only 14% of Pathways female farmers sell in a market outside of their village. Across all Pathways countries, very few (<5%) women sell in bulk via groups that could potentially offer more advantageous terms of sale.

The greatest percentage of women reporting **access to agricultural extension services** occurred in Ghana (38%). Across all other Pathways countries, typically only one-fourth of interviewed women report they have met with an extension worker within the last 12 months. Among the small numbers of women who have had contact with extension workers, the majority are satisfied with the services provided; percentages range from 73% in Tanzania to 98% in Ghana.

Qualitative information offers a variety of insight to why so few women have had contact with an extension officer. In Malawi, interviewed extension workers state that services are insufficient

² Bangladesh data were insufficient for reporting purposes.

compared to population needs, and retaining extension providers in the Pathways operational area is challenging. In Bangladesh, FGD participants assert that extension services are generally delivered to male farmers by male extension workers.

Pathways Outcome 3: Improvements in yield and income through the adoption of sustainable and intensified agriculture and value addition.

Women's reported **mean annual net agricultural income**³ ranges from \$56 USD in India to \$ 465 USD in Mali. With India as the exception, all country results show an extreme difference between women's mean and median net income confirming widely distributed income among the surveyed households. In Malawi, Mali, and India, women residing in female-headed households earn less income from agriculture than do women from male-headed households.

Among surveyed female farmers, women report growing on average two (India) to four (Mali) **different types of crops**. Among these growers, an integrated approach to improved agricultural production seems common in Malawi and Ghana, with close to or over half of surveyed women reporting **adoption of three or more improved practices** (45% and 54% respectively). The use of improved practices appears less common in India (33% reporting the use of three or more practices), Tanzania (22%), and Mali (18%). The most commonly reported practices are the use of compost or manure, crop rotation, and minimum tillage. Growing a wider diversity of crops increases resilience by providing a buffer against failure of any one or two crops; however, across all countries, fewer than 27% women declare they use this practice.

Over half of female farmers surveyed in India (78%), Malawi (63%) and Ghana (55%) assert they practice two or more **improved post-harvest practices**, with reported practices varying widely across countries.

A minority (22% (Ghana) to 42% (India) of female farmers report adopting **improved storage practices**, such as granaries, cribs, silos, or sealed airtight containers. The most common purpose for crop storage across the Pathways countries is to have food for household consumption.

Female farmers in Mali, where household of large livestock was found to be highest, seem most inclined to using **improved livestock practices**—almost 91% report they have used at least one method to enhance livestock management. The uptake of such practices by women who raise livestock in India (28%), Ghana (40%), and Malawi (44%) is not as common. In most Pathways countries, the most frequent livestock practices reported by female farmers are vaccination and food complementation.

Pathways Outcome 4: Increased poor women farmer contributions to and influence over household income and decision making

The largest percentage of women reporting sole or joint **control over household income and expenditures** occurred in Malawi (64%), closely followed by Bangladesh (63%); the smallest percentage occurred in Mali (34%). Women's control over household agricultural income and expenditures is similarly challenged. The largest proportion of women who achieved the country-specific threshold set for sole or **joint control over agricultural income and expenditures** occurred in Tanzania (62%); the

³ Calculated from women's estimated sole and/or joint earnings from agricultural sources minus the estimated annual costs of inputs for each income source

smallest proportion in Mali (13%). Across countries, qualitative findings suggest that disparity in control over household and agricultural resources is far greater than what quantitative data indicate.

The largest proportion of women who achieved the country-specific threshold set for sole or joint **control over household assets** occurred in Bangladesh (64%), closely followed by Tanzania (61%); the smallest percentage occurred in Mali (19%). Similar to other decision-making domains, women's control over household assets is significantly greater for women who reside in a female-headed household than for those who reside in a male-headed household.

Baseline results suggest that women in Malawi, Ghana, Mali, and India have restricted **control over agricultural assets**. Percentages achieving the country-specific thresholds for this indicator range from 25% in Mali to 55% in India. Control over these assets appears to be more equitable in Tanzania (82%) and Bangladesh (87%). Notably, this series of questions is framed to include not just women who make sole decisions, but those who make "joint" decisions as well. There is likely wide variation among individual women as to how much of their input might be considered as a "joint" decision. Thus, the quantitative results may mask the dominance of men over women in terms of decision-making control of agricultural assets. Qualitative findings support this hypothesis.

Only a third of women interviewed in Mali and Ghana have some decision-making role regarding health care for their families. Conversely, the vast majority of women surveyed in Malawi, Tanzania, Bangladesh and India (79 - 94%) state they are a sole or joint decision maker for **health care decisions**.

Among women for whom **family planning decisions** are relevant, the vast majority (88-97%) in Malawi, Tanzania, India, and Bangladesh assert they make sole or joint decisions. To a lesser extent, the majority of women in Mali (75%) and Ghana (67%) report the same. Qualitative data from Tanzania supports the quantitative results. In FGDs, men and women agreed generally that they make family planning and health care decisions together. However, qualitative findings from Malawi, India, and Bangladesh do not support quantitative findings and indicate that ultimately men decide whether or not a couple will have children.

Pathways Outcome 5: More positive and enabling attitudes, behaviors, social norms, policies, and institutions

Patriarchal attitudes about family life appear to be ingrained in women's opinions of their own role in family life. Less than half of all surveyed women report **attitudes supporting gender-equitable roles** as defined by this indicator. The greatest percentages of women expressing "gender equitable attitudes" occurred in Malawi and Tanzania with 46% meeting CARE's criteria for this indicator. Approximately one-third of women in Tanzania and India, and 26% of Bangladeshi women achieved this indicator. Only 3% of women in Mali reveal attitudes that support gender-equitable roles within the household.

A majority (79%) of women in Malawi report attitudes **that reject household gender-based violence**. Much lower percentages of women expressed similar attitudes in all other Pathways countries, ranging from 41% in Ghana to 13% in Bangladesh. These results are mostly explained by the large percentages of women in these countries who believe a woman must tolerate violence for the sake of family stability.

Not quite half the female respondents in Malawi and Tanzania achieved CARE's **mobility** indicator (49.6% and 42% respectively), while less than one in six women in all other Pathways countries are

considered to be mobile. Among the countries where very few women report mobility the percentages range from a high of 16% in India to a low of 2% in Bangladesh.

Sex as a barrier to participation in formal and informal groups is not a common constraint for females in the project areas of most Pathways countries; however, almost 40% of surveyed women in Mali report they were not able to join a group for this reason.

KEY CONSIDERATIONS

Findings from the baseline studies indicate that Pathways objectives are relevant to the targeted areas and populations. There appears to be ample opportunity to improve productivity both through increased yields and increased income from related activities, such as post-harvest processing and marketing. However, such increases will not accrue to women until and unless they have greater mobility and control over the income generated from such activities, particularly from crop sales.

Men's dominance in decision-making related to agricultural activities, particularly in terms of using money from sales for their own purposes, undermines women's ability to contribute to increased household food security and resilience. Furthermore, as long as women continue to see themselves as subservient, there is no reason for men to change their attitudes. While improved knowledge and skills, and increased access to loans and agricultural inputs are necessary steps in the right direction, they will not be sufficient for women to sustainably improve household food security and resilience. To realize the Pathways Theory of Change, all project activities must place increased and intense focus on raising gender awareness among men, women, and communities.

Differences between females residing in male- and female-headed households should be noted and activities aligned to each. For example, women from female-headed households may need more support to improve annual net income from agriculture production than their counterparts; however females living in male-headed households will undoubtedly need more support to achieve performance indicators related to productive decision-making and control of assets, expenditures, and income.

Qualitative and quantitative data generally validated one another with exception of one area—decision-making and control. Differences here were vast, suggesting the need for a better means of measuring decision-making and control for women. Although indicators were modeled after a new empowerment tool, results from the six Pathways countries in this study as well as the three WE-RISE baselines⁴ imply that the broad definition of “sole or joint” does not allow CARE to identify barriers to decision-making or control with precision. As an alternative, CARE could consider women's response to a decision-making continuum with categories such as: no decision-making; suggestion; consultation; joint (both parties have equal say); and sole decision-making. Additionally, continued and frequent exploration of the topic in focus groups is recommended.

⁴ CARE Australia's WE-RISE program is similar in design to Pathways. WE-RISE uses a strong gender focus to improve household food security and resilience by empowering women to more fully engage in and benefit from agricultural activities. TANGO simultaneously conducted the baseline studies for WE-RISE country programs in Tanzania, Ethiopia, and Malawi during Pathways data collection.

Specific considerations include the following:

- In many circumstances, Pathways VSLAs and Self Help Groups(SHG) are the only venue where women can participate in group learning or mobilize support for vulnerable community members, and thus the groups provide opportunity for CARE to reach out to women on many topics. Strengthening existing VSLAs, beyond traditional savings and loans, may assist Pathways to achieve program goals. In countries with primarily mixed-sex VSLAs, CARE could routinely host same sex focus groups to allow women and men to speak candidly about areas that hinder their progress toward attaining household food security and resilience.
- Expanding the focus of VSLAs to a fuller body program may allow country projects to address the current exclusion of poor women. While the women may not yet have the resources to save, they could greatly benefit from activities promoting gender awareness, confidence, and improved knowledge and skills related to agricultural productivity.
- Women and men in Pathways collectives request more timely extension information related to agricultural production – particularly prior to the season beginning and related to pricing, inputs and disease prevention.
- Women specifically request training on new technologies in agricultural product processing. Commensurate with this is an identified need for record keeping for women in their IGAs.
- Few women sell their agricultural products or obtain inputs through a producer group. This is an important area of focus for the program to enhance livelihoods, as buying and selling in bulk via groups could potentially offer more advantageous terms. While still a small percentage, India has the largest proportion of women reporting access to inputs through a producer group. Given the paucity of agricultural collectives in many Pathways operational areas, particularly those focused on female membership, using Pathways VSLAs or SHGs as a starting point for agriculture productivity and empowerment is a clear comparative advantage of CARE interventions. Pathways should explore the initiatives of Pathways India and determine how they can be scaled-up and out.
- With exception of surveyed women in Mali, very few women state they are able to access formal or informal market information systems. Pathways should explore the initiatives of Pathways Mali related to market information and determine how they can be scaled-up and out.
- In addition to a lower level of remuneration, key contributors to income disparity between female-headed households and male-headed households are exploitation—women are being taken advantage of in terms of business, pricing, vendors, harassment. Project initiatives to realize Outcome 5—more positive and enabling attitudes, behaviors, social norms, policies and institutions—are unclear. CARE would do well to re-evaluate and define exactly how Pathways intends to influence these areas.
- Women are accessing loans from the VSLAs/ SHGs and are generally grateful to have this opportunity; however qualitative findings suggest that in many cases once the loan is obtained, decisions about how it is used are determined by a male in the household. Initiatives to mitigate this trend must be defined by CARE country offices. A good start will be raising household and community gender awareness, as previously mentioned.

1 INTRODUCTION AND BACKGROUND

CARE’s Pathways program focuses on improving poor women farmers’ productivity by empowering them to more fully engage in equitable agriculture systems. Funded by the Bill and Melinda Gates Foundation and implemented in Bangladesh, Ghana, India, Malawi, Mali, and Tanzania, and aligned with other CARE initiatives, such as CARE Australia’s WE-RISE program, Pathways is designed to overcome the constraints to women’s productive and equitable engagement in agriculture. Using a strong gender focus, the Pathways program seeks to improve household food security and resilience by empowering women to more fully engage in and benefit from agricultural activities.

TANGO International, Inc., a consulting firm based in Tucson, Arizona, USA, was contracted to design and support the implementation of an evaluation plan for CARE Pathways. The six baseline studies presented in this report are one element of the broader evaluation plan.

This synthesis report describes the baseline methodology and process, highlights the findings from quantitative and qualitative baseline studies in Bangladesh, Ghana, India, Malawi, Mali, and Tanzania, and offers key considerations for program implementation. A compendium of Supplementary Annexes accompanies this narrative report.

1.1 Pathways Goals and Objectives

Pathways Theory of Change

CARE’s previous work on the Women’s Empowerment Strategic Impact Inquiry⁵ provides the basis of the Pathways Theory of Change (TOC).

This research included 18 months of analysis on drivers of women’s engagement in and exclusion from agriculture in the six Pathways countries. The TOC includes five domains of change, or change levers: a) women’s capacity, b) access to productive assets/resources (e.g., inputs, financial tools), c) increased productivity, d) increased influence over household decisions and assets, and e) improved enabling environments (i.e., cultural and social norms and attitudes, gender-sensitive policies). Figure 1 presents the Pathways TOC.

The program’s TOC posits that marginalized, poor women farmers will

Figure 1: Pathways Theory of Change



⁵ CARE. Strategic Impact Inquiry. <http://gender.care2share.wikispaces.net/Strategic+Impact+Inquiry>

be more productive, and their families more food secure when:

- women have increased capacity (skills, knowledge, resources), capabilities (confidence, bargaining power, collective voice), and support.
- local governance and institutions have/implement gender-sensitive policies and programming that are responsive to the rights and needs of poor women farmers.
- agricultural service, value chain, and market environments of relevance to women are more competitive, gender-inclusive and environmentally sustainable.

The Pathways results framework (see Annex 1) further illustrates the program's TOC approach, with positive change towards increased food security and empowerment resulting from the five change levers: capacity, access, productivity, household influence and enabling environments. Objectives 2 and 3 ensure lessons learned from the Pathways experience contribute to positive change in the global discourse on equitable agricultural programming at scale.

1.2 Purpose and Objectives of the Baseline Studies

The main purpose of the baseline studies is to enable an evaluation of program performance through implementation of directly comparable endline surveys; ultimately this comparison of baseline and endline results will answer the key questions posed in CARE Pathways TOC.

The studies are one element of larger evaluation collaboration between CARE USA and TANGO International for the CARE Pathways Program which involves:

1. A global monitoring and evaluation framework;
2. Identification of the most appropriate, rigorous, and ethical impact assessment methodology to use across the different countries allowing for comparability between projects and countries;
3. Support to CARE country offices and their local partners in conducting the baseline and endline evaluations, ensuring quality data collection protocols and supporting data analysis;
4. Exploration of opportunities to integrate an outcome monitoring system in existing project monitoring systems in order to allow for better alignment and comparability within and between the programmes (as needed and requested);
5. Producing publishable comparative and synthesis baseline and final reports.

The TANGO Scope of Work for technical support to the CARE Pathways Program can be found in the Supplementary Annexes accompanying this report.

The baseline studies provide information necessary to characterize the status of beneficiaries at the projects' start-up and against which endline data can be compared in order to assess the effect of project interventions. Each country baseline provides quantitative and qualitative data on food and livelihood security, agricultural productivity, and gender equality. A key objective of the baseline quantitative surveys is to estimate and analyze the status of key impact and outcome indicators described in the CARE Pathways Indicator Framework (Annex 2).

Baseline findings will be used for setting short- and long-term targets to track the progress of Pathways activities. Findings may also be used to refine and/or prioritize project activities in the operational areas. Results for all baseline indicators for which TANGO collected information are presented in Annex 3.

2 METHODOLOGY

The baseline field activities took place between July 2012 and November 2012. A mixed-methods approach, using quantitative and qualitative research and survey instruments, was implemented in all country baselines.

2.1 Quantitative and qualitative research

Pathways **quantitative baseline research** used a non-experimental design for pre-post comparison of results. The surveys are “beneficiary-based” in that the samples are drawn randomly from sample frames composed of all households with a female member in a collective with which Pathways is working. In all countries except Ghana a two-stage selection process was used. Villages or clusters were first randomly selected from the overall operational area using probability proportionate to size (PPS) based on female membership in collectives. In the second-stage of sampling, households with female VSLA members were randomly selected from each sampled village. The study in Ghana, executed by CARE, rather than TANGO, used a simple random sample design. Additional slight differences in sampling methodology occurred in some countries (Annex 4 offers details). Designed as a longitudinal study, data will be collected from the same households in the baseline and endline surveys.

The sample sizes varied by country; each was determined to provide statistically representative results for household and individual level indicators at the project level. Using values described in Annex 4 the minimum sample size (including non-response and attrition factors) was computed as 480 for Bangladesh, 176 for Ghana, 947 for India, 787 for Malawi, 841 for Mali, and 929 for Tanzania. In each country, the **qualitative** sample of communities was a subset of the quantitative sample, maximizing diversity along relevant criteria and varying per country.

The **qualitative studies** conducted in each country provide insights to better understand and interpret the quantitative indicators and help identify key factors critical to the success of the program. Qualitative findings offer complementary information on norms that affect women’s empowerment and power relationships, particularly as these factors relate to poor women’s ability to actively engage in and have control over agricultural production and marketing activities. These studies focus on specific issues identified in topical outlines that guided the research facilitators in collecting information from groups of women and men. The qualitative research used a diverse combination of participatory methods and tools such as focus group discussions (FGDs), key informant/stakeholder interviews, seasonal calendars, 24-hour time allocation analyses, and Venn diagrams.

Annex 4 provides further detail on survey methodology.

2.2 Development of Indicators and Data Collection Tools

Pathways **impact and outcome indicators** were developed through discussions at a CARE Monitoring and evaluation (M&E) workshop held in Pondicherry, India in May 2012 and subsequent comments from

CARE management and staff. As a result of the workshop, indicators were designed to align with better practices and have been standardized with other relevant CARE programming (e.g., CARE-AUS's WE-RISE program). TANGO and CARE also drew on other sources to develop the indicators, including CARE's Strategic Impact Inquiry on Women's Empowerment (SII)⁶, Feed the Future's *Women's Empowerment in Agriculture Index*,⁷ and IFPRI's *Engendering Agricultural Research, Development and Extension*.⁸

Detailed descriptions of indicators, along with direction of change targets, are summarized in the CARE Pathways Evaluation Plan, located in the Supplementary Annexes. Indicators included in the Baseline Results table (Annex 3) represent those that will be tracked at the impact and outcome levels; some are composite indicators that require the combination of two or more variables. Some indicators are disaggregated by sex or sex of the household head; others target female project participants only.

Data collection tools used in the individual countries originate from a standardized set of global tools developed in collaboration with CARE-USA. The global quantitative survey tool and global topical outlines used for qualitative research are presented in the Supplementary Annexes. CARE staff in each country helped to contextualize the standardized tools to the local context (see annexes in each of the Pathways Baseline Country Reports for contextualized tools).

Survey Training and Logistics: TANGO International and CARE jointly reviewed and agreed to hire local firms to oversee and conduct the baseline studies. The quantitative and qualitative field teams were independently contracted by the local firms and CARE. With exception of Bangladesh and Ghana, TANGO trained all baseline survey team members – household interviewers, qualitative facilitators, team supervisors, and program M&E staff responsible for coordinating the data collection and aggregation. Staff from CARE USA and CARE Ghana trained Ghanaian teams; local firm Mitra and Associates and CARE Bangladesh trained survey team members in Bangladesh. Details on training conducted by TANGO are presented in Annex 4.

Data collection: In Malawi, Tanzania, Mali, and India, the survey was administered using personal digital assistants (PDAs) or Android tablets. TANGO provided quality oversight for the first number of days of household survey fieldwork after which the local firms oversaw data collection. Remote technical assistance from TANGO and the CARE country offices was provided as needed. TANGO qualitative team leaders remained with the qualitative teams for the duration of research in these four countries, providing daily quality control and guidance.

In Bangladesh and Ghana, the CARE-led teams administered the survey using paper questionnaires. CARE staff and local consultants supervised data cleaning and entry.

Analysis and Reporting: The quantitative data were collated and configured by TANGO International staff using SPSS v15.0 software. Analysis and reporting are consistent with the CARE Pathways Global Evaluation Plan. This includes organization of the data to align with the common indicator framework,

⁶ CARE International. 2006. *The Courage to Change: Confronting the limits and unleashing the potential of CARE's programming for women*. Synthesis Report: Phase 2. CARE International Strategic Impact Inquiry on Women's Empowerment.

⁷ International Food Policy Research Institute. 2012. *Women's Empowerment in Agriculture Index*. Feed the Future.

⁸ International Food Policy Research Institute. 2011.

calculation of composite variables (e.g., asset and coping strategy indices) from primary variables where appropriate, and formulation of tables and charts.

Budgetary limitations precluded a stratified sample design that would allow for cross country comparison; thus, although indicator results from each country baseline are presented in common tables, the reader is cautioned against making such comparisons. No statistical tests were carried out to compare the results between the six countries.

A number of questions were posed to both men and women in the baseline surveys, and the individual country reports present sex-disaggregated results. Additionally, for many indicators, the country reports present results disaggregated by women who live in male-headed households and women who reside in female-headed households. In the spirit of offering a concise Global Synthesis, disaggregated findings are not presented in the main body of this report. Although results are not disaggregated, some table cells contain an asterisk (*) next to values. These notations highlight statistically significant differences, determined using t-tests, between male- and female-headed households within individual countries. Annex 3 presents the disaggregated results for all project indicators. Country reports provide additional details on these differences.

2.3 Limitations

As might be expected in a complex mixed-methods study spanning six countries, several limitations to the baselines were identified.

Accuracy of sampling frames: Sampling for the household surveys in Tanzania, Malawi, Mali, and India was hampered by beneficiary lists that were not current and contained inaccurate member information, including duplication and male members listed as females. These errors resulted in high non-response rates and thereby reduced the cushion offered by the attrition factor. Endline surveys may not realize the full sample size necessary to detect differences between sub-groups with precision, reducing the ability of CARE to attribute changes to project interventions.

In India and Malawi, the effect of the inaccuracies required a redraw for the second sampling stage. Even after the redraws problems with the sample frames continued. For Malawi, Tanzania, and Mali the poor record-keeping made the non-response rate inadequate. To address this challenge, TANGO randomly selected replacement names to add to each selected cluster. This allowed the Malawi baseline to obtain the minimum number of interviews needed for the baseline survey, however the endline survey will be constrained by a 3% attrition factor that may not be sufficient. The random selection of replacement names did not resolve the problem for Mali and Tanzania at baseline; surveys in both countries exceeded calculated non-response rates considerably. The Tanzania country office may still be able to realize the necessary full sample size at endline due to an initial attrition factor of 15% (now reduced to 10%). The same is not true for Mali; if attrition exceeds 1.5% over the life of the project the minimum sample size will not be realized.

Table 1 presents the calculated minimum sample sizes; for both baseline and endline, the actual final count of households surveyed, and the new allowable attrition values.

