



USAID
FROM THE AMERICAN PEOPLE



FINAL REPORT

Ethiopia Endline Study: Quantitative Assessment of Food-for-Peace Development Food Assistance Projects (DFAPs)

February 13, 2018

This report was produced for review by the United States Agency for International Development. It was prepared by the Evaluation and Learning Mechanism (EVELYN) Task Order.

FINAL REPORT

Ethiopia Endline Study: Quantitative Assessment of Food-for-Peace Development Food Assistance Projects (DFAPs)

Submission Date: 02/13/2018

Contract Number: AID-OAA-TO-17-00005

Study Team: Dr. Patricia Vondal, Senior Evaluation Specialist, ME&A
Dr. Benita O'Colmain, Senior Survey Methods Specialist, ICF International
Dr. Gheda Temsah, Senior Data Analyst, ICF International
Dr. Ramu Bishwakarma, Senior Data Analyst, ICF International
Dr. Nizam Khan, Senior Data Analyst, ICF International

Submitted by: ME&A
4300 Montgomery Ave. Suite 103
Bethesda, MD 20814
Tel: 301-652-4334
Email: ethomas@engl.com

DISCLAIMER

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

CONTENTS

- EXECUTIVE SUMMARY i
 - Study Design..... i
 - Study Limitations..... ii
 - Key Findings..... ii
- 1. INTRODUCTION 1
 - 1.1 Overview of the Endline Study 1
 - 1.2 Overview of Food Security Situation from 2010-2016 2
- 2. METHODOLOGY AND LIMITATIONS 6
 - 2.1 Methods for the Endline Population-Based Household Survey..... 6
 - 2.2 Methods For Qualitative Baseline Study and the Performance Evaluation 12
 - 2.3 Data Limitations and Issues Encountered..... 17
- 3. FINDINGS..... 18
 - 3.1 Characteristics of the Study Population 18
 - 3.2 Household Food Security, Poverty, and Livelihood Activities 19
 - 3.3 Agriculture 27
 - 3.4 Water, Sanitation, and Hygiene 31
 - 3.5 Women’s Health and Nutrition..... 34
 - 3.6 Children’s Health and Nutrition..... 38
 - 3.7 Gender 47
- 4. CONCLUSIONS 52
- REFERENCES..... 56

ANNEXES (submitted under separate cover)

- 1. EVELYN Statement of Work
- 2. Protocol for Population-Based Household Survey
- 3. Population-Based Household Survey Questionnaire—English version
- 4. Population-Based Survey Data Treatment and Analysis Plan
- 5. Protocol for Qualitative Study
- 6. Data Collection Sites Selected by Implementing Partners and Rationale
- 7. Qualitative Data Collections Instruments
- 8a. Tabular Summary of Endline Indicator Estimates
- 8b. Comparison of Baseline and Endline Indicator Estimates
- 9. Descriptive and Bivariate Tables
- 10. Multivariate Analyses for Stunting

LIST OF TABLES

Table 1. Program Area and Sampled Households by Implementing Partner	7
Table 2. Endline PBS Response Rates, Ethiopia 2017.....	10
Table 3. 2012-2016 Indicators Collected at Baseline and Endline, Ethiopia 2017	11
Table 4. Qualitative Data Collection Sites Used for the Endline Study by Site Classification and Data Source.....	13
Table 5. Baseline-Endline Comparison of Household Head Characteristics, Ethiopia 2012 & 2017	19
Table 6a. Baseline-Endline Comparison of HDDS and Food Groups, Ethiopia 2012 & 2017.....	20
Table 6b. Prevalence of Moderate or Severe Food Insecurity (FIES), Ethiopia 2017.....	22
Table 6c. Endline Estimates of Poverty Indicators, Ethiopia 2017	24
Table 6d. Baseline-Endline Comparison of the Share of Food Consumption Expenditures, Ethiopia 2012 & 2017	25
Table 7. Households by Type of Livelihood Activity and Other Sources of Income in the Year Preceding the Survey (percentage), Ethiopia 2017.....	26
Table 8. Agricultural Indicators, Ethiopia 2017	28
Table 9. Baseline-Endline Comparison of WASH Indicators, Ethiopia 2012 & 2017.....	32
Table 10a. Women's Health and Nutrition Indicators, Endline Survey.....	34
Table 10b. Baseline-Endline Comparison of Antenatal Care Visits	37
Table 11. Baseline-Endline Comparison of Children's Health and Nutrition Indicators	38
Table 12. Self-Earned Cash Decision-Making, Ethiopia 2017	48
Table 13. Maternal and Child Health Knowledge and Decision-Making	50