Table 1: Sample size and actual number of surveyed households, by country

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
<i>Computed minimum sample size (including factors for non-response and attrition)</i>	787	929	176	841	480	947
<i># of households surveyed</i>	763	849	175	785	454	923
<i>Non-response factor used in sample design</i>	3%	3%	3%	3%	3%	3%
<i>Actual rate of non-response</i>	3%	8.5%	0.5%	6.6%	5.5%	2.5%
<i>Minimum sample needed for endline</i>	740	762	153	774	418	777
<i>Attrition factor used in sample design</i>	2%	15%	10%	5%	10%	15%
<i>Maximum allowable attrition after baseline</i>	3%	10%	12%	1.4%	8%	15%

Survey training and supervision: Due to budgetary limitations, CARE elected to conduct the surveys in Ghana and Bangladesh without TANGO’s technical assistance and supervision; thus, TANGO had little ability to assess and address sampling and survey operations. Issues related to data for these two countries follow.

- A revision of the Bangladesh survey tool constrained the ability to compute impact and outcome indicators. Some essential questions for the computation of the Women’s Empowerment Index (WEI) were omitted and questions related to loan use were not asked in conjunction with questions related to loan decision-making.
- Bangladesh elected to use EKATA groups (women’s empowerment collectives) for the sample frame, despite the fact that the Pathways impact groups are: women agricultural day laborers, women involved with agricultural input business, and women farmers. Two limitations result from the use of EKATA groups for the sample frame: 1) an insufficient sample size of female farmers, and 2) selection bias. They are explained in detail below.
 - o *Insufficient sample size:* Only 23 women in the survey were found to be involved in agricultural activities other than wage labor, feasibly a result of the chosen sample frame (all other countries used savings or producer collectives for the sample frame). The impact of this minute sample is that the agricultural section of the household quantitative survey is of insufficient size to be considered valid data for the baseline. This severely limits the ability of CARE Bangladesh to measure achievement for all performance indicators related to Outcomes 2 and 3 of the Pathways Results Framework over the life of the project.
 - o *Selection bias:* Poor female farmers who are a part of Pathways impact groups may or may not have an EKATA group in their community; there is not 100% coverage of these groups across all

CARE communities.⁹ Furthermore, the decision of where to implement EKATA groups is based on a high population of children and *willingness* of communities to participate in activities that help to increase women’s mobility and decision making at family and community levels, and develop action plans to stop early marriage, dowry, and eve teasing. This may or may not reflect the typical community in which the poor female farmers of Pathways impact groups reside. With many Pathways indicators related to women’s empowerment, the use of such EKATA groups as the sample frame likely resulted in selection bias.

- The selection criteria for the two villages sampled for qualitative research in Ghana is unclear, and thus may or may not be accurately capture dominant patterns and trends present in the program region. Ideally, the villages should have been selected based on a variety of characteristics such as agricultural zone, access to resources and ethnicity.
- It was unfeasible to calculate per capita income - a key outcome indicator - using Ghana data. More than two-thirds of respondents did not know how much income was earned. TANGO did not train enumerators or supervise data collection in Ghana, and thus cannot comment to why there was such ambiguity about this question. Without a baseline value, CARE Ghana will not be able to measure improvement for this indicator over the life of the project.

Limited key informant interviews: The scope of qualitative data for Ghana, India, and Tanzania was potentially limited by few or no key informant interviews (KII). In India, monsoons limited transportation and resulted in a less than desired number of KIIs. In Tanzania, one result of limited logistical and other support on the part of the country staff was that no KIIs were possible. The Ghanaian team did not conduct any KIIs. TANGO did not train the qualitative team or supervise data collection in Ghana, and thus cannot comment on why these necessary interviews were not conducted.

Timing of fieldwork: In Tanzania, the baseline study was conducted during Ramadan, potentially affecting food security indicators of Household Dietary Diversity (HDDS) and Women’s Intra-household Food Access, as respondents were asked to reflect a recall period of a “normal 24-hour period” rather than the “previous 24-hour” recall specified in the index.

Surveys were conducted just after the harvest of staple crops in Tanzania and Malawi, thus, many households would have still been well-supplied with harvested crops and findings will not accurately reflect the depth of food insecurity experienced during leaner months.

Duration of interview: Finally, the household survey instrument is very long with questions being recommended from many stakeholders. This impacted data collection in all countries and potentially jeopardized the quality of data to be collected. Long interview times invite enumerator error as a result of the impetus to meet daily interview number quotas as well as respondent fatigue. Under such a scenario enumerators may be more prone to skip questions or even sections and/or participants may lose patience with the interview. TANGO and CARE attempted to mitigate this limitation by reducing redundancy, while retaining necessary relevancy to all stakeholders and the cultural context of each country, however, when fieldwork commenced, the length of the survey still was not optimal.

⁹ For example, in the large project SHOUHARDO II, the groups are only present in 30% of CARE communities. TANGO International. 2013. CARE Bangladesh Mid-Term Review SHOUHARDO II Multi-Year Assistance Program (MYAP) Volume I – Main Report

3 FINDINGS AND OUTCOMES

The overall goal of the Pathways program is to increase the productivity and empowerment of women farmers in more equitable agriculture systems at scale. Critical to realizing this goal are improvements and increases in four key long-term impact areas: *household food and nutrition security, household resilience, economic poverty reduction, and women’s empowerment.*

Section 3 begins by summarizing the household characteristics of the sampled Pathways beneficiaries within each country. We then describe critical findings for each key impact area in which the projects seek improvement: Section 3.2- Food and Nutrition Security; Section 3.3- Household resilience; Section 3.4 Economic Poverty Reduction, and Section 3.5 Women’s Empowerment. The remaining sub-sections (3.6 through 3.10) present greater detail specific to Objective 1 and the main outcomes described in CARE Pathways Indicator Framework (Annex 2).

3.1 Household Characteristics

A relatively large number of households are headed by females as seen in Table 2– particularly in Tanzania (33%), Malawi (25%) and India (23%). The following observations are noted when comparing the data from the six countries, *although none are statistical differences.* The average age of the household head appears to be slightly older in Mali, Ghana, and Tanzania than in other countries,. Households appear to be largest in Mali, a country where polygamy is prevalent (11 members on average) and smallest in Bangladesh (four members on average). Mali also reports the greatest number of females in a household (almost 6), two to three more than any other country in the Pathways portfolio. Mali data also show the greatest number of females within each household who are engaged in agricultural activities, likely related to the 48% of Malian female respondents who reported they are in a polygamous marriage. Bangladeshi households report fewer than one female household member who is engaged in agricultural activities.

Table 2: Household demographics, by household

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Female-headed households	24.8	33.0	16.8	9.8	11.7	22.6
N	189	265	29	74	53	209
	Mean					
Number of household members	5.1*	4.1	6.4*	10.7*	4.1*	4.5*
Number of females in household	2.6	2.3	3.1	5.8	2.1	2.3
Number of females engaged in agricultural activities	1.5	1.3	1.1	3.0	0.1	1.2
Age of head of household	43.0	49.3	49.5	53.6	37.9	46.1
N	763	803	173	779	454	925

* Significantly different between male- and female-headed households within individual countries at $p < .10$. See country reports for details.

A large majority of Pathways beneficiaries in all countries have been married more than two years, ranging from 63% in Tanzania to 89% in Mali. Data that stand out in Table 3 include: 1) Over 7% of VSLA

members in Tanzania report to be single; while very few surveyed women in other countries report being single 2) Tanzania’s reported divorce rate for VSLA members (16%) is almost double that of Malawi (7%), and divorce rates in India, Ghana, and Mali are almost non-existent; 3) over and close to half of VSLA members in Mali (51%) and Ghana (48%) are involved in polygamist relationships.

Table 3: Marital status of female Pathways beneficiaries, by country

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Single	0.9	7.3	1.2	0.5	-	0.6
Married (Less than or equal to two years)	10.6	4.9	1.7	1.4	-	4.1
Married (More than two years)	72.2	62.8	87.2	88.5	-	83.3
Divorced	7.3	15.6	0.0	1.3	-	0.6
Widow/Widower	8.9	9.5	9.9	8.2	-	11.3
N	763	803	173	776	-	924
	%					
Female respondents reporting they are in a polygamous marriage	10.6	15.9	51.4	48.0	-	-
N	762	847	173	771	-	-

Information to better understand the prevalence of disability was captured in Malawi, Tanzania, and Mali, with similar percentages of households reporting a disabled household member—roughly 15-17% across the three countries (Table 4).

Table 4: Household disability

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Households with a disabled member	14.7	16.5	-	15.7	-	-
N	763	849		778	-	-

Literacy, as measured by self-reported ability to read and write, appears highest for household heads in Tanzania (83%) and Malawi (79%), and lowest in Bangladesh (11%) (Table 5). The percentages reported in Table 5 are for the total sample (male heads of households and female heads of households); however, individual country reports contain data disaggregated by sex that show statistical differences between male and female-headed households in Tanzania, Mali, and India, with male-headed households reporting higher literacy.

Data that stand out in Table 5 include the number of household heads in Ghana who have had no formal education—close to 72%. Completion of primary school by the household head appears highest in Malawi and Tanzania, reported by 68% and 79% of each country’s sample. Although close to one-fifth of household heads in Malawi and India report completing a secondary education, this level of education

was attained by only 5% or fewer household heads in all other countries. Of note are country definitions for primary or secondary education levels. For example, primary school in Bangladesh is classified as grades 1-6; in Malawi, grades 1-8 comprise the primary level.

Table 5: Educational achievement, by household

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Literacy	79.3	82.8*	0.0 ^a	40.0*	11.0	53.7*
N	763	819	29	776	454	925
No education	9.4	23.1	71.5	51.3	58.1	51.4
Primary	67.5	69.6	10.5	10.4	24.9	28.2
Secondary	20.8	5.0	1.7	3.5	4.8	18.9
Tertiary (Technical or University)	2.2	1.0	5.8	7.5	1.1	1.1
Adult education	-	1.3	-	27.3	-	-
N	763	819	173	776	454	924

* Significantly different between male- and female-headed households within individual countries at $p < .10$. See country reports for details.

^a The Ghana data set contains no data points for male household heads for the variable ' literacy', thus reported data are only for the very small sample of female household heads.

3.2 Food and Nutrition Security

Critical to realizing the overarching long-term Pathways impact goal “*More secure and resilient livelihoods for poor women farmers*” are improvements in food and nutrition security. The primary indicators used in this study to measure levels of food security are: 1) the household average dietary diversity score (HDDS), a proxy for food access, and 2) the mean women’s intra-household food access score.

As the individual country data are assessed, it is important to understand the timing, seasonality, and other factors, such as shock (including weather) of each project region that provide context for responses. A number of indicators are premised on reported recent experiences of households. The midterm and endline surveys should be undertaken at the same approximate time of the year.

In Malawi and Tanzania, the survey was conducted just after or somewhat coincident with the harvest season for the majority of staple crops. Thus households may still have been well-supplied with harvested crops, and findings may not accurately reflect the depth of food insecurity experienced during leaner months.

3.2.1 Dietary Diversity and Intra-Household Access

Household Dietary Diversity Score: The main food preparer was asked to report on 12 different food groups consumed by any household member over a 24-hour period (the day and night prior to the

interview).¹⁰ The responses produce a score between 0 and 12, with the higher score demonstrating greater access to diverse food groups.

Across surveyed countries the mean HDDS varies from 4.0 in India to 7.3 in Tanzania (Table 6). Small but significant differences between the number of food groups consumed in male-headed households compared to female-headed households are noted in Malawi, Tanzania, Ghana, and Bangladesh, with female-headed households accessing one half to 0.08 fewer foods (Annex 3 and individual country reports provide details).

Women’s intra-household food access: After determining whether any household member consumed each of the 12 food groups, the main food preparer was asked if all, some, or no female household members over the age of 15 ate the food item. The responses “all women” or “some women” produce a score between 0 and 12, with the higher score representing greater access to diverse food groups.

Results of the mean HDDS and mean women’s intra-household food access score suggest that within households, females have on average access to the same number of food groups as other household members. Qualitative findings from Bangladesh are not aligned to quantitative results; differences should be further explored by CARE country teams.

During difficult times, women consume food of lower quality than others in their family. Traditionally they serve everyone in the family before eating themselves.

Focus group - Bangladesh

Table 6: Household diet diversity and women’s access to food

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	Mean					
Household dietary diversity score	5.4*	7.3*	4.5*	6.0	4.4*	4.1
N	638	803	173	746	451	923
Women’s intra-household food access	5.3	7.2*	4.4*	5.8	4.4*	3.9*
N	634	821	170	746	451	923

* Significantly different between male- and female-headed households within individual countries at $p < .10$. See Annex 3 and country reports for details.

In **qualitative wealth ranking exercises**, project participants in India (the country with the lowest mean HDDS) summarized the food consumption patterns of those viewed as the community’s most vulnerable households. They stated that those most vulnerable usually eat one meal a day with very little dietary diversity. Typical foods consumed by those described by India FGD participants as most vulnerable are rice, dal, salt, chili and leaf fry.

¹⁰ In Tanzania, due to the study taking place during Ramadan, the main food preparer was asked to report on household consumption for a typical 24-hour period.

3.3 Livelihoods Resilience

3.3.1 Coping Strategies

Coping Strategy Index (CSI): The CSI is a tool used to measure behavior change in households when they cannot access adequate or preferred foods. Often used as a food security and early warning indicator, it can also be used as an indicator of longer-term food security resilience.¹¹ The CSI attempts to answer the following question: “What do you do when you don’t have enough food, and don’t have enough money to buy food?” The various answers to this question comprise the basis of the CSI score. Annex 5 provides more details on how the CSI is computed.

Table 7 shows that the percentage of households who report experiencing food and income shortages varies greatly across the six countries. The vast majority (93%) of Bangladeshi households reported food insecurity in the three months prior to the survey; notably the survey was carried out at the end of lean season. Almost three-fourths (74%) of households in Ghana reported the same; however, despite this very high percentage of food insecure households, the survey in Ghana was not carried out during the lean season (May –July). In contrast, in Malawi and Tanzania, very small percentages of surveyed households (5% and 11% respectively) reported food and income shortages in the past three months. This is not to say that surveyed households in Malawi and Tanzania do not experience food insecurity. As mentioned, the survey was conducted just after the harvest of staple crops in both countries, thus, many households would have still been well-supplied with harvested crops.

According to FGDs in Tanzania, food shortages are prevalent during the first few months of the year (December/January – March/April). In wealth ranking exercises in Malawi, FGD participants ranked the poorest households as those who seldom have enough food to get past July or August, which are overall the most food secure months, occurring right after the maize harvest of May – June.

Table 7: Food insecurity indicators, by household

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Households who did not have enough food or money to buy food in past 3 months	4.8	10.6*	74.3*	30.9	93.6	25.7
N	763	819	173	738	454	919
	Mean index value					
Coping strategies index	2.0	2.5*	20.1	49.7	24.3*	34.4
N	763	819	171	776	454	925

* Significantly different between male- and female-headed households within individual countries at $p < .10$. See Annex 3 and country reports for details.

¹¹ Developed by CARE and field tested by WFP and CARE, the CSI has been used for early warning and food security monitoring in African and Asian countries, in addition to several Middle Eastern countries.

The mean CSI is highest in Mali (50 out of a possible 100) followed by India (34 out of a possible 100), suggesting households must frequently alter their food consumption patterns in order to deal with temporary food shortages. The CSIs for Malawi and Tanzania are relatively low (2.0 and 2.5 respectively), as would be expected as both surveys were conducted at the end of the harvest season, a time when food shortages are not as prevalent.

In addition to consumption coping strategies, households were asked to report on the use of coping strategies that are more likely to contribute to longer-term irreversible effects, such as sale of productive assets, sale of land, or selling seed held for next season, and how often these strategies had been used in the past three months to cope with food or income scarcity. Table 8 reveals that the majority of Pathways households in Bangladesh (89%) and in Ghana (73%) had to employ at least one negative coping strategy. Fewer households in Mali (29%) and India (25%) report resorting to such means, although the differences are not tested for significance. The lower proportion of households reporting such actions in India may be due to the well-established Indian food security safety net—the Public Distribution System (PDS) which distributes subsidised food and non-food items to India’s poor. The PDS exists for all households below the poverty line in the Pathways operational region, which is considerable. Fewer than 10% of households in Malawi and Tanzania report employing any negative coping strategy in the three months prior to the survey. These data are aligned to the findings that show few households in the two countries report food or income shortages, presumably due to the season in which data were collected. Table 8 provides details on specific types of strategies households state they have used to cope with food or income shortages.

Table 8: Adoption of negative coping strategies, by household

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Households adopting any negative coping strategy in response to food and income shortages during the last three months	9.7	6.9	72.8	29.1	89.3	25.4
N	763	821	173	776	422	925
Coping strategies	%					
Receive remittances (food or cash) from relatives, friends	2.9	2.4	27.6	7.6	25.1	13.4
Migrate	0.4	1.5	3.2	2.6	26.4	4.1
Pledge or sell labor/crops/livestock in advance	4.6	1.1	49.6	2.4	30.6	2.3
Unusual sales (e.g., household assets, firewood, charcoal, etc.)	0.7	1.2	44.1	3.2	2.2	0.8
Take a loan with interest	3.7	0.7	46.5	12.0	52.6	14.1
Participate in food or cash for work programs	1.0	0.6	52.8	-	-	6.1
Sell seed stock for next season	2.4	0.7	-	0.5	0.7	1.2
Use own savings	2.2	1.0	78.0	4.6	11.7	-
Reduce expenditure on livestock and agricultural inputs	0.3	0.2	55.1	3.5	-	0.9
Lower school attendance or drop out from school	0.9	0.2	18.1	1.0	1.8	0.3
Slaughter more animals than normal	0.4	0.4	3.9	0.6	0.4	-
Reduce expenditures (e.g., health care, education)	0.1	0.2	29.9	4.4	24.0	5.6
Send children away to better-off relatives and friends	0.7	0.2	7.9	0.6	1.3	0.3
Request local government for assistance	0.4	0.0	1.6	1.5	18.9	2.5
Sell a higher number of livestock than usual	0.4	0.0	40.9	7.2	-	0.8
N	763	821	173	776	454	925

3.3.1. Shocks

The Pathways program places significant focus on increasing household resilience. Critical to resilience are households' adaptation strategies. This section outlines the types of shocks experienced by households and the adaptation strategies they have implemented to buffer the impact of future shocks.

Households were asked whether or not they had experienced 13 different types of shocks in the five years prior to the interview. On average, respondents state they have experienced one to two of the shocks asked about in the survey (Table 9).

The two most common shocks experienced by households in almost all Pathways countries in the past five years are a large increase in food prices and major drought. A high percentage (52%) of households in Malawi report disease epidemics, and the most frequently reported shock by Bangladeshi households is illness or injury of a household member.

Table 9: Shocks experienced in last five years, by household

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	Mean					
# of shocks experienced	2.7	1.5	1.9	1.4	1.4	1.4
Type of shock	% households who experienced the shock					
Increased food prices	83.2	46.2	-	51.3	22.7	29.6
Major drought	14.9	31.5	59.4	47.2	1.5	43.9
Epidemics (crop, livestock, human)	52.0	15.3	13.6	15.6	-	26.5
Illness or accident of HH member	18.7	11.0	41.4	8.2	28.0	20.5
Theft	-	9.0	-	-	-	-
Death of income earning HH members	8.5	11.1	40.9	4.8	1.3	9.7
Failure or bankruptcy of business	26.0	3.8	5.3	0.3	2.6	1.2
Divorce or abandonment	11.9	12.7	0.8	2.1	1.1	0.2
Loss of regular job by household member	4.7	1.0	5.3	1.7	0.2	3.2
Division of father's property	2.0	1.6	0.8	1.5	0.2	0.9
Major conflicts	5.1	1.3	0.0	1.4		0.3
A decrease of remittances to household	5.5	1.3	6.8	0.8	0.0	0.1
Hail damage	34.8	-	-	-	-	-
Major flooding	7.1	-	-	-	5.5	-
N= Households reporting at least one shock	763	819	133	776	454	925

3.3.2. Adaptation Strategies to Reduce the Impact of Future Shocks

Among households who had experienced at least one shock, the majority in all countries except Tanzania report having employed one or more strategy to try and reduce the impact of future shocks (Table 10). In Tanzania, 52% of households reported doing nothing to mitigate the impact of any future shock, which is consistent with input from focus groups. Specific information on the types of adaptation strategies employed in the face of shock can be found in the individual country reports.

Focus group participants in Malawi and Mali report that adverse weather patterns—mostly dry spells, and in some cases excessive rains—have affected almost all communities in the last five years. Participants state that the communities were not prepared for these shocks, lacking water management systems, and with no collective mitigation strategy in place. When climate shocks affect production even slightly, the impact on a poor family (which in some villages, Malawian FGD participants assert are as many as 70% of the population) can be dramatic due to their lack of ability to buffer the shock.

An understanding of the need for adaptation strategies was articulated by community members in Ghana. Strategies mentioned, among others, are fortification of homes to better guard against strong rains and flooding, use of cover and drought resistant crops in fields, and early planting.

Table 10: Adoption of adaptation strategies, by household

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Households who report using at least one adaptation strategy to reduce impact of future shock	83.9	41.2	94.7	61.2	81.5	58.5
N= households who have experienced at least one shock	744	570	133	541	371	738

3.3.3. Household assets

The mean asset index is a proxy for household wealth and measures the number and weighted value of animal and other productive and household assets. We compute this index by multiplying the number of each type of household asset by the index value for that particular asset type. Asset index values used for construction of the asset indices are presented in Annex 5. Because land measurement varies across countries, the index is calculated with and without land assets.

A higher asset index value indicates that households have been able to accumulate assets over time. Households are able to accumulate assets if income is greater than expenditures necessary to meet household subsistence requirements. Assets also provide households with a cushion to adjust to shortfalls in incomes, or sudden increases in required expenditures. Thus, households with a higher asset index value are presumed to be less vulnerable than households with lower asset index values. The asset index will be key to understanding the resilience of Pathways participants at the end of country projects. By focusing on the resources that individuals and households can draw upon to reduce vulnerability, CARE will have insight on household capacity to strengthen resilience to a range of different risks.