LIST OF FIGURES

Figure 1. Distribution of Average Daily Per Capita Expenditures, Combined Project Areas, Ethiopia 2017	25
Figure 2. Percentage of Households by Type of Livestock (at least one) by DFAP Area.....	28
Figure 3. Percentage of Farmers That Plant Crops or Raise/Buy Livestock with the Specific Intention to Sell or Resell.....	30
Figure 4. BMI Levels of Non-Pregnant Women of Reproductive Age, Combined DFAP Areas, Ethiopia 2017.....	35
Figure 5a. Comparison of Baseline and Endline Food Groups Consumed by Women 15-49 Years of Age in the CRS Implementation Area, Ethiopia 2012 & 2017.....	36
Figure 5b. Comparison of Baseline and Endline Food Groups Consumed by Women 15-49 Years of Age in the FH Implementation Area, Ethiopia 2012 & 2017.....	36
Figure 6. Components of MAD Among Children 6-23 Months of Age by Age and Breastfeeding Status, Combined DFAP Areas, Ethiopia 2017	45
Figure 7. Breastfeeding Status for Children 0-23 Months by Age in Months, Combined DFAP Areas, Ethiopia 2017	46
Figure 8. Self-Earned Cash Decision-Making, Combined DFAP Areas, Ethiopia 2017	49
Figure 9. Maternal Health and Nutrition Decision-Making, Combined DFAP Areas, Ethiopia 2017.....	51
Figure 10. Child Health and Nutrition Decision-Making, Combined DFAP Areas,.....	51
Ethiopia 2017	51

ACRONYMS

ANC	Antenatal Care
BL	Baseline
BMI	Body Mass Index
CAPI	Computer-Assisted Personal Interviewing Software
CFI	Chronically Food Insecure
CHN	Children's Health and Nutrition
CMAM	Community Management of Acute Malnutrition
CRS	Catholic Relief Services
DA	Development Agent
DFAP	Development Food Assistance Project
DFSA	Development Food Security Activity
DHS	Demographic and Health Survey
DRM	Disaster Risk Management
EBF	Exclusive Breastfeeding
EL	Endline
EVELYN	Evaluation and Learning Mechanism
FAO	Food and Agriculture Organization of the United Nations
FANTA	Food and Nutrition Technical Assistance III Project
FCo-HHH	Female Co-Heads of Household
FEWS NET	Famine Early Warning Systems Network
FGD	Focus Group Discussion
FFP	Food for Peace
FH	Food for the Hungry
FIES	Food Insecurity Experience Scale
FY	Fiscal Year
GI	Group Interview
GOE	Government of Ethiopia
GPS	Global Positioning System
HDDS	Household Dietary Diversity Score
HEW	Health Extension Worker
HH	Household
HHS	Household Hunger Scale
ICF	ICF International
IP	Implementing Partner
IRB	International Review Board
KFSTF	Kebele Food Security Task Force
KII	Key Informant Interview
LSMS	Living Standards Measurement Study
MAD	Minimum Acceptable Diet
MCHN	Maternal and Child Health and Nutrition
MDD-W	Minimum Dietary Diversity-Women

ME&A	Mendez England & Associates
MHHH	Male Heads of Household
MHN	Maternal Health and Nutrition
MIC5	Mothers with Infants and Children Under Age Five
NRM	Natural Resources Management
ORT	Oral Rehydration Therapy
PBS	Population-based Survey
PDSB	Permanent Direct Support Beneficiary
PE	Performance Evaluation
PIM	Program Implementation Manual
PPP	Purchasing Power Parity
PSNP	Productive Safety Net Program
QS	Qualitative Study
REST	Relief Society of Tigray
SAM	Severe Acute Malnutrition
SCUS	Save the Children USA
SD	Standard Deviation
SNNPR	Southern Nations, Nationalities and Peoples' Region
SOW	Statement of Work
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USD	United States Dollars
USG	United States Government
WASH	Water, Sanitation and Hygiene
WDDS	Women's Dietary Diversity Score
WFSTF	Woreda Food Security Task Force
WHO	World Health Organization
WV	World Vision
WHHH	Women Heads of Household

EXECUTIVE SUMMARY

This report provides results from a mixed-methods study of recently completed United States Agency for International Development (USAID) Food for Peace (FFP) Development Food Assistance Projects (DFAPs) in Ethiopia. The DFAPs were designed to: 1) enhance resilience to shocks and livelihoods; and 2) improve food security and nutrition for rural households vulnerable to food insecurity. Four non-governmental organizations (NGOs), Catholic Relief Services (CRS), Food for the Hungry (FH), Ethiopia/Relief Society of Tigray (REST), and Save the Children USA (SCUS), implemented the FFP-funded DFAPs in selected woredas of Ethiopia, respectively, in the Oromia Region and Dire Dawa Administrative Unit, the Amhara Region, the Tigray Region, and in Somali and Oromia Regional States. Unfortunately, for security reasons it was not possible to include an assessment of the SCUS DFAP in this study.

The endline (EL) study was conducted by a team assembled by Mendez England & Associates (ME&A), under the Evaluation and Learning Mechanism (EVELYN). It was conducted as part of a joint baseline (BL) and EL population-based survey (PBS). The qualitative data were drawn from Tufts University's qualitative performance evaluation report of the four DFAPs (2017). Additional qualitative data were used from the qualitative study (QS) conducted in 2017 for the BL report for newly-awarded Development Food Security Activities (DFSAs) in Ethiopia. The primary purpose of the EL study is to provide endline estimates for key FFP impact and outcome indicators drawn from communities assisted by the DFAPs, and compare these indicators where appropriate with those collected at baseline. The intended audiences are FFP and its implementing partners (IPs), as well as other key stakeholders.

STUDY DESIGN

The EL study included a representative PBS of 5,400 households and a qualitative data from the Tufts DFAP Performance Evaluation (PE) report (2017) based on key informant interviews (KIIs) and focus group discussions (FGDs) with woreda and kebele officials and village residents. Data were also drawn from the Qualitative Study conducted in 2017 for the DFSA BL study based on KIIs and group interviews (GIs). In addition, secondary data sources were used to provide important background information covering the DFAP implementation period. Mixed-method analytical techniques were used to integrate qualitative and quantitative findings for the EL study report.

Field work for the PBS was conducted from July 4-August 21, 2017. The PBS sample was selected using a multistage clustered sampling design to provide a statistically representative sample of three of the four DFAP areas.¹ The PBS questionnaire was developed through a series of consultations with FFP, the Food and Nutrition Technical Assistance III (FANTA) Project, FFP awardees, and USAID/Ethiopia.

The design of the qualitative DFAP PE conducted by Tufts was based on a purposive sample of 15 woredas covering the four DFAP implementation areas. Field work was conducted in October and November 2016. The data collection instruments were based on evaluation questions in the scope of work for the DFAP PE. The QS design for the BL study was based on a purposively drawn sample of eight data collection sites, two in each of the four DFSA implementation areas. Site selection criteria were developed by the IPs. Data collection instruments were based on modules used in the questionnaire for conducting the PBS. Findings from the qualitative data were used to provide contextual information and explanations for significant statistical findings for each topic. Field work was conducted from July 4-August 5, 2017. Findings from this 2017 QS for the BL were used to augment those from the DFAP PE report because the Statement of Work (SOW) did not specifically focus on qualitative data collection for FFP impact and outcome indicators. Secondary data sources used to provide important background information and context include the Famine Early Warning System

¹ Due to security reasons, the EL study could not cover the SCUS DFAP in the Somali and Oromia Regional States.

Network (FEWS NET) food security outlook reports and fact sheets, the USAID Complex Emergency Fact Sheets, situation reports from the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Children’s Fund (UNICEF), the 2010 Government of Ethiopia (GOE) Growth and Transformation Plan, and the 2016 Program Implementation Manual for Productive Safety Net Program 4 (PSNP 4).

STUDY LIMITATIONS

Effects of other donor programs. There were several other ongoing programs in the DFAP implementation areas during the implementation of the DFAPS that may have had a direct effect on some indicators. The attribution of effects to any specific program in the area are not able to be discerned.

Limitations of the qualitative data used for the EL study. There was no specific qualitative study designed for the EL study because a qualitative PE of the DFAPs had been conducted in October-November 2016. The SOW and focus of the DFAP PE were developed to respond to a wide range of FFP questions and to evaluate the performance of the DFAPs. As such, the primary focus was not on collecting qualitative data linked to the PBS Household Questionnaire Modules for FFP impact and outcome indicators. The team used the data from the PE to provide whatever insight could be used to contextualize and explain findings from the PBS EL data. To augment the qualitative findings from the DFAP PE Report, the team drew on some of the findings from the QS, which was designed and conducted to provide qualitative data from the BL study for the four DFSAs. Secondary data from USAID, UNICEF, and FAO reports were also used to provide additional context to the PBS findings.

Validity and reliability of self-reported data. Much of the data collected for the household survey were self-reported, which has limitations, such as: the possibility of exaggeration or omission of information; inaccurate recollection of experiences or events; social desirability bias or reporting of untruthful information; and reduced validity when respondents do not fully understand a question. These same limitations may apply to qualitative data collected through KIIs and GIs. To mitigate these limitations, the team triangulated the PBS findings with the qualitative findings from the QS. The QS minimized the possibilities of these effects through a triangulation process by asking the same or very similar questions during GIs with woreda and kebele officials and, at the village level, during separate GIs with Male Heads of Households (MHHH), Female Co-Heads of Households (FCo-HHH), and Women Heads of Households (WHHH). Responses from each GI conducted in villages were internally compared, and then compared with responses from woreda officials and kebele officials.