Country differences noted in Table 11 have not been tested for significance; however, data suggest that asset ownership with land included is highest in Mali, Tanzania, and Ghana, and is considerably lower in India, Malawi, and Bangladesh. In Malawi, Ghana, Bangladesh, and India, the value of assets owned by Pathways households with a male head are significantly greater than the value of assets owned by female-headed households, indicating that in these countries, the female-headed households have reduced potential to offset shock (Table 11).

When land assets are removed from the equation, the gaps between the index values of the various countries shrink somewhat. Households in Mali still appear to have the greatest mean index value without land (326). Context must be taken into consideration as this high overall mean is predominantly due to the prevalence of large livestock ownership among pastoralist populations—almost six per household, an asset with one of the highest assigned index values (See Annex 5).

Qualitative findings from Mali contradict quantitative values. Observations and interviews suggest that few households own more than two head of livestock. Households in Mali also had a surprisingly high mean for transportation ownership—more than two per household—another asset with a relatively high value. A more in-depth look at the holdings of targeted beneficiaries on the part of CARE would help to explain the discrepancies between qualitative and quantitative data. Tanzanian households appear to have the second greatest asset index value (without land), and households in Bangladesh the lowest mean index value (55) without land.

Table 11: Asset ownership, by household

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India	
	Mean value						
Mean asset index (with land)	194.5*	451.8	352.4*	424.0	206.0*	167.1*	
Mean asset index (without land)	93.3*	187.3*	129.2*	325.8	55.4*	119.7	
	N	756	816	173	776	454	921

* Significantly different between male- and female-headed households within individual countries at $p < .10$. See Annex 3 and country reports for details.

As Table 12 demonstrates, nearly all households surveyed in each country, with the exception of Bangladesh, report owning agricultural land. This finding for Bangladesh is not surprising given the history of land tenure challenges experienced by the country's poor and vulnerable populations. The majority of Pathways households in all countries, with the exception of Bangladesh, report owning non-mechanized farm equipment, although possession of this asset in India appears to be less common with only 59% of households reporting ownership, compared to 88 to 97% of households in other countries. Just 50% of Pathways households in Ghana claim they possess a home.

Across Pathways countries, certain assets stand out as those more likely to be owned by households with a male head. They include non-mechanized farm equipment, means of transportation, small consumer durables, poultry, a cell phone, and large livestock. Country reports provide specifics on the scope of disparity for asset ownership between households headed by men and by women.

Table 12: Household ownership of assets

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
House	81.9	95.0	50.3*	74.4	80.8	86.7*
Agricultural land	92.8	98.1	97.7	89.4	9.7	76.4*
Non-agricultural land	20.2*	56.8	22.0*	18.8	0.2	19.6
Means of transportation	51.9*	67.6	61.9*	81.7*	27.1	51.0*
Mechanized farm equipment	2.1	0.4	8.7	7.1*	0.4	14.9*
Non-mechanized farm equipment	92.5*	97.2	89.6*	87.8*	0.0	58.9*
Fish pond/Fishing equipment	0.5	0	1.7	18.1 ^a	2.2	1.5
Non-farm business equipment	12.7	7.9*	20.2	9.4	0.2	15.0*
Cell phone	50.1*	58.2*	65.3*	81.2*	29.3*	27.3*
Small consumer durables	55.7*	70.0*	61.3*	69.1*	33.5	63.6*
Large consumer durables	25.0	26.9	22.0	32.4	0.9	13.1
Chickens/Poultry	67.1*	61.1*	68.2	70.2*	41.4	51.1*
Small livestock	46.7	17.1	67.6	72.9*	16.3	29.3*
Large livestock	5.1	8.0	48.0*	64.7*	17.2	61.4*
N	762	821	173	756	454	925

* Significantly different between male- and female-headed households within individual countries at $p < .10$. See country reports for details.

^a Nets = 15.5%; fish ponds or fishing equipment = 2.5%

3.4 Economic Poverty Reduction

3.4.1. Household Income and Expenditures

Table 13 presents monthly per capita income and expenditure results. Income data tend to be highly skewed (i.e., not normally distributed), thus, we also report median monthly per capita income. Income data from Ghana is judged as not reliable enough to be reported in the baseline and is thus excluded (see country report for details).

Mean monthly per capita income from all sources appears lowest in Bangladesh and Mali (\$12 USD) and highest in Malawi and Tanzania (\$21 / \$19 USD). In all countries for which income data were collected, non-farm income vastly exceeds farm income, ranging from two and a half times higher in Mali to seven and a half times greater in India. These findings imply that the primary use of crop production is for household consumption rather than for sale. Farm income appears to be highest in Mali at \$5 USD monthly per capita and lowest in Bangladesh at \$2 monthly per capita.

The mean – median differential found for all countries except Bangladesh confirm significant income variance in households. Median monthly per capita income from farm and non-farm sources suggest that across the five countries for which data were collected, Bangladeshi households have the highest monthly per capita earnings (\$10 USD) and Malian households have the lowest (\$4 USD). This finding for Bangladesh warrants further exploration by CARE; other data points suggest the economic well-being of CARE’s Bangladeshi participants is not strong. For example, households have the lowest mean asset value without land in Table 11 above, and also have the lowest mean and median per capita expenditures. It is plausible that the survey team’s interpretation of baseline questions varied slightly from that of other country teams.¹²

Table 13: Monthly per capita income and expenditures, by household

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
<i>Mean monthly per capita income</i>						
	US dollars					
All sources	21.25	19.46	--	12.36	11.60*	17.09
Non-farm income	18.61	18.70	--	11.98	11.31	17.16
Farm income	4.51	6.54	--	5.01*	1.85	2.31
<i>Median monthly per capita income</i>						
All sources	6.32	6.83	--	4.35	10.41	7.60
Non-farm income	4.36	4.66	--	3.84	10.13	7.58
Farm income	1.44	3.02	--	2.02	1.17	1.11
<i>Mean monthly per capita expenditures</i>						
All sources	28.29	28.95	23.69	16.43	12.08	17.42
Food expenditures	8.09	6.51	11.73	7.57	5.73	5.96
<i>Median monthly per capita expenditures</i>						
All sources	12.99	16.98	14.78	10.10	10.46	13.67
Food expenditures	3.09	3.32	5.18	3.49	5.43	4.80

* Significantly different between male- and female-headed households within individual countries at $p < .10$. See Annex 3 and country report for details.

Across the six countries, the mean for monthly per capita expenditures ranges from a high of \$29 USD in Tanzania, to a low of \$12 USD in Bangladesh. Results for median per capita expenditures shows Tanzanian households also reporting the highest figure, at almost \$17 USD and Malian and Bangladeshi households reporting the least amount of expenditures, both about \$10 USD. Median monthly per capita food expenditures represent over half (52%) of all expenditures in Bangladesh; approximately 35% of all expenditures in Ghana, Mali, and India; 24% in Malawi and 19% in Tanzania.

In Malawi, Tanzania, and Mali, mean and median expenditures greatly exceed mean and median income for surveyed households. The relationship between households’ income and expenditures may be due

¹² TANGO did not provide technical assistance to survey teams in Bangladesh or Ghana and thus has limited ability to assess possible differences in training methodology, or interpretation and execution of the survey.

to under-reporting of income; however, this relationship may also suggest an accumulation of debt. If so, it is likely that debt contributes to increased vulnerability to both food and livelihood insecurity.

3.4.2. Income Diversification

As reported in Table 14, the most common source of income for surveyed households residing in the four African Pathways countries is crop sales (although as shown in Table 13, this source does not result in significant earnings). For all countries except Tanzania, small business sales are the next most common source of income. The majority of surveyed households in Ghana (68%) and Malawi (55%) also earn income through agricultural wage labor. In contrast, few households in India and Bangladesh claim they earn income from crop sales or small business. In fact, income diversification appears limited in these two countries with the selling of labor (agricultural and non-agricultural) most frequently reported by households as the most common source of income for their families. In Bangladesh, rickshaw pulling was often cited as an example of non-agricultural wage labor, by focus group participants.

Table 14: Income diversification, by household

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Crop sales(including homestead gardens)	68.5	63.6	54.3	52.6	11.7	18.0
Small business activities	64.7	33.1	46.2	45.3	13.2	7.7
Agricultural wage labor	54.9	26.3	67.6	18.6	64.1	81.1
Non-agricultural wage labor	20.6	9.3	19.1	18.3	73.3	73.4
Sale of livestock and livestock products	30.4	21.9	46.2	28.7	3.1	8.6
Nursery product sales	9.6	5.9	16.2	4.7	1.1	22.4
Seed selling	8.3	4.1	9.3	7.0	1.3	3.6
Beekeeping	-	0.9	2.3	-	-	-
Fishing	2.1	0.1	1.7	8.9	5.9	0.8
Aquaculture	0.3	0.1	-	0.8	0.2	1.0
Handicrafts	4.7	8.2	0.6	13.1	2.6	4.2
Remittances	9.7	11.2	11.6	16.7	0.2	2.1
Formal employment	14.2	4.6	12.1	5.4	2.4	5.7
Skilled labor	13.0	4.8	12.1	10.8	6.2	4.6
Wood and charcoal sales	12.3	4.8	26.6	0.5	0.4	12.8
Other sources	10.4	8.0	0.6	4.6	-	3.2
N	763	821	173	738	454	919

Qualitative data in Malawi and Tanzania reveals that women are more limited in their ability to generate income both because of restrictive social customs/norms and because they are over-burdened with other household activities.

In Mali, qualitative findings indicate that women are more engaged in diverse IGAs than men. Their main IGA is growing garden vegetables, processing agricultural products as well as processing wild resources like *karité* nuts (shea nuts) and baobab leaves, and petty commerce (sale of doughnuts, condiments, spices, crafts etc.). Women state that these activities do not generate enough revenue to cover their needs. In most communities, women’s activities are seen as providing support to the men’s activities.

In contrast to FGD participants in Malawi who assert that women’s labor is paid less, female Ghanaian FGD participants indicate that when engaged in wage labor, they receive the same wages as men. They cite experiences working on other’s farms, at factories, and in health care. They also cite typical IGAs: shea butter processing, *pito* brewing (sorghum beer) and *dawadawa* processing.

3.4.3. Savings

Household economic well-being and resilience to shocks may depend, in part, on a households’ capacity to save and use savings to smooth consumption. Thus, the baseline surveys sought to understand current household savings dynamics. The majority of surveyed households in all countries except Tanzania and Mali report they have savings in a formal or informal institution (Table 15). The same is true for the percentage of women with savings. The results for Tanzania (28% of households/ 27% of women) and Mali (32% of households/ 30% of women) are surprising given that the baseline surveys specifically targeted women who are VSLA members, however qualitative findings offer plausible explanations: In Tanzania, there was a wide consensus among FGD participants that while VSLAs provide savings opportunities to women that are less-accessible from other sources, the low income-generating capacity within communities limits women’s ability to save. In Mali, qualitative data suggest that respondents may have recently exhausted their savings for seasonal investment. Additionally, the increased insecurity and conflict present near Malian project areas may have contributed to reduced savings.

Table 15: Savings in formal or informal institutions

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Households with savings	97.4	28.4*	82.7	31.7	72.2	78.4
	N 763	819	173	776	454	925
Women with savings	97.1	26.9	82.7	30.2	-	78.1
	N 762	849	173	772	-	924

* Significantly different between male- and female-headed households within individual countries at $p < .10$. See Annex 3 and country reports for details.

3.5 Women's Empowerment

TANGO constructed a Women's Empowerment Index (WEI) for CARE that was modeled after the Women's Empowerment in Agriculture Index (WEAI).¹³ Similar to the WEAI, the WEI includes the Five Domains of Empowerment (5DE) index, which reflects the percentage of women who are considered empowered, based on their empowerment score. We calculate this score from 13 weighted indicators within five domains: production, resources, income, leadership, and autonomy. A woman who achieves an empowerment score of .80 or greater is considered to be empowered. To allow for country-specific improvement, baseline values are adjusted to country-specific thresholds (see Annex 6 for details).

The WEAI also involves a Gender Parity Index (GPI), which measures differences in empowerment of various domains between men and women. Due to differences in how certain questions were presented to men and women, the WEI used in Pathways baseline analyses does not include the GPI per se, but rather examines men's and women's empowerment in each domain. Gender parity measurements are based only on households in which a man and a woman answered questionnaire modules respective to their sex. Thus, no female-only households are included, and no households where a man was unavailable to respond to Modules H through Q in the questionnaire are included (see the Supplementary Annexes accompanying this report). Empowerment scores are constructed for men and women, however a GPI is not tabulated.

The 5DE index is calculated using the following formula.

$$5DE = H_e + H_d A_e = (1 - H_d A)$$

Where:

H_e is the percentage of empowered women

H_d is the percentage of disempowered women

A_e is the average absolute empowerment score among the disempowered

3.5.1. Women's Empowerment Index

Results in Table 16 show that the baseline 5DE score for women's empowerment ranges from lows of 0.29 in Bangladesh and 0.32 in Mali to a high of 0.66 in Malawi. Less than 1% of all women surveyed in Bangladesh are empowered; fewer than 5% are empowered in Ghana, Mali, and India. Even in Malawi, the country with the highest 5DE score, only 23% of surveyed women are considered to be empowered.

Values in Table 16 reflect the mean 5DE index for the total sample. Data disaggregated by sex of household head, found in Annex 7, indicate that significantly more women living in female-headed households are empowered compared to women in male-headed households. For example, in Tanzania only 4% of women in male-headed households are considered to be empowered compared to 33% of women residing in female-headed households. Similarly, in Malawi 11 % of women in male-headed households are considered to be empowered compared to 60% of women residing in female-headed households; and in India, 0.01 % of women living in male-headed households are considered to be empowered compared to 17% of women residing in female-headed households. Annex 7 shares the depth and details of empowerment disparity, including examination of women's achievement in the

¹³ International Food Policy Research Institute. 2012. *Women's Empowerment in Agriculture Index*. Feed the Future.

individual indicators comprising the five domains of women’s empowerment measured in the baselines, and men’s and women’s achievement in individual domains, a proxy for gender parity.

Table 16: Women’s 5 Domains of Empowerment Index

	Baseline value					
	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
5DE Index	.66	.58	.47	.32	.29	.46
	Female respondents					
% of women achieving empowerment (score of .80 or greater)	23.2*	13.1*	1.7*	2.2*	0.0	4.4*
Mean empowerment score for all female respondents	0.62*	0.57*	0.47*	0.32*	0.29	0.45
N	763	819	173	776	454	924
Mean empowerment score for disempowered women	0.53*	0.50	0.46*	0.31*	0.29	0.43*
N	586	712	170	759	453	924

* Significantly different between male- and female-headed households within individual countries at $p < .10$. See Annex 3 and country reports for details.

Sample qualitative input on gender equity from focus group discussions					
Malawi	Tanzania	Ghana	Mali	Bangladesh	India
Small trade businesses are seldom run by women alone; but rather in partnership with a husband or a family member, even if the woman is the one to initiate the business idea and obtain start-up capital.	Women are “underneath” men because it has always been that way.	Men are generally uncomfortable with women working outside the home, but recognize the financial benefits, including resources for household food for some part of the hunger period.	All important household decisions are made by the husband head of household and include education, sale of agricultural products, livestock, loans, marriages, boy’s circumcision, and girl’s excision.	The severity of shocks is associated with men staying out for longer times in their migration patterns. In these situations women “are allowed” to visit markets more frequently.	Men have “supreme” power in a number of important decision-making areas. Women may be ridiculed verbally if they are seen as being wrong in their decision-making. It may seem to the outside like women are making decisions, but in reality they are not.
Women’s labor is paid less even for equal jobs. Both sexes justify this stating that women have domestic tasks they must do; therefore, any paid job they undertake requires more time to complete.	Women are seen generally as weak and simply not able to conduct themselves as men do.	Men decide on critical points of family size, obtaining and use of loans, major asset control, land preparation and cropping decisions. When a woman wealth increases, she likely will have greater decision-making though the community may “frown” on that.	If a woman is educated and works out of her house her husband will not be interested in her anymore.	During difficult times, women consume food of lower quality than others in their family. Traditionally they serve everyone in the family before eating themselves.	Women sometimes believe they are “rubber stamping” what men are saying on issues at the local level.
Lack of self-confidence together with a husband’s hostility or a males’ control of women’s decisions and household assets are main causes that prevent women from requesting loans to start up business activities, and also impact whether or not a woman remains in a VSLA.	“Men are...in charge of all household matters. The community believes that women cannot make the right decisions.”	Men and women would like more timely information relating to agricultural production – particularly relating to pricing, inputs and disease prevention prior to the season beginning. Women say that men tend to have better access to this information.	Most women are resigned to their submissive role and their lack of power in decision making and think of themselves as their husband property.	Women in focus groups repeatedly talk of receiving lower wages than men in spite of the same productivity. For example, in Bondorpara, 150 tk per day is the wage rate for men - contrasted with only 100 tk for women. Other focus groups indicate even greater disparities.	Men have significantly better knowledge and access to agricultural inputs. With their greater mobility they go to and can secure inputs at subsidized rates at the block level from government agricultural sources.

3.6 Women’s Self-Confidence and Relationships

Pathways Outcome 1 focuses on improved knowledge, skills, relationships, self-confidence and conviction of poor women farmers. To understand the baseline status of these areas, the surveys explored women’s participation and representation in formal and informal groups; women’s leadership within these groups; women’s comfort level with speaking up in public about important issues; women’s political participation; and women’s self-confidence.

3.6.1. Women’s Participation in Formal and Informal Groups

The survey first asked women to determine if different types of groups existed in a community. If a group existed, women were asked about their active participation and whether they held a leadership position.

Across the six Pathways countries, the vast majority of women report participating in at least one formal or informal group that exists in their community (Table 17). This is not surprising given criteria for participation in the Pathways program is based, in part, on membership in a collective. Of women belonging to a group, the percentages holding a leadership position (likely to include those with a designated title and/or defined role or responsibility) are relatively high in Malawi (53%) and Tanzania (43%). In contrast, just under one-third of surveyed women in Ghana and Mali, and one-fifth of surveyed women in India, state they hold a leadership position.

Table 17: Women’s participation and leadership in groups

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women participating in formal and informal groups	98.7	95.3	97.1	83.0	67.6	90.2
N	762	816	173	764	454	904
Women who hold leadership positions in formal and informal groups	53.2	42.6	29.8	32.3	-	20.4
N=women who are members of groups	752	778	168	634	-	796

Details presented in country reports show that women in Malawi, Tanzania, and Ghana participate in a broad diversity of groups, including credit, producers’, trade, and women’s groups. However in Mali, Bangladesh, and India, group participation does not appear to be as diverse. In some cases this is due to no groups existing in communities, rather than due to exclusion or elected non-participation. The high level of group participation in Mali and India is primarily explained by women’s involvement in credit/microfinance groups or in mutual help/ insurance groups, as would be expected in surveys of savings/credit collective members. Group participation in Bangladesh is the anomaly, attributed almost entirely to women who belong to an agricultural producers’ group. A logical explanation for low savings group participation is that CARE elected to draw the sample from EKATA groups, which are empowerment collectives, rather than from savings collectives. Savings membership aside, the finding is still quite perplexing given that only 23 women identified themselves as farmers.¹⁴

¹⁴ In the baseline studies, “farmers” were defined as women who engaged in any agricultural activity, including primary production, processing, or marketing of food, fiber, or fuel crops, large and small livestock, bees, fish, horticultural crops such as

Important and instructive for Pathways are the type of groups in which women are participating at the relatively lowest levels. In all Pathways countries, with exception of Tanzania, this includes local government. In Bangladesh, India, and Ghana, non-participation can be attributed to women reporting no such group existed; however in Mali the vast majority of women report the presence of a local government group, yet fewer than 5% are active members. In Tanzania, Mali, and India, groups with the lowest representation of women also include natural resource groups (water and forest users). Additionally, very few surveyed women in India report they belong to a producers' group or a mutual help group, despite the vast majority of women reporting these groups exist in their communities.

3.6.2. Women's Participation and Representation in Community Affairs

Key levers of change, important to the achievement of Pathways Objective 1, are the self-confidence and conviction held by poor women farmers. To better understand the baseline status of women's potential for leadership and influence in the communities where they live, the baseline survey asked women about their comfort level in speaking up about three topics and whether they had expressed their opinion in a public meeting (other than CARE collective meetings) any time in the last 12 months. Respondents who responded positively to three of the four questions are considered to be confident speaking about gender and other community issues at the local level. In Bangladesh, respondents were not asked about their comfort level speaking about gender issues, thus, achievement of the outcome indicator in Bangladesh is based on confidence in two of the three questions asked.

Table 18: Expressing opinions in public

	Malawi	Tanzania	Ghana ^a	Mali	Bangladesh	India
	%					
Women confident speaking about gender and other community issues at the local level	53.7	70.1	33.5	33.4	19.6	71.1
Topics						
Comfortable speaking up in public to help decide on infrastructure	70.6	69.5	45.9	34.8	22.9	72.5
Comfortable speaking up in public regarding gender issues	65.0	69.1	42.4	35.2	N/A	73.3
Comfortable speaking up in public to protest the misbehavior of authorities or elected officials	60.1	64.8	35.5	25.6	33.1	66.6
Expressed opinion in a public meeting (other than VSLA, or producer group meetings) in last 12 months	34.9	34.2	32.9	1.9	3.6	16.3
N	762	722	173	765	444	924

^a Country threshold is 2 of 4 statements

vegetables, fruit, nuts, berries, herbs or natural products (non-timber forest products and wild fisheries). Women whose *only* involvement in agriculture was wage labor were not considered "farmers".

Just over 70% of women in Tanzania and India meet the indicator threshold; slightly more than half do so in Malawi. Approximately one-third of surveyed women are considered confident expressing their opinions in public in Ghana (34%) and Mali (33%), and fewer than one-fifth (19%) are considered so in Bangladesh. Of note is that while the majority of women in Malawi, Tanzania, and India state they are comfortable speaking up about infrastructure decisions, gender issues, and misbehaviour of authorities or elected officials, only a minority state they have actually expressed an opinion in a public meeting in the last 12 months. Fewer than 5% of surveyed women in Mali and Bangladesh report they have expressed an opinion in a public meeting in the last 12 months.