KEY FINDINGS

Food security: The Household Dietary Diversity Score (HDDS) improved in all three DFAP areas, but the EL estimates of hunger also underscore moderate access to food. Although a BL-EL comparison of the prevalence of hunger cannot be performed because the BL used the Household Hunger Scale (HHS) while the EL used the Food Insecurity Experience Scale (FIES), the FIES-based EL estimates indicate that food insecurity remains a persistent challenge. Overall, more than one-third of households (36.9 percent) experienced moderate or severe food insecurity in the 30 days prior to the EL survey and close to one-half (53.5 percent) did so in the past 12 months as measured by the FIES.

Conclusion: It is possible that further increases in HDDS and improvements in the prevalence of food security may have been achieved, but the severity of the 2015-2016 drought, policy changes related to content and amount of food in the PSNP 4 food transfers, and the 3.5 million PSNP 3 households graduated based on quotas were all limiting factors. Increases in dietary diversity were attained by some households who were able to establish backyard gardens given sufficient rain.

Poverty: There are several methodological differences in the calculation of the BL and EL poverty indicators; therefore, a direct comparison is not feasible. The EL estimate for per capita consumption

expenditures are markedly higher than the BL, and subsequently the EL estimates for the prevalence of poverty are markedly lower. More comprehensive information on household consumption expenditures, collected at EL, could have contributed to a higher consumption aggregate at the per capita level, which could, in turn, have led to a lower EL estimate of the prevalence of poverty. The EL poverty estimates indicate variability in the economic well-being of households by DFAP implementation area. At EL the prevalence of poverty was highest in the CRS implementation area (76.7 percent). The prevalence of poverty was similar in FH area (50.4 percent) and the REST area (46 percent). With the exception of the REST implementation area, adult male-only households have the highest daily per capita consumption expenditures, lowest prevalence of poverty, and lowest mean depth of poverty.

Sources of income from remittances, gifts, inheritances, and safety net or cash assistance comprise a source of income to 61.3 percent of households in the REST implementation area, 52.7 percent of households in the FH area, and 35.4 percent of households in the CRS implementation area. The most important source of income among these categories is from safety net or cash assistance,² clearly showing how critical government assistance is to the food security of these households.

Conclusions: Because a direct comparison of BL and EL poverty indicators is not feasible, the team can only draw limited conclusions. The prevalence of poverty seen at EL was affected by crop failures, declines in livestock productivity, livestock death from multiple years of erratic rainfall, and location-specific incidents of drought and flooding. These effects on household poverty levels were further exacerbated by the 2015-2016 drought. The drought also caused a reversal of food self-sufficiency achieved by some households. Households frequently search for wage-earning opportunities in times of crop failure, but the daily wage rate paid for agricultural labor declined significantly because of the few commercial farms unaffected by drought conditions and the large number of people seeking opportunities on these farms.

Agriculture: Overall, more than one-third (37.5 percent) of farmers in the DFAP areas used at least one financial service. Use of financial services varies widely by DFAP area. Farmers' use of financial services is lowest in the CRS implementation area (17.3 percent). Compared to CRS, use of financial services is about three times higher in the FH implementation area (46.9 percent) and about two times higher in the REST project area (37.5 percent). Commercial farming is more commonly practiced by male farmers than female farmers. In all three DFAP areas, the majority of farmers engaged in commercial farming practiced at least one value chain activity (CRS, 81.7 percent; FH, 87.7 percent; and REST, 86 percent). The majority of farmers in DFAP areas used at least three sustainable agriculture practices. In the combined DFAP areas, farmers are more likely to use at least three sustainable crop practices (92.1 percent) and at least three sustainable livestock practices (71.5 percent) than three sustainable natural resource management (NRM) practices (44.1 percent). With the exception of use of sustainable livestock practices in CRS areas, in each of the DFAP areas male farmers compared to female farmers are generally more likely to use at least three sustainable crop practices, three sustainable livestock practices, or at least three sustainable NRM practices. Overall, 26.1 percent of farmers used at least one of the improved storage practices in the past 12 months.

Water, Sanitation, and Hygiene (WASH): The percentage of households using improved sanitation facilities declined in the CRS and FH implementation areas. Open defecation increased in the FH area. The percentage of households with soap and water at a handwashing station declined in the FH and REST implementation areas. About one-quarter of households can access drinking water in less than

² There are several sources of safety net food/cash resources. These include PSNP, emergency assistance provided during or immediately after severe weather events such as droughts or flooding, and assistance from GOE contingency funds. Reportedly the major source of emergency assistance is from GOE contingency funds, but contingency funds have also been used as Transitory Assistance for PSNP graduates and other chronically food insecure households that are not enrolled as PSNP beneficiaries. The PBS household survey did not ask respondents to indicate the specific source of safety net food/cash resources.

30 minutes. There was no significant difference in the use of water improvement technologies across all DFAP areas.

Conclusion: Data from FEWS NET, USAID Complex Emergency Fact Sheets for Ethiopia in 2015 and 2016, and findings from the DFAP PE Report show that years of insufficient rain and particularly the major drought of 2015-2016 created severe water shortages in many of Ethiopia's hotspot woredas. Steps were taken by the GOE, donors, and relief organizations to address the resulting crisis of insufficient drinking water. These water shortages explain why only one-quarter of households can access drinking water in less than 30 minutes. Despite the widespread messaging and growing understanding of the importance of handwashing at critical times and the training provided by DFAP IPs and health extension workers (HEWs), shortages of water coupled with the prioritization of available water for drinking purposes resulted in the decline of handwashing practices across the three DFAP areas. Lack of durability of the latrine model introduced and its high replacement cost are two key factors that contributed to the decline in using improved sanitation facilities as well as the increase in open defecation found in the FH implementation area. The team has no qualitative data to help explain the low use of water improvement technologies.

Women's Health and Nutrition (WHN): A comparison of BL and EL estimates of overlapping food groups indicates continued reliance on grains, roots, and tubers. In CRS's implementation area, women's consumption of other vitamin A-rich fruits and vegetables declined since BL. In the FH area, the consumption of legumes, beans, and nuts increased since BL, but there was decline in the consumption of eggs and other vegetables. Women's food consumption patterns parallel the overall household consumption patterns and are also consistent with the types of crops planted by DFAP area. Most women in the combined DFAP areas have a normal body mass index, implying they have a normal weight. About one-third (36.2) of non-pregnant women 15-49 years are underweight. Results indicate no significant changes in the receipt of at least four antenatal care (ANC) visits between BL and EL in the FH and REST implementation areas. Contraceptive prevalence rate in the combined DFAP areas at EL is 37.3 percent, and the most commonly used method among women in the three DFAP areas is injectables. Although there are no BL estimates for the contraceptive prevalence rate, a comparison of average household size indicates a decline in the implementation areas since BL.

Conclusion: At EL about one-third (36.2 percent) of women in the combined DFAP areas are underweight indicating the need for further improvements in women's nutritional status. The low levels of dietary diversity as evidenced by the women's dietary diversity score (WDDS)—on average women consume two or less of nine nutritional rich food groups—at BL and the minimum dietary diversity-women (MDD-W)—on average, less than 10 percent of women consume 5 of 10 nutritionally rich food groups—at EL are related to multiple factors described in the findings that taken together create barriers to women's food access and availability. These barriers explain women's consumption of cheaper and locally grown foods, specifically grains, roots, and tubers, as the basis of their diet. The DFAPs were not designed to include family planning and the promotion of modern contraceptive use. Among the reasons for the relatively low prevalence of contraceptive use are religious beliefs against the concept of family planning, women's fears that contraceptives may harm them, and, in some areas, the domination of men in all areas of decision-making in predominantly Muslim communities. The team does not have data to form conclusions on the lack of statistically significant change between BL and EL in prevalence of women making at least four ANC visits during their last pregnancy in the REST and FH implementation areas, or why EL ANC results in REST are higher than in CRS and FH areas. The data do suggest that ongoing efforts tailored to specific locational features and sociocultural norms and practices within each DFAP area are required for family planning and health care seeking during pregnancy.

Children's Health and Nutrition (CHN): Children's malnutrition (underweight, stunting, and wasting), the prevalence of minimum acceptable diet (MAD), and the prevalence of exclusive breastfeeding improved in all three DFAP areas. Results of multivariate analyses indicated the odds of being stunted are lower for children living in female-head-households compared to male-headed households and lower for children living in households whose head has a primary education or some primary education compared to children living in households whose head has had no schooling. Mother's participation in paid work is associated with lower odds of stunting but the effect washes out when the model controls for the sociodemographic and economic characteristics of the household. The odds of a child under five being stunted are twice as high in the FH area compared to the CRS area. Children living in the REST area are more likely to be stunted than children in the CRS area. The prevalence of diarrhea in the REST area declined markedly by almost 50 percentage from 68.9 percent to 21 percent despite the deterioration in the use of a proper handwashing station. In FH, the prevalence of children 0-23 months with diarrhea remained stable at around 26 percent despite the deterioration in the use of a proper handwashing station, decline in the use of an improved sanitation facility, the increase in practice of open defecation and no change in the use of an improved water source. Use of a correct water practice or technology is associated with lower prevalence of diarrhea in all three DFAP areas. In the CRS area, the prevalence of diarrhea among children 0-23 months is 8.6 percent of children in households that use correct water treatment but it is twice (19.8 percent) as high among children in households that do not use correct water treatment.