Focus group findings offer other facets to understanding women’s self-confidence and conviction. For example, in Ghana, although quantitative findings show that a minority of women speak out on the issues asked about in the survey, qualitative input indicates that Ghanaian women feel comfortable publically addressing topics such as education (inadequate teachers), lack of health facilities, and water issues. In India, female FGD participants stated that when issues are discussed at the local level, women sometimes believe they are “rubber stamping” men’s opinions. India’s qualitative team observed that in mixed sex FGDs women were much less expressive than men and more deferential to men’s input; however, in female-only FGDs women robustly expressed their opinions. The story to the side highlights the disempowerment of women who take action to improve their community. It is also reflective of corruption and threat of violence that exists in the Pathways villages visited by the India qualitative team.

Story: Challenges in women speaking out...

A SHG composed of women found some stolen firewood from the forest. They contacted forestry officials. At first they told the women to file a formal complaint against the culprits. Then threats were made to harm their husbands if action was taken. The women decided not to proceed.

Focus Group Discussion – India

Women’s level of political participation feeds into the WEI, thus the baseline asked respondents about their recent voting history and involvement in local government. Across the six countries the majority of women report voting in the last local election (Table 19). Small percentages report running for office in the last parliamentary or local election.

Table 19: Women’s political participation

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Ran for office in the last local/parliamentary election	5.2	9.0	5.2	1.9	-	2.1
Voted in the last local/ parliamentary election	85.8	90.0	95.4	79.9	93.2	95.8
Been a member of an advisory team for any community conflict resolution or in local government meetings	17.6	16.0	9.2	8.6	1.0	13.7
N	762	847	173	770	444	924

In addition to voting, data indicate that small percentages (14-18%) of women in Malawi, Tanzania, and India have been a member of an advisory team for community conflict resolution or taken part in local government meetings; for females in Ghana, Mali, and Bangladesh, participation in this type of community governance appears less common, with fewer than 10% of surveyed women reporting involvement.

3.6.3. Women's Self-confidence

A self-confidence indicator contributes to the WEI, achievement of which is termed as mostly or strongly agreeing with statements below that CARE defines as reflecting self-confidence (Table 20).¹⁵

Women's self-confidence appears to be most challenged in Mali and India, and appears to be greatest in Malawi and Ghana. Notably, the Mali baseline had the lowest threshold for achievement of this indicator (agreeing with three of the seven statements). While most Malawian women express confidence related to all the statements, topics related to agricultural production (skills, information, resources, and services) were most often cited by women in the Ghana, Mali, and Tanzania as areas in which women are not confident. It is less common for women to flatly disagree with the statements than to agree; although, with the exception of Malawi, frequently women would respond "no difference" indicating they neither agreed nor disagreed with the statements.

Table 20: Women's self-confidence

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women respondents who express self-confidence	72.3	51.0	65.9	45.1	-	47.5
N	763	182	173	772	-	821
Statement	Majority agree			Majority disagree		
<i>I can always resolve household problems if I try hard enough</i>	Ghana, India, Malawi, Tanzania			Mali		
<i>If somebody opposes me, usually I can find a way to get what I want</i>	Ghana, India, Malawi, Tanzania					
<i>I always find some way to deal with problems that confront me</i>	Ghana, India, Malawi, Tanzania					
<i>I have the skills and information I need to improve my agricultural production</i>	Malawi			Mali, Tanzania		
<i>I have access to the resources and services I need to improve my agricultural productivity.</i>	Malawi			Ghana, Mali, Tanzania		
<i>I can take action to improve my life</i>	Ghana, India, Malawi, Mali			Malawi		
<i>I can influence important decisions in my community</i>	Malawi, Tanzania			Mali		

¹⁵ To allow for country-specific improvement, baseline values were adjusted to country-specific thresholds ranging from agreement with at least five of seven statements to at least three of seven statements. Please refer to Annex 6 and individual country reports for details.

3.7 Women's Access to Productive Resources

To realize Pathways Outcome 2 – *Increased access to productive resources, assets, markets, and appropriate and reliable services and inputs for poor women farmers* – CARE aims to improve the linkages between service providers (private sector, institutions, and government) and women farmers. Through collectives, Pathways will support the development of community-based extension workers and improve efforts of government extension services to better and more equitably target women farmers.

To provide a current snapshot of farmers and their linkages to productive resources, assets, markets, and services, the baseline surveys included a range of questions related to women's use of financial services to support agricultural production; their access to and satisfaction with agricultural extension; and types of output markets used for sale of agricultural products. This section presents the results.

3.7.1 Women's Access to Financial Services

Table 21 shows that the majority of women have used their own savings as well as credit from VSLAs or SHGs to support agricultural activities in the last 12 months. It is possible that the two responses overlap, and that some responses attributed to "own savings" actually reflect amounts saved within a VSLA/SHG. Of note, is the paucity of financial services outside of community savings groups from which women choose or are able to access funds to support agricultural production. Focus group input suggests that vast gender disparity exists for women who wish to obtain agricultural loans and also implies that lending terms preclude most women from obtaining loans.

In Malawi, FGD participants mentioned that local microfinance institutions (MFI) focus on well-to-do businesspersons; furthermore, a number of loan acceptance procedures for women include a husband's consent even if collateral is owned by the woman seeking a loan. MFI staff in Malawi state that although their firm targets only women about 70% of the loans are obtained to support men's business and the organization has not developed any gender-sensitive monitoring

Table 21: Women's access to financial services

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women accessing financial services to support agricultural activities in the last 12 months	96.9	97.0	95.3	89.7	-	90.9
N	716	825	169	716	-	853
Financial services (multiple response)	% female respondents					
Own savings	67.2	95.9	73.4	76.2	-	67.4
VSLA/ SHG	28.4	5.5	50.3	38.9	-	22.2
Other	3.6	5.3	0.0	13.7	-	4.0
Agricultural cooperative	1.1	1.1	0.0	3.1	-	2.5
MFI loan	0.7	0.4	1.2	4.1	-	3.0
Agricultural insurance	-	0.2	-	0.3	-	1.2
N	716	824	161	701	-	853

In Mali and Ghana, FGD participants assert that MFI loans are only available to members, and membership requires owning significant collateral in the form of land, livestock, or equipment. High interest rates, a 6-month loan repayment policy (not aligned to harvests), and distant locations from villages are viewed as prohibitive for women seeking loans.

3.7.2 Access to and control of loans

Control over loans is defined as having sole determination regarding how the borrowed capital is used. Table 22 reveals that female respondents from Ghana appear to have the greatest access and control over loans for IGAs, such as investments in a business enterprise, the purchase of agricultural inputs or production assets, or the lease or purchase of land for agricultural purposes. In contrast, women from Tanzania, India, and Bangladesh appear to have the least access to and control of loans for this purpose.

The low percentages of women who achieved this indicator in Tanzania and India can be explained by the few women who claimed they took out a loan in the last 12 months (19% and 29% respectively). This highlights an access rather than a control challenge, and is supported by results that show among the small group of women who accessed a loan, the majority made their own decision to borrow, made their own decision of how to use the loan, and did indeed use the loans for IGA investment.

Table 22: Women's loan access and control

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women with access to and control over loans for IGA	31.8*	14.0	82.1	55.9	7.6 ^a	17.3
N=women who took out loans or wanted to borrow but were unable to	707	819	145	596	314	423
Women who took out at least one loan in the last 12 months	88.2	19.0	74.6	70.7	70.7	28.9
N= all women surveyed	762	847	173	770	444	924
Used loans for IGAs	64.7	73.3	85.9	63.6	-	76.0
Make own or joint decision to take out loan	84.5	95.7	93.0	97.4	86.0	73.4
Make own or joint decision on use of loan	86.2	94.4	96.9	96.7	87.9	83.5
N= women who took out a loan in the last 12 months	673	161	129	544	314	267

* Significantly different between VSLA members living in male- and female-headed households within individual countries at $p < .10$. See Annex 3 and country report for details.

^a Bangladesh value only reflects women with access to and control over loans, without including use of loan for IGA

Qualitative findings from Tanzania help to shed light on the loan access challenge. Input from FGDs agrees that access to formal lending institutions is quite limited: women are constrained in their ability to borrow from these institutions primarily because the terms of borrowing and repayment are difficult for them; women typically lack collateral required to secure a loan, such as title to land, and there are no formal institutions nearby. There is also wide consensus that while VSLAs provide opportunities to

women that are not as easily accessible from other sources, the groups do not currently have sufficient savings to satisfy the needs of community members. Given the low income-generating ability of most households in the communities surveyed, there simply aren't sufficient savings available for everyone interested in borrowing from the VSLA.

The small percentage of women with control over loans in Malawi is directly related to not having sole determination regarding how the borrowed capital is used. Data in Table 22 show that the majority of women have accessed a loan (88%) and among those who borrowed, more than two-thirds (65%) used that loan to invest in an IGA. Additionally the vast majority contributes to decision making regarding whether to borrow and how to use money borrowed. However, when the criteria of *solely* determining how credit is used, that percentage drops to under one-third. Focus group findings from Malawi support quantitative data; interviewed women state that loans are often taken to cover household needs and even if partially invested in small business, women often give a large part of the loan to their husbands.

Individual country reports provide details on loan sources. Notably, women's access to and/ or use of loan sources other than a VSLA/SHG or a friend/ relative appears limited. In an analysis of formal and informal institutions in India, SHGs were frequently illustrated and described in Venn diagramming as one of the more highly-valued groups for women.

3.7.3 Women's Access to Agricultural Extension Services

To determine access to agricultural extension services, female farmers were asked whether they had met with an agricultural extension worker or a livestock/fisheries worker in the last 12 months. The greatest percentage of women reporting such contact occurs in Ghana (38%) (Table 23). Across all other Pathways countries, typically only one-fourth of women interviewed assert they have met with an extension worker within the last 12 months. Among the small numbers of women who have had contact with extension workers, the majority are satisfied with the services provided.

Table 23: Linkages to agricultural service providers

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women with access to agricultural extension services in last 12 months	26.4	28.0	37.8	21.2	- ^a	23.3
N	762	847	173	703	14	853
Women reporting satisfaction with agricultural extension services	94.0	73.1	98.4	79.9	- ^a	80.9
N=women who had met with an extension officer	201	238	65	149	6	199

^a Insufficient data for reporting purposes

Qualitative information offers a variety of insight to why so few women have had contact with an extension officer. In Malawi, interviewed extension workers state that extension services are insufficient compared to population needs, and that retaining extension providers in the Pathways operational area

is challenging. Young graduates who start their careers in this area, quickly seek better opportunities; female extension providers tend to be transient, following their husband if he obtains new employment. Though trusted to some degree, agricultural extension is perceived generally in Pathways India project communities as poor and unresponsive by men and women farmers. Additionally, women perceive extension as relating primarily to men. In Bangladesh, FGD participants claim that extension services are generally delivered to male farmers by male extension workers.

3.7.4 Women’s Access to Agricultural Inputs

CARE’s Pathways program identifies collectives (e.g., VSLAs, SHGs, producer groups) as an entry point for improving access to appropriate agricultural inputs such as seeds and fertilizer by women farmers. The theory is that group procurement will increase the ability of the poorest to participate by pooling their limited resources. The program will enable capable collectives and/or individual members to operate as input suppliers, to also link the groups with relevant input suppliers, and to link community-based extension agents to information sources and input suppliers. This focus necessitates a clear understanding of female farmers’ current input sources.

The percentage of female farmers reporting access to agricultural inputs from at least one external source over the last 12 months varies widely across the five Pathways countries for which there is sufficient data. In Tanzania and India, less than two-fifths reported such access (33% and 38% respectively) (Table 24). In contrast over three-fourths (77%) of female farmers in Malawi state they have accessed inputs such as seeds and fertilizer in the past year (primarily from a government productive safety net program). In Mali, just over half (53%) of female farmers report access; in Ghana 59% report the same. Women in both countries are primarily sourcing inputs from agro-dealers. Notable for India, is that although the percentage of women accessing inputs is small, the primary source is a cooperative or producer group, cited by 14% of female farmers interviewed.

Table 24: Women’s access to agricultural inputs

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
Women accessing agricultural inputs over the last 12 months	77.1	33.3	59.2	53.4	-	38.3
N	716	825	169	778	-	776

Qualitative findings from Tanzania reveal a lack of satisfaction by community members generally, and by women specifically, with “local” input suppliers. The data as a whole suggest that both men and women reported having fairly good – and mostly equal – physical access to agricultural inputs. The primary limiting factor for both women and men is simply financial access; most households surveyed are poor and cannot afford many of the inputs they feel are necessary for improved production. When asked what might help women increase their agricultural productivity, better access to agricultural inputs was mentioned as one of the top priorities by all men’s and women’s focus groups.

Qualitative input from Malawi contradicts quantitative data that show the majority of female farmers are able to access inputs. Key informant interviews and FGDs underline how the government’s input subsidy program has been severely scaled back in the past couple of years and does not cover farmers’ needs. Without subsidization, fertilizer prices have reached unattainable levels for the poorer farmers,

compared to the subsidized prices of previous years. Interviewed farmers state that typical outcomes of decreased input access are a significant fall in yields (also due to soil degradation) or reduced economic well-being as large percentages of their income is invested in fertilizer.

Focus groups in Bangladesh indicate that insecticides, growth hormones, fertilizer, seed, and agricultural equipment, when accessed, is under the control of male farmers. Some program participants say they trust information received on inputs, while others express serious misgivings about the quality of inputs, particularly seeds and fertilizer. In Ghana, where just under two-fifths of female farmers report accessing inputs from an external source, women in FGD report that men generally have greater access to inputs and that their availability is sometimes irregular and not affordable.

3.7.5 Women’s Access to Output Markets

Through the development of clusters and networks of producer groups, CARE Pathways aims to not only improve purchasing for poor women farmers, but also to improve their marketing and negotiation power. The baseline surveys sought to increase CARE’s understanding of women’s relationship to output markets and market information.

Data in Table 25 indicate that in Pathways countries, CARE’s plans for market assistance are well-targeted. Female Ghanaian farmers report the greatest use of markets outside of their local village; however this is still only 56% of the women surveyed. Only 40% of female farmers in Malawi report such access; and fewer than one-fourth in Tanzania and Mali. In India, only one in seven (14%) of Pathways female farmers sell in a market outside of their village. Across all Pathways countries, very few (<5%) women sell in bulk via groups that could potentially offer more advantageous terms of sale.

Table 25: Women’s access to output markets

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women accessing output markets (outside of local market)	39.9	23.8	56.2	22.8	-	14.3
N	714	858	169	699	-	775

Market Information: Across the globe, lack of market price information is a common constraint to farm profitability. In the CARE Pathways operational areas, baseline survey data show that while most women report one to two sources of market information, as many as 43% (India) of female farmers have not accessed market information from any source (Table 26). Mali appears to be the only Pathways country where the majority of female farmers can access a formal or informal market information system.

The market information sources most commonly cited by women are ‘other producers’ (Malawi, Tanzania, India) and ‘collectors or traders’ (Malawi, Tanzania, and Ghana). A large proportion (45%) of Pathways farmers in Malawi learn about current agricultural markets via radio; for Malian female farmers, input suppliers and agro-dealers play a key role in disseminating market information. Although asset data in individual country reports show that the majority of women in Malawi, Tanzania, Mali, and Ghana live in households with cell phones, Table 26 indicates that very few receive SMS market updates.

Table 26: Women’s access to market information

Information accessed from: (multiple response)	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Other producers	37.0	44.8	20.1	1.4	-	29.1
Collectors/traders	30.0	34.5	30.8	28.0	-	21.8
Government extension agents	22.2	25.3	5.9	6.8	-	6.2
Radio	45.0	19.8	18.3	3.0	-	20.8
Other	1.0	9.0	3.6	31.1	-	3.8
Input suppliers/ agro dealer	8.9	2.7	5.9	46.7	-	5.9
Cell phone/SMS update	0.3	1.2	0.0	14.7	-	1.3
Television	3.9	0.7	6.5	7.0	-	9.4
NGOs	3.5	0.1	9.5	-	-	-
No information received	18.0	14.2	35.5	2.6	-	43.1
N	716	600	169	428	-	371

3.8 Increased Productivity

Outcome 3 of the Pathways program seeks to improve yield and income of poor smallholder women farmers through their adoption of sustainable and intensified agriculture and value addition. To determine the baseline status of agricultural productivity for poor smallholder women farmers, the surveys measure women’s net income from agricultural production and/or related processing activities; the number, types, and yields of crops grown by female farmers; and agricultural, livestock, storage, and post-harvest practices which promote sustainable production and value addition.

Women who engaged in any agricultural activity, including primary production, processing, or marketing of food, fiber, or fuel crops, large and small livestock, bees, fish, horticultural crops such as vegetables, fruit, nuts, berries, herbs or natural products (non-timber forest products and wild fisheries) were interviewed to understand numerous aspects of their involvement in and experiences with production. Women whose only involvement in agriculture was wage labor were not interviewed about these topics. Only 23 female farmers were identified in the Bangladesh baseline survey, resulting in a sample too small to be considered valid baseline data.

3.8.1 Women’s Engagement in Agricultural Activities

For Pathways participants, women’s engagement in agricultural activities is predominantly growing crops, followed (closely or distantly depending on the country) by making crop or livestock decisions (Table 27). Female farmers in Malawi and Tanzania appear to participate in a more diverse assortment of agricultural activities than farmers in the other Pathways countries. Few women report they are engaged solely as wage laborers (0.2 – 4.8%), although qualitative findings indicate that in addition to agricultural engagement at the household level, women often sell their labor to wealthier farmers, working in their fields and post-harvest operations.

Table 27: Women’s engagement in agriculture

Types of activity (multiple response)	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Grow crops	96.5	97.3	84.6	93.4	-	71.9
Make decisions about type of crops/livestock	74.1	66.3	45.0	26.8	-	45.0
Tend livestock	56.0	46.3	8.9	11.3	-	31.4
Sales and marketing	48.1	28.2	20.7	21.1	-	14.2
Post-harvest processing	64.5	16.6	9.8	8.0	-	23.3
Other	0.3	1.9	2.4	4.1	-	1.3
Provide paid labor only	0.8	0.2	0.6	-	-	4.8
N	722	827	169	708	-	816

CARE’s value chains of focus in each country follow:

- Bangladesh: Vegetables (chilies), indigo
- Ghana: Groundnuts and soybeans
- India: Cereals (maize, rice), livestock, non-timber forest products
- Malawi: Groundnuts and soybeans
- Mali: Rice, millet, livestock, vegetables
- Tanzania: Cassava, cowpeas, sesame

The criteria for selection of the value chains include, among others, profitability, geographical suitability and potential to benefit women and transform gender roles in agriculture (BMGF priority commodities are underlined).

3.8.2 Women’s Income from Agriculture

Women’s reported mean annual net agricultural income (Table 28) is calculated from women’s estimated sole and/or joint earnings from agricultural sources minus the estimated annual costs of inputs for each income source. As previously noted, income is often not normally distributed, thus, median annual net income is also presented. Income data from Ghana is judged as not reliable enough to be reported in the baseline and is thus excluded (see country report for details).

The extreme difference between women’s mean and median net income for all countries except India confirms large income variations for the sampled population. The median annual net income for women (a value less-likely to be influenced by extreme data values) is much lower. In Malawi, Mali, and India the mean annual net agricultural income of women living in male-headed households is greater than that of women living in female-headed households, and the difference is statistically significant. In Tanzania, the same disparity exists between the median annual net income values of women living in male-headed or female-headed households.

Wholesalers have close connections with middle men that are not in the best interest of “innocent” farmers. Consequently, the farmers are deprived of getting the best prices for their goods.

Focus group input - Bangladesh

Table 28: Women’s net annual income from agricultural production

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
Net income	USD					
Mean annual net income	165.78*	228.01	-	465.27*	-	56.26*
Median annual net income	56.04	98.64*	-	110.16	-	37.89
N	547	584	-	416	-	302

* Significantly different between women living in male- and female-headed households within individual countries at $p < .05$. See Annex 3 and country reports for details.

Qualitative findings indicate that in Malawi and Tanzania women’s lower mobility (discussed in Section 3.10.3) contributes – together with other factors related to gendered identities – to shape the type of IGAs that women are able to engage in, and thereby places ceilings on the amount of income they are able to earn. Additionally, input from female FGDs indicate that men often “usurp” the sale of “women’s” crops.

3.8.3 Crop Diversification

Among surveyed female farmers, women report growing on average two to four different types of crops (Table 29). The most commonly cited crops grown by women are presented in Table 30

Table 29: Number of different crops grown by female farmers

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	Mean					
# of crops	2.7	3.5*	3.0	3.7	-	2.1
N	665	657	135	608	-	436

* Significantly different between women living in male- and female-headed households within Tanzania at $p < .05$. See Annex 3 and country report for details.

Table 30: Top three crops grown by female farmers, by country

Malawi	Tanzania	Ghana	Mali	Bangladesh	India
Maize	Maize	Rice	Peanuts		Rice
Groundnuts	Cashews	Soya	Shallots	-	Maize
Soya	Cassava	Maize	Millet		Pulses

An interesting discussion that occurred in Tanzanian focus groups regards “ownership” of crops. It is widely perceived that both men and women own crops equally; they both work the fields to produce the harvest. The distinction lies with who has control over the sale and resulting income of crops produced by either men or women. Unequivocally, men have total control of this aspect of the production cycle. So while women might report they “grow” a particular crop, they most likely do not reap the economic benefit of doing so, at least not directly.

3.8.4 Women's Agricultural Yields

Yields (kilogram per hectare) are calculated for all crops promoted by each country project. Because the crops grown in each Pathways country vary widely and effective means of helping poor farmers increase their yields are dependent on numerous context-specific variables, this section does not present data specific to all country crop yields. In depth information can be explored in the individual Pathways country baseline reports. What follows are selected qualitative findings related to agriculture production constraints currently faced by smallholders.

Participants in **Malawi** FGDs report that maize fields have lost productivity over the years, and cultivating this crop requires increasing quantities of fertilizer; however, groundnut production is not constrained by the same problem. Many FGD participants indicate that reduced crop yields are not due to decreased soil fertility, but rather to limited access to fertilizer. Some community members expressly mentioned the need to continue fertilizer use to maintain an acceptable level of soil fertility. An additional reported constraint is deforestation (primarily for firewood and charcoal sales), which impacts soil quality by reducing carbon (less organic matter in soil), and therefore crop production.

Compared to the three oxcart of maize harvested by a middle-income family (an amount which allows them to feed their household through January or February), a poor household can typically harvest only one oxcart of maize.