Conclusions: There have been moderate improvements in CHN indicators (malnutrition) in all three DFAP areas. The improvement in the CHN indicators (malnutrition, MAD) is supported by moderate improvements in HDDS. The finding from the multivariate analyses that children living in female-headed households are less likely to be stunted suggests differences in decision-making and resource allocation for households where women are the sole decision-makers. Based on bivariate analysis of the prevalence of diarrhea and WASH indicators, the use of water treatment technologies is one of the important factors associated with the decrease in diarrhea in REST between 2012 and 2017. Additional analysis could be conducted to identify other factors that contributed to this decrease.

Gender: Men are more likely to partake in cash-earning activities (65.2 percent) compared to women (44.6 percent). Joint decision-making on use of self-earned cash is more common than deciding alone. About one-half of men (57.6 percent) and women (55.1 percent) decide with their spouses on the use of self-earned cash. Approximately one-third of men (33.1 percent) and one-quarter of women (26.1 percent) decide jointly. A total of 17.6 percent of women have no say on how their self-earned cash will be spent compared to 8.9 percent of men.

Across the three DFAP areas it is more common for maternal health and nutrition (MHN) and CHN decisions to be made alone and usually by the woman than to be made jointly by spouses. In the combined DFAP areas about 56.6 percent of women decide alone on MHN issues compared to 23.9 percent of men. A total of 59.4 percent of women decide alone on CHN matters compared to only 13.2 percent of men. Joint MHN and CHN decision-making is less common, but nonetheless, approximately one-third of decision-making is done together. The majority of women in the combined implementation areas (83.9 percent) have some participation in decisions having to do with their own health and nutrition and 57 percent make this decision alone.³ A total of 16.1 percent of women do not participate in MHN decision-making because their husbands decide alone. Relatedly, about 24.2 percent of men do not engage their wives in MHN decision-making. Similar to MHN decision-making, the majority of women (89 percent) in the combined DFAP areas participate in decisions having to do with the health and nutrition of their children. Only 10.9 percent of women have no input into CHN decisions and a similar percentage of men (13.3 percent) report that they decide alone (13.2 percent) on CHN issues or

³ This includes women who reported deciding alone, women who reported deciding with their spouse, and women who reported deciding with someone else on their own health and nutrition.

let someone else make the decision (0.1 percent). On the other hand, about one-half of fathers (54.1 percent) are not involved in CHN decision-making.

Conclusions: The predominance of women’s participation in Maternal and Child Health and Nutrition (MCHN) decisions is likely the result of the ongoing focus on gender equity and the importance of women’s participation promoted by GOE PSNP officials and each IP over the duration of the DFAP implementation period.⁴ Each IP used a variety of techniques to promote these changes including: different forms of messaging, such as role playing; holding community conversations on gender; and the establishment of gender clubs in schools. IPs provided gender training of government officials including HEWs to sensitize them on gender issues and to engage them in promoting changes and direct support to village women.

⁴ The various approaches and methods used by IPs are described in the DFAP PE Report (2017) on under the findings on gender equity and empowerment.

I. INTRODUCTION

I.1 OVERVIEW OF THE ENDLINE STUDY

In Fiscal Year (FY) 2012, the United States Agency for International Development (USAID) Office of Food for Peace (FFP) awarded funding for four multi-year development food assistance projects (DFAPs) in Ethiopia. The goal of the FY 2012-2016 DFAP awards was to enhance food security among targeted chronically food insecure (CFI) households.

Under the Evaluation and Learning Mechanism (EVELYN) umbrella contract, FFP contracted Mendez England & Associates (ME&A) and its subcontractors ICF International (ICF) and TANGO International (TANGO) to conduct an endline (EL) study of three of the four DFAPs recently completed in Ethiopia [see Annex I for the Statement of Work (SOW)].⁵ Kimetrica was subcontracted as the local data collection firm. The EL study was conducted as part of a joint baseline (BL) and EL population-based survey (PBS) and qualitative data collection effort designed to serve the purposes of the EL study as well as a BL study for four newly-awarded development food security activities (DFSA) in FY 2016 in the same regions of Ethiopia. This study focuses on the results of the EL study only; the results of the BL study are provided in a separate report.

The EL study is the second phase of a pre-post evaluation cycle. The first phase involved a BL study at the beginning of the DFAP implementation cycle in 2012. The EL study includes: 1) a representative population-based household survey to collect data for key FFP impact and outcome indicators; 2) qualitative data collected from interviews with woreda and kebele officials and village residents in a purposive sample of data collection sites; and 3) review of secondary data sources to provide background information. The objectives of the EL study for the DFAPs are to:

- Assess the EL status of key FFP impact and outcome indicators;
- Compare EL indicators with BL indicators where appropriate and conduct a statistical test of differences; and
- Provide qualitative and secondary data to add context to the PBS findings.

The United States Government (USG) global food security strategy established the following definition for food security: “access to—and availability, utilization, and stability of— sufficient food to meet caloric and nutritional needs for an active and healthy life” (USG, 2016; 10). This underscores the four pillars of food security: availability, access, utilization, and stability [Food and Agriculture Organization of the United Nations (FAO, 2009)]. The EL study, designed to provide information on all four elements of food security, investigates: food insecurity and food access; expenditures and assets; water, sanitation, and hygiene (WASH) practices; agriculture; women’s and children’s health and nutrition; and gender differences in decision-making for cash earners and parents of children under two years of age.

Implementing Partners (IPs) for the DFAPs

Four non-governmental organizations (NGOs), Catholic Relief Services (CRS), Food for the Hungry (FH), Relief Society of Tigray (REST), and Save the Children USA (SCUS), implemented the FFP-funded DFAPs in Ethiopia:

1. CRS and its partners implemented its DFAP in the Oromia Region and Dire Dawa Administrative Unit.
2. FH and its partners implemented its DFAP in the Amhara Region.
3. REST and its partners implemented its DFAP in the Tigray Region.

⁵ The various approaches and methods used by IPs are described in the DFAP PE Report (2017) on under the findings on gender equity and empowerment.

4. SCUS and its partners implemented its DFAP in the Somali and Oromia Regional States.

Due to security concerns, this EL study did not collect data for the SCUS DFAP and thus will be limited to results for the three DFAPs implemented by CRS, FH, and REST.

Goals and Overall Approach of the Three DFAPs

The USAID/FFP DFAPs implemented respectively by CRS, FH, and REST were USAID's contribution to the Government of Ethiopia (GOE) Protective Safety Net Program (PSNP). As such, they were designed to align with and support PSNP policy and programs in each region. The DFAPs had a common goal (albeit with slight variations) aligned with the goal of PSNP: to enhance food security among targeted CFI households. Key FFP program expectations for each DFAP to achieve increased food security included: reaching targeted objectives in Maternal and Child Health and Nutrition (MCHN) and WASH, resiliency, enhanced gender equity, and capacity building. The following summary provides information about each IP's specific goal, and the major approaches from their results framework designed to achieve the goal.⁶

CRS: The goal of the CRS DFAP was “*reduced food insecurity of chronically food-insecure households (HHs) in seven woredas in Oromia Region (six woredas) as well as Dire Dawa City Administration (one woreda) of Ethiopia.*” To achieve this goal, CRS focused on two major areas. One was on increasing resilience through asset development and protection as well as through using PSNP transfers of food packages and cash. The other major approach focused on increasing health and nutrition status through programming in WASH, improved diets, health and nutrition services, and improved behaviors. Gender empowerment was included as a strong emphasis in implementing each programmatic area.

FH: The goal of FH's DFAP was “*to improve the food security status for all members of food-insecure households in 12 woredas of Amhara Region (415,031 beneficiaries).*” To achieve this goal, FH focused on two major sets of activities. One focused on improving resilience by activities that would reduce food gaps, protect assets, improve natural resource management (NRM), and improve local capacity building. The second set of activities were focused on improving health and nutrition by incorporating MCHN and WASH components. Cross-cutting theme incorporated into these two programmatic areas were improving gender relations, capacity building, and disability inclusion.

REST: The goal of the REST DFAP was to “*sustainably increase the food-security status of chronically food-insecure households in targeted woredas of Tigray.*” Their program was based on three major areas of emphasis: 1) watershed management approaches to improve production, smooth consumption, and increase availability and accessibility of food; 2) complementary support to food security through the development of health and nutrition; and 3) capacity building at the household, community, and institutional levels.

This report begins with an overview of the food security situation in Ethiopia during the period 2010-2016, followed by a description of the methods used for the PBS and qualitative study and for using qualitative findings from secondary sources. The findings from the PBS are presented and integrated with the results of the qualitative study and secondary sources, followed by conclusions based on key findings.