Focus group- Malawi

In **Tanzania**, FGD participants in all villages assert that disease and insects are major limiting factors to good production, especially for cashew nuts. Access to agricultural inputs (e.g., fertilizers, pesticides) is considered critical for improving yields. Drought is also considered a major limiting factor in crop yield, with few villages enjoying irrigation infrastructure or capacity. Maize, in particular, is particularly sensitive to the effects of drought.

Qualitative input from surveyed communities in **Bangladesh** indicates a perception that the quality of land and other natural resources has decreased over time. Factors cited include over-population resulting in greater use of land, over use of pesticides that are damaging to the ecological system, and silted rivers and water logging that impacts the water absorption capacity of land.

3.8.5 Women's Agricultural Practices

The baseline surveys sought information about the use of improved agricultural techniques by female farmers. An integrated approach to improved agricultural production seems common for female farmers in Malawi and Ghana, with close to or over half of surveyed women reporting they have adopted three or more improved practices (45% and 54% respectively) (Table 31). The use of improved practices appears less common in India (33% reporting the use of three or more practices), Tanzania (22%), and Mali (18%).

Table 31 presents data that can be instructional to the efforts of CARE Pathways as each country project seeks to strengthen the agricultural production capacity of poor female farmers. Among the ten improved practices women were asked about, the most adopted practices by surveyed women are the use of compost or manure, crop rotation, and minimum tillage. Interesting is the limited use of compost or manure reported by female farmers in Tanzania, a means of improving soil fertility which is typically low-cost, can be easily accessible (depending on animal penning practices), and is easy to make.

Across all countries, fewer than 27% women report growing a wider diversity of crops, which increases resilience by providing a buffer against failure of any one or two crops. The number of women reporting this practice in Tanzania and India is extremely low (< 5%).

The number of women who report mulching, another low cost technique to improve soil fertility, is also quite low in all countries (with the exception of India). While limited use of this technology by women in Eastern African countries may be due to inadequate knowledge of its benefits, it may also be due to limited access to sufficient biomass, as well as limitations to the labor required to cut and carry a sufficient amount to adequately mulch crops.

Table 31: Women’s adoption rates of improved agricultural practices

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India	
	%						
Women adopting three or more improved practices	45.2	22.0	53.8	18.0	-	32.7	
	Mean						
Number of practices adopted	2.4	1.4	2.7	1.5	-	1.5	
	N	716	825	169	717	-	853
Improved practices (multiple responses)	%						
Manure or compost	43.8	9.4	67.4	73.0	-	69.1	
Crop rotation	60.3	23.9	60.7	14.6	-	36.1	
Minimum tillage	3.6	31.1	37.8	44.9	-	50.1	
Alley cropping/intercropping	30.8	53.2	36.3	2.5	-	12.7	
Cover crops	19.8	16.4	40.0	1.0	-	12.5	
Improved seeds	37.1	11.5	18.5	11.8	-	36.3	
Soil erosion control	39.1	11.2	21.5	4.8	-	4.2	
Mulching	5.0	9.7	26.7	4.9	-	45.1	
Increased number of crops	18.0	4.8	26.7	10.3	-	4.2	
Irrigation technologies	4.2	0.9	2.2	5.1	-	2.2	
Other	0.9	2.1	1.5	4.8	-	2.0	
N =women who report adopting improved practices	665	681	135	610	-	457	

Qualitative data from **Malawi** indicate that the use of a variety of ‘improved technologies’ is achieved in an environment that has insufficient extension services. Additionally, interviewed extension officers concur that barriers to market access are greater constraints to sustainable and resilient livelihoods for female farmers than are the exclusive use of what they view as “basic agricultural techniques”.

In **Tanzania**, both men’s and women’s focus groups indicate that lack of women’s knowledge regarding agriculture was an impediment to their productivity. In particular, both cite lack of access to agriculture inputs (and the knowledge associated with their use) as important to improving women’s empowerment.

India’s focus group participants relate that government forest policies are restricting the traditional practice of *podu* (shifting cultivation). *Podu* farmers collectively grow productive varieties of millets and pulses. Several crops used to be able to be produced at the same time on hills. Curtailing *podu* cultivation limits the food basket of families. More items must be purchased or grown on other limited land, and guarding of the crops is more difficult with more individualistic agriculture. Community members frequently lament this change and its impact on their livelihoods.

3.8.6 Women’s Post-harvest Practices

The Pathways program focuses on training and assisting members from VSLAs and other collectives in business and market literacy, including participatory market research and other basic business management skills that will help them actively engage in post-harvest activities. The baseline surveys included questions related to the practice of post-harvest and business management activities by female farmers. Table 32 and Table 33 present the results.

Over half of female farmers surveyed in India (78%), Malawi (63%) and Ghana (55%) report they practice two or more post-harvest practices asked about in the baseline surveys (Table 32).

The post-harvest activities in which female farmers are involved varied widely across the five countries with sufficient data. Women in Malawi are most inclined to process and package goods. Qualitative information, however, indicates that much of this may be for self-consumption. Female farmers from India are most inclined to practice packaging, sorting, and grading goods. Qualitative findings from India suggest that packaging seldom involves a value-added practice, but rather is a means of transporting paddy and other crops from the field. Therefore the large percentage of women reporting packaging should be taken lightly; it is possibly due to a poor understanding of the question on the part of enumeration team.

Post-harvest practices asked about in the baseline surveys

- Processing (flour, etc.)
- Packaging
- Sorting
- Grading
- Bulk sale through farmers' groups
- Bulk transport through farmers' groups

Table 32: Post-harvest practices

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women practicing two or more post-harvest practices	62.7	28.2	55.0	42.8	-	78.0
N	716	895	169	320	-	853

Among the small percentages of Pathways Tanzanian and Ghanaian female farmers who report post-harvest activities, sorting is the most commonly cited practice.

Notable for the design of Pathways interventions are data that show fewer than two percent of female farmers from any Pathways country reporting the use of farmers’ groups for the bulk transport or sale of

All are aware that women are much more productive than men in post-harvest processing and women do so with very little means.

Male FGD participants - Mali

crops and farm products, highlighting a systematic constraint to more inclusive value-chain approaches.

Record keeping: CARE’s efforts to provide women with opportunities to learn basic business management skills seems well-targeted as the vast majority of female farmers in all Pathways countries surveyed state they do not practice any form of record-keeping (Table 33), a key decision-making component related to agricultural production changes. Small percentages (< 15% each) report tracking their volume of production or expenses. Extremely small percentages (< 6%) report tracking profitability.

Table 33: Record keeping practices

Type of record keeping practice (multiple response)	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Tracked production volume	7.8	8.5	5.3	12.3	-	13.4
Tracked sales values	5.5	7.8	5.3	8.6	-	7.0
Tracked expenses	7.1	6.7	6.5	5.0	-	12.8
Tracked profitability	5.9	5.5	1.2	2.4	-	1.7
Did not practice record-keeping	89.4	88.2	71.6	82.6	-	83.4
N	714	823	169	701	-	775

3.8.7 Women’s Storage Practices

CARE Pathways intends to strengthen post-harvest management through the promotion of improved storage techniques. To determine the baseline status of women farmers’ storage practices, the baseline surveys queried female farmers about their current method of storage as well as their reasons for storing crops. Table 34 presents the results.

A minority of female farmers report adopting improved storage practices, such as granaries, cribs, silos, or sealed airtight containers (Table 34), while the majority of female farmers in Malawi, Tanzania, Mali, and India state they use traditional storage. Only 23% of female Ghanaian farmers report using traditional storage, with 78% reporting the use of ‘other’. Without qualitative input, it is difficult to say whether ‘other’ is an improved or traditional storage practice.

Among female farmers who claim they store crops, the most common purpose across the five Pathways countries is to store food for household consumption. This is followed by ‘seed or planting’ in Malawi, Tanzania, and India, and by ‘to sell for a higher price’ in Mali and Ghana. Notably, small percentages of women (17-36%) in India, Malawi, and Tanzania report they wait out the market, storing crops to sell later at a higher price. Linking these data points to those in Table 25 and Table 26, which show that female farmers in the surveyed regions of these three countries have limited access to market information and almost exclusively use local markets and or/ local middlemen to sell products, it is quite plausible that women are unaware of market value and may succumb to speculative traders, rather than store crops to sell when demand and prices are higher.

Storage practices CARE Pathways defines as “improved”.

- Modern storage structure like cribs or silos
- Improved locally-made structure/granary
- Improved cereal banks
- Improved community storing facilities
- Sealed/airtight containers

Table 34: Women farmers and storage practices

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women adopting improved storage practices	26.0	29.6	22.5	38.2	-	41.9
	N	716	825	169	566	853
Purpose of storing crop						
Food for household consumption	99.1	98.2	62.5	87.1	-	97.6
Seed for planting	58.5	70.0	35.6	57.8	-	91.8
To sell for a higher price	26.7	36.2	50.0	59.9	-	17.7
N= female farmers who reported using any form of storage	667	723	160	566	-	548

3.8.8 Women's Livestock Practices

Among female farmers in all Pathways countries who rear livestock, those in Mali appear to be most inclined to using improved livestock practices—almost 91% report they have used at least one method to enhance livestock management (Table 35). This finding aligns to the large percentages of interviewed Malian households who reported owning large and small livestock, as well as poultry (Table 12).

Table 35: Women and livestock management practice

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women practicing one or more improved livestock practice	43.7	61.8	40.2	90.9	-	28.3
	N	716	421	169	383	853
Livestock management practices (multiple response)						
	%					
Vaccination	20.9	41.8	73.5	76.5	-	43.5
Habitat construction	36.1	27.7	59.4	2.6	-	40.5
De-worming	8.6	25.8	49.3	59.8	-	32.2
Food complementation	37.0	23.6	94.3	25.6	-	50.5
Other veterinary care	3.9	12.3	23.5	38.1	-	2.7
Artificial insemination	0.9	5.4	2.9	0.5	-	1.3
Forage management	7.5	2.6	2.9	0.5	-	8.6
Improved breeds	6.6	1.4	11.8	0.8	-	5.6
Other	2.5	2.8	-	7.3	-	2.7
None	26.8	37.1	-	4.2	-	19.9
N= Female farmers who own or produce products from livestock	441	423	70	383	-	301

The most frequent methods reported by female farmers in most countries are vaccination and food complementation. In Malawi, only one-fifth of women report vaccinating their livestock (which are primarily poultry according to assets listed in Table 12). The limited access to/ use of veterinary care may contribute to the high frequency of ‘epidemic’ noted by households (50% of sample) when queried about shocks experienced in the last five years (See country report).

Instructive for the design of Pathways interventions are the practices least often used by female farmers rearing livestock. These include forage management, the use of improved breeds, and artificial insemination. The low use of “habitat construction” on the part of female farmers in Mali is likely due to the prevalence of traditional agro-pastoralism in this country.

In both Malawi and Tanzania, a fairly large percentage of female farmers who own livestock or have produced products from livestock in the past 12 months do not practice any form of improved livestock management asked about in the quantitative survey (27 and 37% respectively). Qualitative follow up on the part of Pathways country staff would be helpful to better understand the reasons female farmers do not elect to use improved livestock practices, and/or present constraints to the uptake of these practices.

3.9 Household Decision-Making

Pathways Outcome 4 seeks to increase poor women farmer contributions to and influence over household income and decision-making. To determine the status of women’s contributions to and influence over household income and decision-making at the project’s start-up, the baseline surveys measure women’s control of income and expenditures (disaggregating household and agricultural categories); women’s control of household assets; women’s decision-making related to health care and reproductive health; and the amount of, and satisfaction with, the leisure time women have available each day. Each indicator also contributes to the WEI (see Table 16).

In many instances, CARE defines women’s ‘control’ as women who make sole or joint decisions. This can mean that a woman plays a role in suggesting or consulting on a decision, though the final decision might always be made by a man. Across the Pathways countries women report this is often true (particularly for women in households headed by men) for decisions about the use of income from major cash crops, major agricultural and household expenditures, and major asset sales. The quantitative findings presented in this section are thus based on a definition which allows for a broad range of decision-making control. The qualitative input from CARE project participants helps to identify nuances of control, and at times is at odds with the quantitative findings.

3.9.1 Women’s Control of Household Income and Expenditures

Women’s control of household income and expenditures is defined as women who have input into most or all decisions relative to a household domain AND have input into most or all decisions regarding the use of income from the activity (if it is an IGA). We compute the outcome indicator as the number of women who have control in a set percentage (achievement threshold) of the domains in which the household reports that decisions are made. To allow for country-specific improvement the achievement thresholds vary from 50-75%; thus, cross-country comparisons should not be made. Annex 6 presents the achievement thresholds used for each country.

Baseline data show that the largest percentage of women reporting control over household income and expenditures occurs in Malawi (64%), closely followed by Bangladesh (63%) Table 36. The smallest percentage of women reporting control over household income and expenditures occurs in Mali (34%).

Note that Table 36 presents averages for the total sample within each baseline survey. Data disaggregated by the sex of the household head can be found in Annex 3; these data show that for Malawi, Tanzania, Mali, and India significant differences exist related to control over household income and expenditures between the percentage of women living in male-headed households and the percentage of women who live in female-headed households. For example, in Tanzania, the vast majority (91%) of women from female-headed households report having sole or joint control over 60% of relevant household decision-making domains. In contrast, only 34% of women residing in male-headed households report similar control of household resources.

Table 36: Women’s control of household income and expenditures

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women with sole or joint control of household income and expenditures	64.2*	52.2*	45.1	33.6*	63.4	54.2*
N	762	813	173	766	437	923

* Significantly different between women living in male- and female-headed households within individual countries at $p < .001$. See Annex 3 and country reports for details.

Across countries, qualitative findings suggest that the disparity in control over household resources is far greater than what quantitative data indicate. For example, focus groups of both men and women in Tanzania generally conceded that men are the ultimate decision-makers about all household expenditures as they are considered the head of the household. Qualitative findings show that men are considered to make better decisions; women are unable to make good decisions. However, it was acknowledged among focus group participants that in those cases where a woman might be the main source of household income, she tends to have control over all decisions and resources. Among women, the perception exists that they tend to make decisions that benefit the entire household whereas men tend to make decisions that are more self-serving.

“Important decisions are made by men. This is because the men are culturally the head of the households and also because women are not capable of making good decisions.”

FGD participant - Tanzania

3.9.2 Women’s Control of Agricultural Income and Expenditures

Women’s control over household agricultural income and expenditures, presented in Table 37, is similarly challenged. The largest proportion of women who achieved the country-specific threshold set for sole or joint control over agricultural income and expenditures occurs in Tanzania (62%); the smallest proportion in Mali (13%). Data disaggregated by the sex of the household head can be found in Annex 3.

Table 37: Women’s control over agricultural income and expenditures

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women with sole or joint control over agricultural income and expenditures	55.5*	62.1*	18.5 ^a	13.4*	59.9	49.3*
N	760	816	173	761	167	890

* Significantly different between women living in male- and female-headed households within individual countries at $p < .001$. See Annex 3 and country reports for details.

^a Sample of female-headed households too small to conduct statistical tests between MHH and FHH.

As with findings related to household income and expenditures, qualitative findings suggest the disparity in control is far greater than what quantitative data indicate. For example, in **Malawi**, FGD participants relate that there is a general distrust (shared by women as well) of women’s capacity to manage cash, negotiate with vendors, or choose the ‘right’ goods. Tensions indeed arise when cash becomes available through the work and initiative of women, which causes suspicion, accusation of prostitution, and physical fights to control the money.

In **Tanzania**, according to focus groups, men control cash crops, sale of food crops, and livestock. Women typically only control land if they are widowed, otherwise, they have a right to use their husband’s land as long as he permits it. If he refuses, then she has no right to access it. This type of arrangement may underscore why men feel entitled to sell crops their wives have grown, without their wives’ knowledge or consent. That men sell their wives’ farm produce without their knowledge was widely reported by focus groups, including men’s, and is a major concern to women’s groups.

Female FGD participants in **India** also relate land constraints which limit agricultural decision making. In spite of legal land protections for widowed women, at times the real control is in the hands of in-laws, particularly brother in-laws. Qualitative findings from India also indicate that in some villages women’s names are not on official documents, which means they are not allowed products from the forest (an important resource for food crop farming).

From **Bangladesh**, FGD input shows that although a few women may have some say in livestock decisions, men significantly control the purchasing, selling and feeding decisions related to livestock. Women may inherit livestock from their parents but they typically have little control over use of money from this livestock, though husbands may give money to wives for safe-keeping.

3.9.3 Women’s Control of Household Assets

Women’s control of household assets is defined as women who state they are a sole or joint decision maker regarding the sale or purchase of various household assets. We compute the outcome indicator as the number of women who have control in a set percentage (achievement threshold) of the asset domains relevant to her household. As with other indicators in this section, cross-country comparisons should not be made because

Included in the decision-making domain of “Household Assets” are:

- House
- Cell phone
- Means of transportation
- Non-agricultural land
- Non-farm business equipment
- Small consumer durables
- Large consumer durables

achievement thresholds are country-specific to allow for country-specific project improvement.

Baseline data Table 38 show that the largest proportion of women who achieved the country-specific threshold set for control over household assets occurs in Bangladesh (64%), closely followed by Tanzania (61%). The smallest percentage of women reporting control over household assets occurs in Mali (19%).

Similar to other decision-making domains, women’s control over household assets is significantly greater for women who reside in a female-headed household than for those who reside in a male-headed household in most Pathways countries. Data disaggregated by the sex of the household head can be found in Annex 3. Country reports provide detail.

These results are supported by qualitative data from all countries suggesting that men are, in fact, the primary decision-makers on most household matters. As the head of the household, men are responsible for making decisions concerning all aspects of the household.

Table 38: Women’s control of household assets

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women with sole or joint control over household assets	57.6*	61.1*	40.3 ^a	18.9*	64.9	42.8*
N	740	795	154	757	390	919

* Significantly different between women living in male- and female-headed households within individual countries at $p < .05$. See country reports for details.

^a Sample of female-headed households too small to conduct statistical tests between MHH and FHH.

3.9.4 Women’s Control of Agricultural Assets

Data in Table 39 suggest that women in Malawi, Ghana, Mali, and India have fairly restricted control over agricultural assets. Control over these assets appears to be more equitable in Tanzania and Bangladesh. Data disaggregated by the sex of the household head can be found in Annex 3.

Recall, this series of questions is framed to include not just women who make sole decisions but those that make “joint” decisions as well. There is likely wide variation among individual women as to how much of their input might be considered as a “joint” decision. Thus, the quantitative results may mask the dominance of men over women in terms of decision-making control of agricultural assets.

Included in the decision-making domain of “Agricultural Assets” are:

- Agricultural land
- Chicken/poultry
- Small livestock
- Large livestock
- Mechanized farm equipment
- Non-mechanized farm equipment
- Fish ponds/fishing equipment

Table 39: Women’s control of agricultural assets

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women with sole or joint control over agricultural assets ^a	45.2*	82.4	36.2	24.5*	86.6 ^a	54.6*
N	752	804	172	748	268	836

* Significantly different between women living in male- and female-headed households within individual countries at p < .001. See Annex 3 and country reports for details.

^a Sample of female-headed households too small to conduct statistical tests between MHH and FHH.

Qualitative data suggests this is indeed the case and deepens the understanding of results related to household and agricultural assets. FGD findings from **Malawi** suggest that while many assets may be referred to as property of the husband and the wife, the control on them is asymmetrically connected to gendered identities. Participants report that livestock or certain cash crops are exclusive domains of men: they deal with them and decide when to use them for leisure or work, keeping full control of any income that may derive from them. Women’s reported limited control of these assets can influence household well-being. For example, cash crop sales are typically necessary to cover major household expenses such as school fees, uniforms, books, and medicines. FGD participants assert that it is unlikely that a woman would sell an animal without her husband’s consent, for fear of raising his anger; but in case of need she would be allowed to have a small animal (such as a chicken) killed for food without consulting her husband.

There is a sense among women that *“once you are married, everything of yours then belongs to the man.”*

FGD participants - Ghana

In **Ghana**, qualitative findings indicate that although women are involved with the care of smaller animals like poultry and goats, they do not control them in the sense of being able to buy and sell them. Men also own and control farm implements and most of the crops. Main consumption and cash crops such as maize, millet and sorghum are controlled by the men, but women have greater involvement and some control over crops like groundnuts, soya and *dawa dawa*.

Focus groups from **Bangladesh** state that according to Hindu law, women are not entitled to inherit land from the father; if a father donates the deed to a daughter then technically she can have it. However, when fathers become old or sick, they tend to give the property to their sons, believing that the dowry for their daughter’s marriage is sufficient and land should not be given to her. This practice has not trended toward change. In Muslim families, women are entitled to land but traditionally do not take it. More recently women are being forced by their husbands to claim their portion of land.

3.9.5 Women’s Control of Reproductive and Health Care Decisions

Only one in three women interviewed in Mali and Ghana have some decision-making role regarding health care for their families. Conversely, the vast majority of women surveyed in Malawi, Tanzania, Bangladesh and India report they are the sole or joint decision maker for health care decisions (Table 40).

Among women for whom family planning decisions are relevant, the vast majority (88-97%) in Malawi, Tanzania, India, and Bangladesh report they make sole or joint decisions regarding family planning. To a lesser extent, the majority of women in Mali (75%) and Ghana (67%) claim the same.

Table 40: Women’s decision-making about health care and family planning

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women making sole or joint decisions about health care	86.2*	85.6*	33.1 ^a	37.5*	78.5	93.5
N	756	796	175	761	386	885
Women reporting sole or joint decision-making over reproductive health decisions (e.g., family planning to space or limit births)	94.6	92.3	66.7	74.6	88.4 ^a	97.2
N= women for whom family planning is applicable	562	556	69	405	319	683

* Significantly different between women living in male- and female-headed households within individual countries at $p < .001$. See Annex 3 and country reports for details.

^a Sample of female-headed households too small to conduct statistical tests between MHH and FHH.

Qualitative data from Tanzania supports the quantitative results. In FGDs, men and women agreed generally that they make family planning and health care decisions together. As previously noted however, there remains widespread belief within the communities that men should make all household decisions because they are better at making decisions than women. One female focus group indicated men “do not like to follow family planning; they like to have many children in order to get support in different activities.”

However, qualitative findings from Malawi, India, and Bangladesh do not support quantitative findings. In Malawi, there is a general consensus among female FGD participants that women cannot in practice have an open say on birth control and child bearing, and also a collective feeling that this topic should involve more equitable decision-making. FGD participants from Malawi, India and Bangladesh assert that ultimately men decide whether or not a couple will have children. In-laws in India can have great influence in this decision-making, and women from Bangladesh FGDS state they are not comfortable with family planning.

Control over family planning decisions are a key enabling factor for allowing women to do business.

Focus group - Malawi

3.9.6 Women’s Leisure Time

Women in Pathways countries for which baseline data were collected have approximately two- three hours available each day for leisure activities, such as visiting neighbors, listening to the radio, or playing sports or games (Table 41). A large majority of surveyed women in India, Malawi, and Mali, report they are satisfied with the amount of leisure time available (79-90%). While still a majority, fewer women in Tanzania report such satisfaction (69%). Surveyed women in Ghana appear least satisfied with the amount of leisure time available. The baseline survey for Ghana did not include a question to measure

how many hours are available for leisure activities each day, limiting CARE’s understanding of this seemingly large difference in levels of satisfaction.

Table 41: Women’s leisure time and satisfaction

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India	
	Mean						
Mean # hours available for leisure activity each day	2.6	2.8	-	2.3	-	1.9	
	%						
% women satisfied with the amount of time available for leisure activities	84.5	68.5	50.9	79.0	-	90.3	
	N	762	847	173	770	-	923

3.10 Socio-Cultural Norms and Gender Equity

Pathways Outcome 5 focuses on facilitating the positive and enabling attitudes, behaviors, social norms, policies and institutional changes necessary to promote women’s rights. In some Pathways countries the VSLA is the key entry point for women to discuss gender equality issues, challenging traditional gender and culturally-related barriers in social and economic activities. To get a snapshot of men’s and women’s current attitudes toward gender-equity, primary male and female decision-makers were asked questions about their attitudes, perceptions, and practices related to gender roles, household violence, women’s mobility, and self-confidence. This section summarizes the quantitative findings per these gender-specific issues.

3.10.1 Attitudes on Gender Roles in Family Life

Respondents were asked whether they agreed or disagreed with four statements that reflect men’s and women’s roles in family life. Respondents’ agreement or disagreement with each of the four statements listed below is tallied; respondents receive a score of one for disagreeing with statements one and two, and for agreeing with statements three and four, for a maximum score of four. Those who achieve a score of four are considered to have attitudes that support gender-equitable roles in family life.

1. Most household decisions should be made by the man
2. There is men’s work and women’s work and the one shouldn’t ever do the work of the other
3. If a woman works outside the home, her husband should help with childcare and household chores.
4. A husband should spend his free time with his wife and children.

Table 42 shows that patriarchal attitudes about family life are somewhat ingrained in women’s opinions of their own role in family life. Findings for men’s attitudes are presented in the individual country reports. Less than half of all surveyed women express attitudes supporting gender-equitable roles as defined by this indicator. The greatest percentages of women expressing “gender equitable attitudes” occurs in Malawi and Tanzania with 46% scoring four. Approximately one-third of women in Tanzania

and India achieved a score of four, and only one-fourth of Bangladeshi women did so. Only 3% of women in Mali voice attitudes supporting gender-equitable roles with the household.

Across all countries the difference in overall attitudes regarding gender equity stems primarily from women’s perceptions regarding who should make household decisions and division of household labor, with women often agreeing with statements one and two above. In contrast, the majority of surveyed women in all Pathways countries stated they agreed with statements related to men helping with child care and household chores when a woman works outside the home and spending time with the family (Statements three and four above). Although these data provide insight on *attitudes* related to gender equitable roles, they may or may not reflect actual practice.

Table 42: Socio-cultural norms and attitudes

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women expressing attitudes that support gender equitable roles in family life (scoring 4 of 4).	46.2	30.4	46.1	2.5	26.4	36.2
N	762	847	173	772	444	923

3.10.2 Attitudes on Household Gender-Based Violence

Respondents were asked to agree or disagree with the statements: 1) *“There are times women deserve to be hit,”* and 2) *“a woman should tolerate violence in order to maintain stability in the family.”* For this study, disagreeing with both qualifies as a rejection of household gender-based violence and serves as the underlying measurement for the outcome indicator summarized in Table 43.

A majority (79%) of women in Malawi reject both statements. Much lower percentages of women expressed attitudes that reject household violence in all other Pathways countries, ranging from 41% in Ghana to 13% in Bangladesh. These results are mostly explained by the large percentages of women in these countries who believe a woman must tolerate violence for the sake of family stability.

Table 43: Women’s attitudes on household gender-based violence

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women expressing attitudes that reject gender-based violence. (Scoring 2 of 2)	79.4	30.9	40.5	15.0	12.6	26.6
N	762	847	173	772	444	924

Although the results for Malawi offer insight on attitudes toward domestic abuse women are willing to state in an interview, they may or may not reflect actual practice. Qualitative findings from FGDs and key informants suggest a contrary situation exists and indicate that gender-based violence (GBV) is quite prevalent in all the communities visited, mostly occurring in the form of physical domestic violence.

Qualitative findings in all other countries validated the quantitative results, relating regular incidences of violence against women. Alcohol use by men is frequently cited by women in India, Malawi, and Tanzania to be associated with GBV. Women report beatings for making poor decisions, not respecting men, or falling short of their household duties. In Bangladesh GBV can increase when men are facing financial pressure related to having no work. In Mali, wife beating can be ‘triggered’ by a variety of situations but is most common when a wife is perceived as not respecting her husband. Female genital mutilation was also commonly reported in Mali FGDs.

CARE’s intention to use the VSLAs and collectives as a key entry point for women to discuss gender equality issues seems well targeted. FGD participants from several countries state that women do not have organizations or networks for reciprocal assistance for victims of GBV and there is no encouragement to share or support each other.

3.10.3 Women’s Mobility

Female VSLA members were asked if they had to ask permission from their spouse or another family member to go to ten different locations. Four responses were possible: ‘Yes, always’ ‘Yes, most often’ ‘Yes, but only now and then’, and ‘No, never’. Table 44 presents the data as a mean score of women’s individual answers, which are calculated by taking the mean across women’s individual scores. They are calculated using the following categories and score values from 4 (most mobile) to 0 (least mobile): “Never” (4), “Yes, but only now and then” (3), and “most often” (1) and ‘always’ (0). The maximum score is 32. Women with a score of 16 or greater are considered to be mobile.

Not quite half the female respondents in Malawi and Tanzania are considered to be mobile (49.6 and 42% respectively), while less than one in six meet this threshold in all other Pathways countries (Table 44). Among the countries where very few women report mobility the percentages range from a high of 16% in India to a low of 2% in Bangladesh.

Across all Pathways countries, women’s mobility is significantly greater for women who reside in a female-headed household than for those who reside in a male-headed household. For example, in Tanzania almost 78% of women residing in female-headed households have achieved mobility, as measured by CARE, compared to only 25% of women living in male-headed households. Country reports provide details on this disparity.

Table 44: Women’s mobility

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women achieving a score of 16 or greater (i.e., mobility)	49.6*	41.9*	11.1*	4.6*	1.9 ^a	15.8*
	Mean					
Women’s mean mobility score ^a	15.1	12.3	5.9	2.3	4.9	8.9
N	762	819	172	768	413	924

^a Sample of female-headed households too small to conduct statistical tests between MHH and FHH.

^b Highest possible score is 32

* Significantly different between women living in male- and female-headed households within individual countries at p < .001. See Annex 3 and country reports for details.

Table 45 presents the ten destinations asked about in the baseline surveys, marking those for which 70% or greater of women surveyed must ask permission from a male. Overall, women’s perspectives on what circumstances require permission to leave the household compound vary across the countries, and may well be related to the predominant religions of CARE operational areas. For example, the majority of women surveyed in Ghana and Mali must always or most often ask permission to go every destination asked about in the baselines.

“The community believes women should seek permission from their partners before leaving the house because they are under men ...if a woman leaves the house without asking for permission, then she will be beaten.”

FGD participant - Tanzania

Instructional for CARE, as it designs initiatives to facilitate improved market access and income generation are the mobility limitations related to income earning opportunities and market travel faced by women in Ghana, Mali, Bangladesh, and India.

Common to women all Pathways countries, is the need to ask a spouse’s permission prior to travel outside of their village. This was stated as a circumstance in which a woman must *always* consult her husband by the majority (>50%) of women surveyed in all six countries. For women in all countries except Malawi, 70% or more of women surveyed must always or most often ask permission to leave their village.

Table 45: Mobility circumstances which always or most often require a husband’s permission

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
>= 70% of women state they must always or most often seek permission to visit destination						
<i>Church, Temple or Mosque</i>			X	X		X
<i>Health care provider</i>			X	X		
<i>Public village meeting</i>			X	X		
<i>A meeting of any association of which she is a member</i>			X	X	X	
<i>Female friend’s home</i>			X	X	X	X
<i>Market</i>			X	X	X	X
<i>Local social event</i>			X	X	X	X
<i>Leave the house to earn money</i>			X	X	X	X
<i>Family member’s home</i>			X	X		X
<i>Outside their village</i>		X	X	X	X	X

3.10.4 Barriers to Participating

To better understand gender-based barriers to group participation, the baseline surveys asked women who reported they were not a member of an existing group in their community about the reasons for not participating. One potential response is that they could not join the group due to their sex. Table 46 shows that this is not a common constraint for females in the project areas of most countries, however almost 40% of surveyed women in Mali report they were not able to join a group for this reason.

Table 46: Gender-based barrier to group participation

	Malawi	Tanzania	Ghana	Mali	Bangladesh	India
	%					
Women reporting their sex as a barrier to participation in local groups	3.4	0.9	11.8	39.7	5.4	12.4
N=women not a member of an existing group	586	684	76	768	386	904

4 CONCLUSIONS AND KEY CONSIDERATIONS

Findings from the baseline studies indicate that Pathways objectives are relevant to the targeted areas and populations. There appears to be ample opportunity to improve productivity both through increased yields and increased income from related activities, such as post-harvest processing and marketing. However, such increases will not accrue to women until and unless they have greater mobility and control over the income generated from such activities, particularly from crop sales.

Men’s dominance in decision-making related to agricultural activities, particularly in terms of using money from sales for their own purposes, undermines women’s ability to contribute to increased household food security and resilience. Furthermore, as long as women continue to see themselves as subservient, there is no reason for men to change their attitudes. While necessary steps in the right direction, improved knowledge and skills, and increased access to loans and agricultural inputs will not be sufficient for women to sustainably improve household food security and resilience. To realize the Pathways Theory of Change, all project activities must place increased and intense focus on raising gender awareness among men, women, and communities.

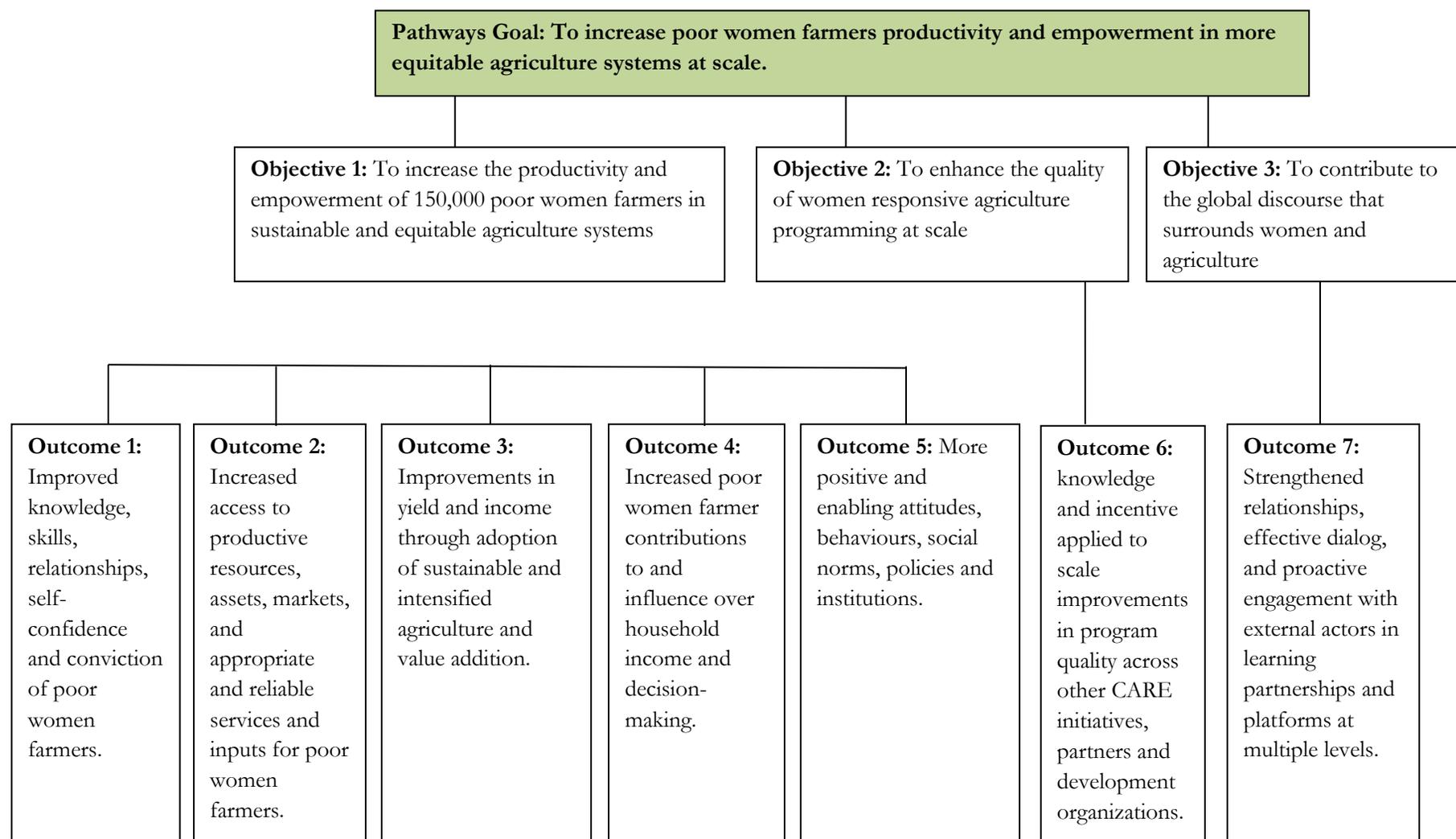
Differences between females residing in male- and female-headed households should be noted and activities aligned to each. For example, women from female-headed households may need more support to improve annual net income from agriculture production than their counterparts; however females living in male-headed households will undoubtedly need more support to achieve performance indicators related to productive decision-making and control of assets, expenditures, and income.

Qualitative and quantitative data generally validated one another with exception of one area—decision-making and control. Differences here were vast, suggesting the need for a better means of measuring decision-making and control for women. Although indicators in this area were modeled after a new empowerment tool, results from the six Pathways countries in this study as well as the three WE-RISE baselines imply that the broad definition of “Sole or joint” does not allow CARE to identify barriers to decision-making or control with precision. As an alternative, CARE could consider women’s response to a decision-making continuum with categories such as: no decision-making; suggestion; consultation; joint (both parties have equal say); and sole decision-making. Additionally, continued and frequent exploration of the topic in focus groups is recommended.

Specific considerations include the following:

- In many circumstances, Pathways VSLAs and SHGs are the only venue where women can participate in group learning or mobilize support for vulnerable community members, and thus the groups provide opportunity for CARE to reach out to women on many topics. Strengthening existing VSLAs, beyond traditional savings and loans, may assist Pathways to achieve program goals. In countries with primarily mixed-sex VSLAs, CARE could routinely host same sex focus groups to allow women and men to speak candidly about areas that hinder their progress toward attaining household food security and resilience.
- Expanding the focus of VSLAs to a fuller body program may allow country projects to address the current exclusion of poor women. While the women may not yet have the resources to save, they could greatly benefit from activities promoting gender awareness, confidence and improved knowledge and skills related to agricultural productivity.
- Women and men in Pathways collectives request more timely extension information relative to agricultural production – particularly prior to the season beginning and related to pricing, inputs and disease prevention.
- Women specifically request training on new technologies in agricultural product processing. Commensurate with this is an identified need for record keeping for women in their IGAs
- Few women sell their agricultural products or obtain inputs through a producer group. This is an important area of focus for the program to enhance livelihoods, as buying and selling in bulk via groups could potentially offer more advantageous terms. While still a small percentage, India has the largest proportion of women reporting access to inputs through a producer group. Given the paucity of agricultural collectives in many Pathways operational areas, particularly those focused on female membership, using Pathways VSLAs or SHGs as a starting point for agriculture productivity and empowerment is a clear comparative advantage of CARE interventions. CARE should explore the initiatives of Pathways India and determine how they can be scaled-up and out.
- With exception of surveyed women in Mali, very few women report they are able to access formal or informal market information systems. Pathways should explore the initiatives of Pathways Mali related to market information and determine how they can be scaled-up and out.
- In addition to a lower level of remuneration, key contributors to income disparity between female-headed households and male-headed households are exploitation—women are being taken advantage of in terms of business, pricing, vendors, harassment. Project initiatives to realize Outcome 5—*more positive and enabling attitudes, behaviors, social norms, policies and institutions*—are unclear. CARE would do well to re-evaluate and define exactly how Pathways intends to influence these areas.
- Women are accessing loans from the VSLAs/ SHGs and are generally grateful to have this opportunity; however qualitative findings suggest that in many cases once the loan is obtained, decisions about how it is used are determined by a male in the household. Initiatives to mitigate this trend must be defined by CARE country offices. A good start will be raising household and community gender awareness, as previously mentioned.

Annex 1: Pathways Results Framework



Annex 2: Pathways Indicator Framework

Results	Performance Indicators	Frequency	Source	Responsible
Pathways Goal: To increase poor women farmers' productivity and empowerment in more equitable agriculture systems at scale.				
Long-term impact: More secure and resilient livelihoods for households of particular segments of poor women farmers impacted through the goal.	<p>Food & Nutrition Security</p> <ul style="list-style-type: none"> • IM 1.1: Mean household dietary diversity scores • IM 1.2: Mean women's intra-household food access <p>Livelihoods Resilience</p> <ul style="list-style-type: none"> • IM 1.3: Coping strategies index • IM 1.4: % households adopting negative coping strategies in past 3 months • IM 1.5: % households using adaptation strategies to reduce the impact of future shocks • IM 1.6: Mean asset index <p>Economic Poverty Reduction</p> <ul style="list-style-type: none"> • IM 1.7: Per capita monthly household income (farm and non-farm) • IM 1.8: Per capita monthly household expenditures • IM 1.9: % households with savings • IM 1.10: % women with savings <p>Women's Empowerment</p> <ul style="list-style-type: none"> • IM 1.11: Women's empowerment index 	Baseline/ end-line; annual monitoring	Quantitative / qualitative surveys; producer group records; annual HH tracer study	External consultant
Objective 1: To increase the productivity and empowerment of 150,000 poor women farmers in sustainable and equitable agriculture systems.				
Outcome 1: Improved knowledge, skills, relationships, self-confidence and conviction of poor women farmers.	<ul style="list-style-type: none"> • OC 1.1: % women participating in formal and informal groups • OC 1.2: % women holding leadership positions in formal and informal groups • OC 1.3: % respondents confident speaking about gender and other community issues at the local level 	Baseline/ end-line; annual monitoring	Quantitative/ qualitative surveys; producer group records; post- harvest surveys of tracer HHs	External consultant; M&E unit

<p>Outcome 2: Increased access to productive resources, assets, markets, and appropriate and reliable services and inputs for poor women farmers.</p>	<ul style="list-style-type: none"> • OC 2.1: % women with access to and control over loans for IGA • OC 2.2: % women with access to agricultural extension services in last 12 months • OC 2.3: % women reporting satisfaction with agricultural extension services • OC 2.4: % women accessing agricultural financial services (loans, savings, crop insurance) in last 12 months • OC 2.5: % women accessing agricultural inputs (seeds, fertilizers, etc.) over the last 12 months • OC 2.6: % women accessing output markets to sell agricultural production over the last 12 months 	<p>Baseline/ end-line; annual monitoring</p>	<p>Quantitative/ qualitative surveys; producer group records; annual HH tracer study</p>	<p>External consultant; M&E Unit</p>
<p>Outcome 3: Improvements in yield and income through adoption of sustainable and intensified agriculture and value addition.</p>	<ul style="list-style-type: none"> • OC 3.1: Net income of women from agricultural production and/or related processing activities • OC 3.2: Agricultural yield in crops supported by Pathways • OC 3.3: Number of different crops grown • OC 3.4: % women adopting (project defined) minimum number of improved agricultural practices (list of improved practices TBD by country) • OC 3.5: % women farmers adopting (project defined) minimum number of post-harvest processing (list of improved practices TBD by country) • OC 3.6: % women adopting (project defined) improved storage practices (list of improved practices TBD by country) • OC 3.7: % women using [project defined] minimum number of improved livestock practices (list of improved practices TBD by country) 	<p>Baseline/ end-line; annual monitoring</p>	<p>Quantitative/ qualitative surveys; annual reports</p>	<p>External consultant; M&E Unit</p>
<p>Outcome 4: Increased poor women farmer contributions to and influence over household income and decision making.</p>	<ul style="list-style-type: none"> • OC 4.1: % women with sole or joint control over household income and expenditures • OC 4.2: % women with sole or joint control over agricultural income and expenditures • OC 4.3: % women with sole or joint decision-making and control over household assets 	<p>Baseline/ end-line; annual monitoring</p>	<p>Quantitative/ qualitative surveys; annual reports</p>	<p>External consultant; M&E Unit</p>

	<ul style="list-style-type: none"> • OC 4.4: % women with sole or joint decision-making and control over agricultural assets • OC 4.5: % women making sole or joint decisions about health care • OC 4.6: % women reporting sole or joint decision-making over reproductive health decisions (family planning; spacing of children) 			
Outcome 5: More positive and enabling attitudes, behaviors, social norms, policies and institutions.	<ul style="list-style-type: none"> • OC 5.1: % of the project's groups that have developed a gender policy • OC 5.2: % of respondents expressing attitudes that support gender-equitable roles in family life • OC 5.3: % of respondents expressing attitudes that reject household gender-based violence • OC 5.4: Women's mobility • OC 5.5: % of women reporting their sex as a barrier to participation in local groups / forums 	Baseline/ end-line; annual monitoring	Quantitative/ qualitative surveys; annual reports	External consultant; M&E Unit

Annex 3: Pathways Baseline results

Pathways Goal: To increase poor women farmers' productivity and empowerment in more equitable agriculture systems at scale.									
Performance Indicators	Malawi			Tanzania			Ghana		
	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample
Mean household dietary diversity scores	5.5*	5.0*	5.4	7.5*	6.7*	7.3	4.6	4.0	4.5*
Mean women's intra-household food access	5.4	5.0	5.3	7.5*	6.7*	7.2	4.5	3.9	4.4*
Coping strategies index	20.0	18.9	19.7	1.9*	3.8*	2.5	19.2	23.0	19.9
% households adopting negative coping strategies in past 3 months	9.8	9.5	9.7	5.9	9.0	6.9	69.4	89.7	72.8*
% households using adaptation strategies to reduce the impact of future shocks	82.7	83.7	83.9	42.7	38.5	41.2	94.6	95.5	94.7
Mean asset index	205.4*	161.6*	194.5	523.8*	302.3*	451.8	384.8	191.5	352.4*
Per capita monthly household income in USD (farm and non-farm combined)	22.28	18.13	21.25	20.69	16.86	19.46	--	--	--
Per capita monthly household expenditures	22.16	23.68	28.29	27.08	32.85	28.95	25.33	15.57	23.69*
% households with savings	97.2	97.9	97.4	30.9*	23.4	28.4	83.3	79.3	82.7
% women with savings	--	--	97.1	--	--	26.9	--	--	82.7
Women's empowerment index	7.7*	53.4*	19.0	3.6*	32.8*	13.1	1.4	17.2	4.1*

Pathways Objective 1: To increase the productivity and empowerment of 150,000 poor women farmers in sustainable and equitable agriculture systems.									
Pathways Outcome 1: Improved knowledge, skills, relationships, self-confidence and conviction of poor women farmers.									
Performance Indicators	Malawi			Tanzania			Ghana		
	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample
% women participating in formal and informal groups	98.8	98.4	98.7	95.8	94.3	95.3	96.5	100.0	97.1
% women holding leadership positions in formal and informal groups	51.6	58.1	53.2	42.1	44.0	42.6	29.5	31.0	29.8
	Male respondents		Female respondents	Male respondents		Female respondents	Male respondents		Female respondents
% respondents confident speaking about gender and other community issues	73.3		53.7	77.3		70.1	83.9		65.9
Pathways Outcome 2: Increased access to productive resources, assets, markets, and appropriate and reliable services and inputs for poor women farmers.									
Performance Indicators	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample
% women with access to and control over loans for IGA	23.4*	57.8*	31.8	13.7	14.7	14.0	94.6	100.0	95.5
	Female respondents								
	Malawi			Tanzania			Ghana		
% women with access to agricultural extension services over last 12 months	26.4			28.0			37.8		
% women reporting satisfaction with agricultural extension services	96.5			73.1			98.4		
% women accessing agricultural financial services (loans, savings, crop insurance) in last 12 months	96.9			97.0			95.3		
% women with accessing agricultural inputs (seeds, fertilizers, etc.) over the last 12 months	77.1			33.3			59.2		
% women accessing output markets to sell agricultural production over the last 12 months	39.9			23.8			56.2		

Pathways Outcome 3: Improvements in yield and income through adoption of sustainable and intensified agriculture and value addition.									
	Malawi			Tanzania			Ghana		
	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample
Net income of women from agricultural production and/or related processing activities	194.56*	74.36*	165.78	262.21	149.37	228.01	--	--	--
	Female respondents								
	Malawi			Tanzania			Ghana		
Mean number of different crops grown	2.7			3.5			3.0		
% women adopting minimum number of improved agricultural practices over last 12 months	45.2			22.0			53.8		
% women adopting minimum number of post-harvest practices over last 12 months	62.7			28.2			55.0		
% women adopting minimum number of improved storage practices over last 12 months	26.0			29.6			94.7		
% women adopting minimum number of improved livestock practices over last 12 months	43.7			32.5			40.2		
Pathways Outcome 4: Increased poor women farmer contributions to and influence over household income and decision-making.									
	Malawi			Tanzania			Ghana		
Performance Indicators	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample
% women with sole or joint control over household income and expenditures	58.1*	82.5*	64.2	33.8*	90.8*	52.2	54.2	82.8	59.1*
% women with sole or joint control over agricultural income and expenditures	47.8*	78.8*	55.5	49.6*	88.4*	62.1	41.4	75.0	47.0*
% women with sole or joint decision-making and control over household assets	50.4*	80.0*	57.6	52.4*	85.7*	61.1	37.5	61.1	40.3
% women with sole or joint decision-making and control over agricultural assets	33.0*	82.3*	45.2	76.5	94.9	82.4	27.3	82.8	36.6

% women making sole or joint decisions about health care	82.2*	98.4*	86.2	81.5*	96.6*	85.6	32.2	37.9	33.1
% women reporting sole or joint decision-making over reproductive health decisions	94.0	98.7	94.6	95.0	100.0	92.3	69.2	25.0	66.7
Pathways Outcome 5: More positive and enabling attitudes, behaviors, social norms, policies and institutions.									
	Malawi			Tanzania			Ghana		
	Male respondents		Female respondents	Male respondents		Female respondents	Male respondents		Female respondents
% of respondents expressing attitudes that support gender-equitable roles in family life	48.4		46.2	22.1		30.4	33.0		46.5
% of respondents expressing attitudes that reject household gender-based violence	83.4		79.4	20.6		30.9	46.4		40.5
	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample
Women's mobility	43.8*	67.2*	49.6	24.6*	77.8*	41.9	6.3	35.7	11.1*
% women reporting their sex as a barrier to participating in local groups	3.8	2.1	3.4	0.9	0.9	0.9	11.9	11.1	11.8

* Significant difference between male and female heads of households or respondents at $p < 0.10$

Pathways Goal: To increase poor women farmers' productivity and empowerment in more equitable agriculture systems at scale.									
Performance Indicators	Mali			Bangladesh			India		
	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample
Mean household dietary diversity scores	6.1	5.8	6.0	4.41*	3.96	4.36	4.18	3.87	4.11
Mean women's intra-household food access	5.8	5.5	5.8	4.40*	3.96	4.35	4.03*	3.63	3.94
Coping strategies index	48.2	62.1	49.7	23.6*	29.5	24.3	34.0	35.6	34.4
% households adopting negative coping strategies in past 3 months	28.8	32.1	29.1	89.5	88.2	89.3	26.7	21.1	25.4
% households using adaptation strategies to reduce the impact of future shocks	61.6	57.9	61.2	81.3	83.0	81.5	57.6	61.8	58.5
Mean asset index	447	228	424*	228.0*	39.1	206.0	173.7*	144.4	167.1
Per capita monthly household income in USD (farm and non-farm combined)	12.33	12.65	12.36	11.28	14.30	11.60	16.16	20.35	17.09
Per capita monthly household expenditures	16.27	17.66	16.43	11.94	13.11	12.08	16.95	19.08	17.42
% households with savings	32.4	25.9	31.7	73.8	60.4	72.2	78.2	78.9	78.4
% women with savings	--	--	30.2	--	--	--	--	--	78.1
Women's empowerment index	0.7*	14.8	2.2	0.0	1.9	0.0	0.01*	16.75	4.44

Pathways Objective 1: To increase the productivity and empowerment of 150,000 poor women farmers in sustainable and equitable agriculture systems.									
Pathways Outcome 1: Improved knowledge, skills, relationships, self-confidence and conviction of poor women farmers.									
Performance Indicators	Mali			Bangladesh			India		
	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample
% women participating in formal and informal groups	82.7	84.8	83.0	69.1	56.6	67.6	89.9	91.2	90.2
% women holding leadership positions in formal and informal groups	30.9*	44.8	32.3	--	--	--	23.0	11.8	20.4
	Male respondents		Female respondents		Male respondents		Female respondents		
% respondents confident speaking about gender and other community issues	61.2		33.4		34.2		19.6		84.3
Pathways Outcome 2: Increased access to productive resources, assets, markets, and appropriate and reliable services and inputs for poor women farmers.									
Performance Indicators	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample
% women with access to and control over loans for IGA	57.1	43.6	55.9	13.7	80.6	21.3	14.8*	29.1	17.3
	Female respondents								
	Mali			Bangladesh			India		
% women with access to agricultural extension services over last 12 months	21.2			--			23.3		
% women reporting satisfaction with agricultural extension services	79.9			--			80.9		
% women accessing agricultural financial services (loans, savings, crop insurance) in last 12 months	89.7			--			90.9		
% women with accessing agricultural inputs (seeds, fertilizers, etc.) over the last 12 months	53.4			--			38.3		
% women accessing output markets to sell agricultural production over the last 12 months	22.8			--			14.3		

Pathways Outcome 3: Improvements in yield and income through adoption of sustainable and intensified agriculture and value addition.									
	Malawi			Tanzania			Ghana		
	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample
Net income of women from agricultural production and/or related processing activities	494.42*	191.27	465.27	--	--	--	60.00*	40.54	56.26
	Female respondents								
	Mali			Bangladesh			India		
Mean number of different crops grown	3.7			--			2.1		
% women adopting minimum number of improved agricultural practices over last 12 months	18.0			--			32.7		
% women adopting minimum number of post-harvest practices over last 12 months	42.8			--			78.0		
% women adopting minimum number of improved storage practices over last 12 months	38.2			--			41.9		
% women adopting minimum number of improved livestock practices over last 12 months	90.9			--			28.3		
Pathways Outcome 4: Increased poor women farmer contributions to and influence over household income and decision-making.									
Performance Indicators	Mali			Bangladesh			India		
	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample
% women with sole or joint control over household income and expenditures	28.9*	73.8	33.6	63.0	66.7	63.4	47.9*	75.6	54.2
% women with sole or joint control over agricultural income and expenditures	8.6*	55.1	13.4	58.6	--	59.9	43.6*	70.5	49.3
% women with sole or joint decision-making and control over household assets	14.7*	55.1	18.9	63.6	75.6	64.9	38.3*	58.3	42.8
% women with sole or joint decision-making and control over agricultural assets	18.9*	74.7	24.5	84.9	--	86.6	49.2*	74.9	54.6

% women making sole or joint decisions about health care	32.7*	78.5	37.5	79.7	67.6	78.5	93.7	92.3	93.5
% women reporting sole or joint decision-making over reproductive health decisions	74.7	73.1	74.6	89.1	--	88.4	97.1	98.0	97.2
Pathways Outcome 5: More positive and enabling attitudes, behaviors, social norms, policies and institutions.									
	Mali			Bangladesh			India		
	Male respondents		Female respondents	Male respondents		Female respondents	Male respondents		Female respondents
% of respondents expressing attitudes that support gender-equitable roles in family life	7.7		2.5	26.7		26.4	28.0		36.2
% of respondents expressing attitudes that reject household gender-based violence	8.9		15.0	9.4		12.6	22.3		26.6
	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample	Male-headed HH	Female-headed HH	Total sample
Women's mobility	2.8*	20.0	4.6	0.8	--	1.9	5.5*	51.2	15.8
% women reporting their sex as a barrier to participating in local groups	41.0*	28.8	39.7	6.1	0.0	5.4	13.1	9.8	12.4

* Significant difference between male and female heads of households or respondents at $p < 0.10$

Annex 4 Methodology

Sampling

Sample size: The baseline survey design was discussed at a workshop in Pondicherry, India, May 21-25, 2012 and subsequently reviewed by CARE AUS before implementation of the survey. Each country independently calculated their sample size based on household expenditures, with a targeted improvement of 30% (X_2) over the life of the activity (LOA). A design effect of 2, $Z_\alpha = 1.282$ (Z-value corresponding to a 90% significance level), and $Z_\beta = .84$ (Z-value corresponding to 80% power) and X_1 at 1, were used for all country-level calculations. Non-response and attrition factors varied based on input from CARE M&E staff and Country Office personnel. The minimum sample size required was computed using the formula for means provided in the FANTA Sampling Guide:

$$n = N * D [(Z_\alpha + Z_\beta)^2 * (sd_1^2 + sd_2^2) / (X_2 - X_1)^2] * A$$

where:

n = required minimum sample size per survey round or comparison group

N = non-response factor

D = design effect

A = attrition factor (baseline to endline)

X_1 = the estimated mean of the indicator at the time of the first survey

X_2 = the *expected* mean of the indicator either at some future date or for the program area such that the quantity $(X_2 - X_1)$ is the size of the magnitude of change or comparison-group differences it is desired to be able to detect

Z_α = the Z-score corresponding to the degree of confidence with which it is desired to be able to conclude that an observed change of size $(X_2 - X_1)$ would not have occurred by chance (α - the level of statistical significance)

Z_β = the z-score corresponding to the degree of confidence with which it is desired to be certain of detecting a change of size $(X_2 - X_1)$ if one actually occurred (β - statistical power)

sd_1 = the expected standard deviation of the indicator the time of the first survey

sd_2 = the expected standard deviation of the indicator at some future date

CARE elected to make an adjustment for small population size in Tanzania, Bangladesh and Ghana using the following formula:

$$n = (n_{\text{initial}} * P) / (n_{\text{initial}} + P - 1)$$

where:

n = required minimum sample size per survey round or comparison group

n_{initial} = sample size before correction

P = Population

Using these values, *n* (the minimum sample size) the minimum sample size (including non-response and attrition factors) was computed as 480 for Bangladesh, 176 for Ghana, 947 for India, 787 for Malawi, 841 for Mali, and 929 for Tanzania.

Two-stage Cluster Sampling

In all countries except Ghana, a two-stage cluster sampling process was used. Villages were first randomly selected in the Pathways operational area using probability proportionate to size (PPS) based on the number of female members in village collectives with which Pathways was operating (e.g., Village Savings and Loan (VSL) groups, farming/livestock groups).

In the second-stage of sampling, female collective members were randomly selected from each sampled village.

Survey Training and Logistics

TANGO International and CARE jointly reviewed and agreed to hire local firms to oversee and conduct the baseline. The field teams (quantitative and qualitative teams and supervisors) were independently contracted by the local firms and CARE.

With exception of Ghana and Bangladesh, TANGO International trained all baseline survey team members – household interviewers, qualitative facilitators, team supervisors, and program M&E staff responsible for coordinating the data collection and aggregation. Quantitative training covered the following topics:

1. Overview of CARE’s Pathways program and Country Project
2. Review of the objectives of the Baseline survey
3. Detailed discussion of the survey tool (question-by question)
4. Training on administering the questionnaire with PDAs/Android tablets
5. Pilot testing of the survey tool
6. Modifications to the survey tool in response to the pilot test

Enumerators and supervisors received basic training on the use of PDAs/Android tablets, including how to enter data, recharge batteries, and enter and use The Survey Software. Supervisors also received training on how to transfer data files from PDAs/ Android tablets onto laptop computers. Training modules on PDAs/ Android tablets were based on materials previously developed by TANGO.

The local consulting firms were responsible for coordinating the regular collection of the electronic data sets from the field-based survey teams. TANGO provided quality oversight for the first several days of the fieldwork in each country. Finally, TANGO prepared the report of findings from each country survey.

Site Selection and Tools for Qualitative Study

The **qualitative assessment** explores contextual factors, including agency, structure and relations and their impact on poor smallholder women farmers. The qualitative data provides insights to better understand and interpret the quantitative indicators and help identify the key factors critical to the success of the program. The qualitative study utilized a combination of methodologies including focus group discussions and a number of other tools to secure data. Participatory methodology is used

throughout the assessment to secure information from program participants, including their views of what is most valuable and relevant.

The qualitative sample of villages/communities was a subset of the quantitative sample, maximizing diversity along relevant criteria listed below, and varying per country:

- population size
- distance from market and trading centres
- road accessibility
- Hazards
- Coverage of development programmes
- Proximity to government offices
- Proximity to extension service providers
- Presence of banks, microfinance institutions
- Type of leadership in traditional authority / level of involvement with population
- Value chain infrastructure
- Migration
- Diversity of livelihood and agro-ecological zones

Qualitative data collection was performed through FGDs with two separate sets of guiding questions focused on gender and on livelihoods. FGDs were also conducted using participatory tools such as a wealth ranking, daily activities and seasonal calendar, with substantial focus on gender issues (roles, workloads, domains, opportunities, family structures, etc.).

Data Analyses

All quantitative data were collated and configured by TANGO International staff using SPSS v15.0 software. Analysis was consistent with the CARE Pathways Evaluation Plan. This included organization of the data to align with the Pathways indicator framework, calculation of secondary variables (asset indices, coping strategy index) from primary variables where appropriate, and formulation of tables and charts. Statistical differences between male- and female-headed households were determined with t-tests or non-parametric tests (e.g., Mann-Whitney U). Probability levels are reported for statistically significant differences only.

The qualitative information was first reviewed by the qualitative team each day immediately following a field visit to both cross check information and its interpretation and to sharpen inquiry tools as necessary. The following day notes were transcribed into informational matrices on computers for each focus group. Overall summaries for each village were developed for key informational categories. These summaries and the data were reviewed and the information integrated with the quantitative analysis.

Annex 5: Computation of secondary variables related to household economic status and food security

Household Dietary Diversity Score (HDDS)

This indicator is computed by summing the number of different food categories reported eaten by the household in day prior to the interview. This indicator was measured as recommended by FANTA, using the following 12 food groups: cereals, tubers, legumes, dairy, meat, fish, oils, sugar, fruits, eggs, vegetables, and others. The HDDS provides a measure of a particular household's food access. A higher HDDS represents a more diverse diet, which is empirically highly correlated with a household's income level and access to food.¹⁶

Asset Indices

The weighted asset index is computed by multiplying the number of each type of household asset by the index value for that particular asset type. Index values of household assets used in the construction of the asset index are presented in the table below. A higher value of the asset index indicates that households have been able to accumulate assets over time. Households are able to accumulate assets if income is greater than the necessary expenditures to meet household subsistence requirements. Assets also provide households with a cushion to adjust to shortfalls in incomes, or sudden increases in necessary expenditures. Thus, households with a higher asset index are less vulnerable than households with lower asset index values.

As shown in the table below, for some assets, context-specific weighted values were used across countries. For example, in Mali land is plentiful and is not the constraining factor of production, also warranting a lower weight, and items such as beds and/or bookshelves were included the category of "large consumer durables" justifying a lower weight.

Asset type	Weighted values		
	Malawi, Ghana, India	Tanzania	Mali
Agricultural land (pieces/plots)	50	50	25
Large livestock (oxen, cattle)	25	25	25
Small livestock (goats, pigs, sheep)	10	10	10
Chickens, ducks, turkeys, pigeons	3	3	3
Fish pond or fishing equipment	5	5	15
Non- mechanized farm equipment (sickle)	1	1	1
Farm equipment (mechanized)	10	10	10
Nonfarm business equipment	10	10	10
House (and other structures)	10	10	5
Large consumer durables (TV, sofa)	10	10	5
Small consumer durables (radio, cookware, iron)	1	1	1
Cell phone	5	5	5
Other land not used for agricultural purposes (pieces, residential or commercial land)	10	10	10
Means of transportation (bicycle, motorcycle, car)	10	15	10

¹⁶ Swindale, Anne, and Paula Bilinsky. *Household Dietary Diversity Score (HDDS) for Measurement of Household Food Access: Indicator Guide (v.2)*. Washington, D.C.: Food and Nutrition Technical Assistance Project, Academy for Educational Development, 2006.

Asset Weights for Bangladesh

Asset type	Index value
Electric fan	2
Radio	2
Chairs	2
Bed	2
Water pot	1
Cooking pot	1
Jewellery	5
Gas stove	5
Luggage	2
Hoe	1
Saw	1
Hammer	1
Axe	1
Small agricultural tools	1
Insecticide sprayer	1
Grinding mill	1
Plough	5
Mobile phone	5
Pickup/vehicle	100
Bicycles	10
Motor bike	50
Raw materials/stocks for business	10
Television	10
DVD/VCR	10
Refrigerator	10
House	10
Chicken	3
Goat	10
Sheep	15
Cow	20
Bull	20
Calf	20
Fishing equipment	25
Irrigation pump	10
Grain mill	10
Threshing machine	10
Agricultural land	50
Non-agricultural land	10

Annex 6: Women’s Empowerment Index (WEI)

The Women’s Empowerment Index (WEI) indicator used as part of CARE’s evaluation plan was adapted from, and closely follows, the Women’s Empowerment in Agriculture Index (WEAI) developed for Feed the Future. The WEAI includes two sub-indices: the 5 domains of empowerment index (5DE) and the Gender Parity Index (GPI).

The 5DE index is a direct measure of women’s empowerment split into two main components:

- Incidence of Women’s Empowerment: calculated as the percentage of women that are empowered
- Adequacy of the Disempowered: empowerment score of those women that are disempowered

Empowerment, as defined in the WEAI, is achievement in 80% or better of a weighted-index of the 10 indicators underlying the WEAI. The table below shows the weighting used for both the WEAI index and the adapted WEI index being used in this evaluation. The differences in weighting between the two are driven in large part by additional indicators that were included as part of CARE’s evaluation plan. Those new indicators include:

- Women’s self confidence
- Women’s mobility
- Women’s attitudes towards gender equitable roles in family life
- Women’s political participation

The addition of the new indicators adds several important dimensions directly related to women’s empowerment that were previously unaccounted for in the WEAI. Women’s engagement in the political process and a measure of self-confidence were added to the leadership domain. With the expansion of that domain from two to four indicators, the indicators were re-weighted to 5% from 10%, leaving the domain weighted at 20%.

The WEAI “Time” domain was relabeled “Autonomy” to more accurately reflect the indicators contributing to this domain in the WEI. The workload indicator, weighted at 10% in the WEAI, was replaced by two indicators measuring women’s mobility and their attitudes concerning gender equity in the home. Questions related to women’s workload were explored through qualitative interviews rather than the quantitative survey. Again, the addition of an extra indicator to the time domain resulted in the need to adjust indicator weights in order to leave all domains equally weighted at 20%.

WEAI vs. WEI: Indicator weights

Domain	Indicator	WEAI weight	WEI (CARE) weight
PRODUCTION (20%)	With decision-making input for HH productive decision domains	10%	10%
	With autonomy in HH production domains	10%	10%
RESOURCES (20%)	With sole or joint ownership of household assets ^a	6.67%	6.67%
	With sole or joint control over purchase or sale of household assets ^a	6.67%	6.67%
	With access to and decisions on credit	6.67%	6.67%
INCOME (20%)	With control over household income and expenditures in HH decision-making domains ^b	20%	20%
LEADERSHIP & COMMUNITY (20%)	Participating in formal and informal groups	10%	5%
	Confident speaking about gender and other community issues at the local level	10%	5%
	Who express self-confidence	N/A	5%
	Demonstrating political participation	N/A	5%
TIME/ AUTONOMY (20%)	Satisfied with the amount of time available for leisure activities	10%	6.67%
	Workload	10%	0%
	Achieving a mobility score of 16 or greater	N/A	6.67%
	Expressing attitudes that support gender equitable roles in family life *	N/A	6.67%
	Total	100%	100%

a excluding poultry, small consumer durables, and non-mechanized farm equipment as modeled in the WEAI.

b excluding minor household expenditures as modeled in the WEAI.

* This indicator not included for Bangladesh

Data were not obtained for two indicators on the Bangladesh survey pertaining to the domains of 'Leadership & Community' and 'Time/Autonomy'. As such, the weights for those domains had to be recalculated to reflect the loss of indicators. 'Leadership & Community' is traditionally comprised of four indicators, but the loss of one ("self-confidence") shifted the weights across the three indicators to be 6.67% each rather than 5%. Similarly for the 'Time/Autonomy' domain, one out of the three indicators ("satisfied with the amount of time available for leisure activities") was not included on the survey and the remaining two received weights of 10% each.

Analysis was initially conducted using the WEAI thresholds for indicator achievement, or those specified by CARE in the case of new indicators. These thresholds often resulted in baseline levels of achievement of 90% or greater, leaving little room for project improvement over time. To allow for country-specific improvement, baseline values were adjusted to country-specific thresholds. In cases where baseline indicator values were greater than 50% using the WEAI thresholds, the threshold for the indicator was adjusted until the value fell between 45-60%. In some cases, values remain above 60% when the threshold cannot be adjusted any further. The table below gives both the initial WEAI thresholds and the ending country-specific thresholds.

As an example where a threshold was adjusted for Ethiopia, the initial guidance for the indicator measuring the decision-making import for household productive decision domains was defined as achievement being realized for those women that had input in 2 or more (of 5 total) domains. When calculated, the percentage of women achieving this was 74.7%. Thus, the indicator was recalculated increasing the threshold for achievement from (2 of 5) to (3 of 5) production domains. Again, this was greater than 50% (72.6%) so the threshold was increased until the value fell between 45-60%. Finally, the threshold was adjusted to 5 of 5 production domains at which point the value fell to 64.8%. Generally, one would continue adjusting the threshold, however in this case the threshold could not be adjusted further. Those indicators with "N/A" signify cases where there was no threshold to adjust (i.e., participating in formal and informal groups – either they participated in at least one group or they didn't).

	Who express self-confidence *	2 of 7	5 of 7	5 of 7	5 of 7	5 of 7	--	5 of 7
AUTONOMY	Satisfied with the amount of time available for leisure activities	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Achieving a mobility score of 16 or greater ^c	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Expressing attitudes that support gender equitable roles in family life *	N/A	N/A	N/A	N/A	N/A	N/A	N/A

^a excluding poultry, non-mechanized farm equipment, and small consumer durables as modeled in the WEAI.

^b excluding minor household expenditures as modeled in the WEAI.

^c Highest possible score is 32.

* This indicator not included for Bangladesh.

To accommodate the addition of CARE's new indicators, adjustments were also made to the GPI portion of the WEI. The most conspicuous change comes in the removal of the aggregated GPI component itself. Although a single index number for gender parity was not calculated, examination of the differences in response between males and females for each indicator allows CARE to gain an understanding of parity as it relates to each WEI domain.

Removal of the aggregated GPI component was necessary because of differences between men and women for three indicators. Including these three indicators as part of the GPI would have violated the spirit of what the GPI represents. The three indicators are: women's mobility, women's ownership of assets, and women's input in the purchase in sale of assets.

The GPI includes two components:

- Percentage of women achieving gender parity: measured by the percentage of empowered women + percentage of women that have empowerment scores \geq to the empowerment score of the male respondent in their household
- (Avg.) Difference in empowerment between men and women: calculated for those women that don't achieve gender parity.

The WEAI is structured to ask both men and women about their own mobility. The question was adapted as a result of input from the Ethiopia baseline survey (the first baseline study to be conducted) wherein men felt it absurd to be asked about their own mobility. The WEI, therefore, asked for men's perceptions about their spouse's mobility. Thus, there was no measurement of men's empowerment as regards their own mobility, making it impossible to measure differences between male and female empowerment in mobility (i.e., parity), as men and women were asked different questions.

Both questions related to asset ownership were only asked of the female household member (in part to help shorten the lengthy survey), again making it impossible to calculate a relative difference in empowerment between males and females for ownership and control of assets.

One option would have been to exclude all three of these indicators from calculation of the gender parity index. However, that would have meant a lack of valuable information and muddied interpretation of the results. Thus, rather than calculating a single, somewhat meaningless number as indicative of differences in men's and women's overall empowerment, men's and women's empowerment in each domain is used to understand parity. Mobility was excluded due to the interpretation issues cited above. The two asset indicators were included because, as constructed, the questions asked of household females still captured the relative difference in asset ownership and decision-making between household males and females (even if only from the perspective of the household female). Finally, the percentage of women achieving women's parity and the average difference in empowerment between men and women respondents was excluded due to the issues cited above.

Annex 7: Detailed Findings for Women's Empowerment Index, by Country

Table 47: Women's Empowerment: Bangladesh

5 Domains of Empowerment Index		.29		
		Females living in:		
		Male-headed HH	Female-headed HH	Total Sample
% of women achieving empowerment (score of .80 or greater)		0.0	1.9	0.0
Mean empowerment score for all women		.28	.36	.29
N		401	53	454
Mean empowerment score for disempowered women		.28	.35	.29
N		401	52	453
Domain	Indicator	% of women achieving indicator at baseline		
PRODUCTION	With decision-making input for at least 20% of all HH productive decisions made	77.3		
	With autonomy in one or more HH production domains	13.8		
RESOURCES	With sole or joint ownership of 50% of household assets ^a	27.1		
	With sole or joint control over purchase or sale of 50% household assets ^a	64.9		
	With access to and decisions on credit ^c	21.3		
INCOME	With control over household income and expenditures in 60% of HH decision-making domains ^b	63.4		
LEADERSHIP & COMMUNITY	Participating in formal and informal groups	67.6		
	Confident speaking about other community issues at the local level (2 of 3 topics)	19.6		
	Demonstrating political participation	36.3		
	Who express self-confidence in 5 of 7 statements	Not in survey		
AUTONOMY	Satisfied with the amount of time available for leisure activities	Not in survey		
	Achieving a mobility score of 16 or greater	1.9		
	Expressing attitudes that support gender equitable roles in family life (Scoring 4 of 4)	26.4		
N		127-444		

GENDER PARITY: Bangladesh			
Domain	Indicator	% achieving indicator at baseline	
		Male respondents	Female respondents
PRODUCTION	With decision-making input for all HH productive decision domains	8.5	73.7***
	With autonomy in one or more HH production domains	41.7	10.2***
RESOURCES	With sole or joint ownership of 50% of household assets ^a	88.6***	21.0
	With sole or joint control over purchase or sale of 50% household assets ^a	96.2***	65.5
	With access to and decisions on credit ^c	25.2***	11.7
INCOME	With control over household income and expenditures in 60% of HH decision-making domains ^b	74.4	71.6
LEADERSHIP & COMMUNITY	Participating in formal and informal groups	50.2	72.6***
	Confident speaking about community issues at the local level (2 of 3 topics)	34.6	17.1***
	Demonstrating political participation	67.3***	31.5
	Who express self-confidence in 5 of 7 statements	Not in survey	Not in survey
AUTONOMY	Satisfied with the amount of time available for leisure activities	Not in survey	Not in survey
	Expressing attitudes that support gender equitable roles in family life (Scoring 4 of 4)	19.4	25.8**
N		222-321	222-321

^a excluding poultry, small consumer durables, and non-mechanized farm equipment as modeled in the WEAL.

^b excluding minor household expenditures as modeled in the WEAL.

^c intended use of loan for income-generating activities was not included in the survey

*** Means/percentages are significantly different at $p < .001$.

** Means/percentages are significantly different at $p < .01$.

Table 48: Women's Empowerment : Ghana

5 Domains of Empowerment Index		.46		
		Females living in:		
		Male-headed HH	Female-headed HH	Total Sample
% of women achieving empowerment (score of .80 or greater)		1.4	17.2	4.1*
Mean empowerment score for all women		.42	.64	.46*
N		144	29	173
Mean empowerment score for disempowered women		.41	.59	.44*
N		142	24	166
Domain	Indicator	% of women achieving indicator at baseline		
PRODUCTION	With decision-making input for at least 40% of HH productive decisions made	58.9		
	With autonomy in one or more HH production domains	31.6		
RESOURCES	With sole or joint ownership of 50% of household assets ^a	26.6		
	With sole or joint control over purchase or sale of 50% household assets ^a	28.9		
	With access to and decisions on credit	82.1		
INCOME	With control over household income and expenditures in 60% of HH decision-making domains ^b	45.1		
LEADERSHIP & COMMUNITY	Participating in formal and informal groups	97.1		
	Confident speaking about gender and other community issues at the local level (2 of 4 topics)	42.2		
	Demonstrating political participation	94.2		
	Who express self-confidence in 5 of 7 statements	42.8		
AUTONOMY	Satisfied with the amount of time available for leisure activities	50.9		
	Achieving a mobility score of 16 or greater	11.1		
	Expressing attitudes that support gender equitable roles in family life (Scoring 4 of 4)	46.2		
N		168-173		

GENDER PARITY: Ghana			
Domain	Indicator	% achieving indicator at baseline	
		Male respondents	Female respondents
PRODUCTION	With decision-making input for all HH productive decision domains	74.8	57.9*
	With autonomy in one or more HH production domains	68.2	18.7*
RESOURCES	With sole or joint ownership of 50% of household assets ^a	80.0	27.7*
	With sole or joint control over purchase or sale of 50% household assets ^a	86.2	27.7*
	With access to and decisions on credit	75.9	51.7*
INCOME	With control over household income and expenditures in 60% of HH decision-making domains ^b	86.2	45.0*
LEADERSHIP & COMMUNITY	Participating in formal and informal groups	100.0	95.2
	Confident speaking about gender and other community issues at the local level (2 of 4 topics)	69.6	47.3*
	Demonstrating political participation	97.6	94.1
	Who express self-confidence in 5 of 7 statements	69.6	47.3*
AUTONOMY	Satisfied with the amount of time available for leisure activities	57.0	61.0
	Expressing attitudes that support gender equitable roles in family life (Scoring 4 of 4)	33.0	41.1
N		45-112	45-112

^a excluding poultry, non-mechanized farm equipment, and small consumer durables as modeled in the WEAI

^b excluding minor household expenditures as modeled in the WEAI.

*p<0.05

Table 49: Women's Empowerment: India

		Baseline value		
5 Domains of Empowerment Index		0.460		
		Females living in:		
		Male-headed households	Female-headed households	Total Sample
% of women achieving empowerment (score of .80 or greater)		0.01*	16.75	4.44
Mean empowerment score for all female respondents		.41*	0.60	0.45
N		715	209	924
Mean empowerment score for disempowered women		.41*	0.54	0.43
N		715	209	924
Domain	Indicator	% of women achieving indicator at baseline		N
PRODUCTION	With decision-making input in at least 66.7% of HH productive decision domains*	47.7		858
	With autonomy in one or more HH production domains	15.5		858
RESOURCES	With sole or joint ownership of at least 50% of household assets ^a	45		918
	With sole or joint control over purchase or sale of at least 80% of household assets ^a	49.6		920
	With access to and decisions on credit	45.6		423
INCOME	With control over household income and expenditures in at least 70% of HH decision-making domains ^b	49.2		924
LEADERSHIP & COMMUNITY	Participating in formal and informal groups	88.1		904
	Confident speaking about gender and other community issues at the local level (3 of 4 topics)	60.2		924
	Satisfied with the amount of time available for leisure activities	90.3		924
	Achieving a mobility score of 16 or greater	15.8		924
AUTONOMY	Who express self-confidence in 5 of 7 statements	47.5		821
	Expressing attitudes that support gender equitable roles in family life (Scoring 4 of 4)	36.1		924
	Demonstrating political participation	45.6		924

^a excluding poultry and non-mechanized farm equipment as modeled in the WEAI.

^b excluding minor household expenditures as modeled in the WEAI.

GENDER PARITY: India

		% achieving indicator at baseline		
Domain	Indicator	Male respondents	Female respondents	N
PRODUCTION	With decision-making input in at least 67% of HH productive decision domains	66.5***	46.0	606
	With autonomy in one or more HH production domains	35.0***	6.9	606
RESOURCES	With sole or joint ownership of 50% of household assets ^a	92.3***	40.2	650
	With sole or joint control over purchase or sale of 80% household assets ^a	82.0***	44.8	650
	With access to and decisions on credit	55.4***	38.6	166
INCOME	With control over household income and expenditures in 70% of HH decision-making domains ^b	78.6***	46.3	650
LEADERSHIP & COMMUNITY	Participating in formal and informal groups	38.7***	87.2	584
	Confident speaking about gender and other community issues at the local level(3 of 4 topics)	71.2***	84.8	532
	Satisfied with the amount of time available for leisure activities	91.2	90.8	650
	Who express self-confidence in 5 of 7 statements	62.1***	46.8	560
AUTONOMY	Expressing attitudes that support gender equitable roles in family life (Scoring 4 of 4)	28.1***	34.9	648
	Demonstrating political participation	62.5***	42.5	650

^a excluding poultry and non-mechanized farm equipment as modeled in the WEAI.

^b excluding minor household expenditures as modeled in the WEAI.

** *Significantly different at p < .001

Table 50: Women's Empowerment : Malawi

5 Domains of Empowerment Index		.662		
		Females living in:		Total Sample
		Male-headed HH	Female-headed HH	
% of women achieving empowerment (score of .80 or greater)		11.2***	59.8***	23.2
Mean empowerment score for all women		.56***	.79***	.62
N		574	189	763
Mean empowerment score for disempowered women		.52***	.61***	.53
N		510	76	586
Domain	Indicator	% of women achieving indicator at baseline		
PRODUCTION	With decision-making input for all HH productive decision domains	59.6		
	With autonomy in one or more HH production domains	40.4		
RESOURCES	With sole or joint ownership of 75% of household assets ^a	57.5		
	With sole or joint control over purchase or sale of 75% household assets ^a	62.3		
	With access to and decisions on credit	76.8		
INCOME	With control over household income and expenditures in 60% of HH decision-making domains ^b	58.1		
LEADERSHIP & COMMUNITY	Participating in formal and informal groups	98.7		
	Confident speaking about gender and other community issues at the local level (3 of 4 topics)	53.7		
	Demonstrating political participation	83.6		
	Who express self-confidence in 5 of 7 statements	72.3		
AUTONOMY	Satisfied with the amount of time available for leisure activities	84.5		
	Achieving a mobility score of 16 or greater	49.6		
	Expressing attitudes that support gender equitable roles in family life (Scoring 4 of 4)	46.2		
N		758 -762		

GENDER PARITY: Malawi			
Domain	Indicator	% achieving indicator at baseline	
		Male respondents	Female respondents
PRODUCTION	With decision-making input for all HH productive decision domains	82.8***	40.1***
	With autonomy in one or more HH production domains	59.2***	21.7***
RESOURCES	With sole or joint ownership of 75% of household assets ^a	78.7***	53.6***
	With sole or joint control over purchase or sale of 75% household assets ^a	91.6***	54.2***
	With access to and decisions on credit	57.1**	74.0**
INCOME	With control over household income and expenditures in 60% of HH decision-making domains ^b	85.4***	44.0***
LEADERSHIP & COMMUNITY	Participating in formal and informal groups	82.8***	98.7***
	Confident speaking about gender and other community issues at the local level (3 of 4 topics)	74.5***	58.0***
	Demonstrating political participation	91.1	86.0
	Who express self-confidence in 5 of 7 statements	73.9	67.5
AUTONOMY	Satisfied with the amount of time available for leisure activities	82.8	82.2
	Expressing attitudes that support gender equitable roles in family life (Scoring 4 of 4)	48.4	45.2
N		155-157	155 -157

^a excluding poultry, non-mechanized farm equipment, and small consumer durables as modeled in the WEAI. This indicator is based on the female respondent's perception of who makes decisions on household assets. Male respondents were not directly asked questions about asset ownership and control.

^b excluding minor household expenditures as modeled in the WEAI.

***Means/percentages are significantly different at $p < .001$.

**Means/percentages are significantly different at $p < .05$.

Table 51: Women's Empowerment : Mali

		Baseline value		
5 Domains of Empowerment Index		.32		
		Females living in:		
		Male-headed households	Female-headed households	Total Sample
% of women achieving empowerment (score of .80 or greater)		0.7***	14.8	2.2
Mean empowerment score for all female respondents		.29***	.58	.32
N		695	81	776
Mean empowerment score for disempowered women		.29***	.53	.31
N		690	69	759
Domain	Indicator	% of women achieving indicator at baseline		
PRODUCTION	With decision-making input in at least 40% of HH productive decision domains*	36.6		
	With autonomy in one or more HH production domains	29.0		
RESOURCES	With sole or joint ownership of at least 50% of household assets ^a	15.5		
	With sole or joint control over purchase or sale of at least 50% of household assets ^a	15.6		
	With access to and decisions on credit	87.6		
INCOME	With control over household income and expenditures in at least 50% of HH decision-making domains ^b	17.9		
LEADERSHIP & COMMUNITY	Participating in formal and informal groups	83.0		
	Confident speaking about gender and other community issues at the local level (2 of 4 topics)	24.7		
	Satisfied with the amount of time available for leisure activities	79.0		
	Achieving a mobility score of 16 or greater	4.6		
AUTONOMY	Who express self-confidence in 3 of 7 statements	45.1		
	Expressing attitudes that support gender equitable roles in family life (Scoring 4 of 4)	2.8		
	Demonstrating political participation	47.5		
N		596-770		

GENDER PARITY : Mali

Domain	Indicator	% achieving indicator at baseline		N
		Male respondents	Female respondents	
PRODUCTION	With decision-making input for all HH productive decision domains	98.0***	32.0	538
	With autonomy in one or more HH production domains	95.4***	23.4	538
RESOURCES	With sole or joint ownership of 50% of household assets ^a	87.8***	9.7	559
	With sole or joint control over purchase or sale of 50% household assets ^a	86.2***	9.8	559
	With access to and decisions on credit	89.5	85.6	181
INCOME	With control over household income and expenditures in 50% of HH decision-making domains ^b	83.8***	11.9	554
LEADERSHIP & COMMUNITY	Participating in formal and informal groups	99.1***	86	551
	Confident speaking about gender and other community issues at the local level (2 of 4 topics)	53.1***	22.9	554
	Demonstrating political participation	78.9***	47.7	554
	Who express self-confidence in 3 of 7 statements	73.3***	45.1	637
AUTONOMY	Satisfied with the amount of time available for leisure activities	37.5***	77.5	160
	Expressing attitudes that support gender equitable roles in family life (Scoring 4 of 4)	8.2***	3.2	474

^a excluding poultry and non-mechanized farm equipment as modeled in the WEAI.

^b excluding minor household expenditures as modeled in the WEAI.

***Means/percentages are significantly different at p <.001.

**Means/percentages are significantly different at p <.01.

Table 52: Women's Empowerment: Tanzania

		Baseline value		
5 Domains of Empowerment Index		.58		
		Females living in:		
		Male-headed households	Female-headed households	Total Sample
% of women achieving empowerment (score of .80 or greater)		3.6***	32.8***	13.1
Mean empowerment score for all female respondents		.50***	.74***	.57
N		553	266	819
Mean empowerment score for disempowered women		.45	.68	.50
N		534	178	712
Domain	Indicator	% of women achieving indicator at baseline		
PRODUCTION	With decision-making input for all HH productive decision domains	49.7		
	With autonomy in one or more HH production domains	28.7		
RESOURCES	With sole or joint ownership of 75% of household assets ^a	51.0		
	With sole or joint control over purchase or sale of 75% household assets ^a	65.1		
	With access to and decisions on credit	18.9		
INCOME	With control over household income and expenditures in 60% of HH decision-making domains ^b	55.7		
LEADERSHIP & COMMUNITY	Participating in formal and informal groups	62.6		
	Confident speaking about gender and other community issues at the local level (3 of 4 topics)	40.0		
	Demonstrating political participation	90.7		
	Who express self-confidence in 5 of 7 statements	55.7		
AUTONOMY	Satisfied with the amount of time available for leisure activities	70.9		
	Achieving a mobility score of 16 or greater	37.9		
	Expressing attitudes that support gender equitable roles in family life (Scoring 4 of 4)	18.2		

*** Significantly different at $p < .001$

GENDER PARITY: Tanzania

		% achieving indicator at baseline	
Domain	Indicator	Male respondents	Female respondents
PRODUCTION	With decision-making input for all HH productive decision domains	63.6	49.7
	With autonomy in one or more HH production domains	59.7***	28.7***
RESOURCES	With sole or joint ownership of 75% of household assets ^{a, †}	67.1***	51.0***
	With sole or joint control over purchase or sale of 75% household assets ^a	88.5***	65.1***
	With access to and decisions on credit [†]	20.8	18.9
INCOME	With control over household income and expenditures in 60% of HH decision-making domains ^b	84.2***	55.7***
LEADERSHIP & COMMUNITY	Participating in formal and informal groups	54.0	62.6
	Confident speaking about gender and other community issues at the local level (3 of 4 topics)	77.1	40.0
	Demonstrating political participation	95.1	90.7
	Who express self-confidence in 5 of 7 statements	78.1***	55.7***
AUTONOMY	Satisfied with the amount of time available for leisure activities	79.7*	70.9*
	Expressing attitudes that support gender equitable roles in family life (Scoring 4 of 4)	20.8*	18.2*

^a excluding poultry and non-mechanized farm equipment as modeled in the WEAI.

^b excluding minor household expenditures as modeled in the WEAI.

* Significantly different at $p < .05$

*** Significantly different at $p < .001$

†This question was not asked directly to men but represents women's perceptions concerning men.