I.2 OVERVIEW OF FOOD SECURITY SITUATION FROM 2010-2016

This section includes an overview of some of the key events that influenced levels of food security between 2010 and 2016, and likely impacted DFAP FFP EL indicator values. These include drought and insufficient and erratic rainfall leading to successive years of crop shortage and livestock mortality between 2010-2014, the onset of an unusually strong El Nino in 2015 bringing a severe and prolonged

⁶ The various approaches and methods used by IPs are described in the DFAP PE Report (2017) on under the findings on gender equity and empowerment.

drought of historic proportions (and other severe weather events) during 2015 and 2016, and two major changes in the GOE PSNP, one in 2011, and one in 2016.

1.2.1 Background of Factors Affecting Food Security Situation 2012-2016

Major Climate Events

The FFP Ethiopia DFAP IPs began program implementation in 2012 during a time period of ongoing drought in Ethiopia covering all countries in the Horn of Africa. Delayed and insufficient rain in some areas of Ethiopia and heavy flooding and hail in others led to reduced harvests and in some areas significant crop failures in 2010. Food prices increased in 2010 and, in 2011, food inflation of staple food prices was at 40.7 percent [Famine Early Warning Systems Network (FEWS NET) 2011]. In 2011, rains arrived late and were insufficient to reduce drought effects. These factors led to an emergency food insecurity situation in southern Somali, the lowlands of Oromia and the South Omo section of Southern Nations, Nationalities, and Peoples' Region (SNNPR). The late rains and scarcity of water resources contributed to heavy livestock mortality, poor condition of remaining livestock, and low milk productivity. In significant parts of agro-pastoralist areas in Tigray, Amhara, and Oromia, late rains contributed to farmers delaying sowing their fields and, overall, less land area was cultivated. Significant crop losses and, in some areas, crop failure were predicted for the belg⁷ harvest because of delayed or failed rain leaving these areas in a food insecurity crisis situation. While later season kiremt rains brought some relief in local areas, water for human and livestock was scarce, in some areas requiring the continuation of emergency water trucking operations. Some 7.4 million people were supported by PSNP, and an additional 4.5 million people required emergency humanitarian assistance because of decreased rainfall and extremely high food prices.

FEWS NET's Climate Trend Analysis of Ethiopia (2012) covering the mid-1970s through the late 2000s showed increases in temperature across most of the country and seasonal rainfall (belg rains) declines from 15-20 percent across southern, southeastern, and southwestern Ethiopia. Their data analysis showed that over the past 20 years (1991-2011) the areas receiving sufficient belg rains for crop production contracted by 16 percent. The authors forecasted that continuing declines in rainfall and rainfall variability could result in a further contraction of 16 percent. During that same time period, the same areas receiving sufficient kiremt rains also contracted. In the eastern highlands, the trend analysis showed that belg rains would similarly be threatened. The authors concluded that the recent rainfall decreases were linked to a warming of the Indian Ocean and likely to persist for "at least the next decade," along with more frequent occurrences of severe drought (FEWS NET 2012).⁸

The pattern of erratic and unpredictable rainy seasons, rainfall variability, and reduced rainfall across agro-pastoralist and pastoralist areas of Ethiopia and, in some locations, either drought, flooding, or hail, continued from 2012-2014.⁹ Below average rainfall during the belg rainy season in 2012 and 2013 adversely affected household recovery in regions that experienced high levels of food insecurity and malnutrition in 2011. In the pastoralist areas in some sections of Somali, Oromia, and SNNPR, chronic drought persisted. Erratic, spatially spotty, and insufficient rainfall in many areas of the country in 2014 decreased harvested food crops further and extended the period of food insecurity and above-average food prices. These conditions all contributed to an increased need for support. With the onset of the

⁷ Refers to crops harvested that were planted at the beginning of the belg rainy season. See FEWS NET Food Security Outlook reports (2012). In a typical year, belg (early rainy season) rains fall from February through April. Kiremt rains fall from June through September.

⁸ See FEWS NET Fact Sheet 2012-3053. A Climate Trend Analysis for Ethiopia, pg. 6, April 2012.

⁹ See FEWS NET Ethiopia Food Security Outlook Reports 2012, 2013, 2014. These reports provide information for areas of chronic food insecurity (hotspots susceptible to drought) on prior harvests for staple crops, effect on food prices, and outlook for crop harvest based on most recent and current behavior of belg and kiremt rainy seasons, and forecasts.

2015 El Niño, already predicted to be the strongest on record, the ongoing needs for humanitarian assistance were exacerbated.¹⁰

In 2015-2016, El Niño conditions created a severe, long-lasting drought, floods, and other extreme weather events with widespread global impacts. Ethiopia suffered its worst drought in 50 years causing successive harvest failures and widespread death of livestock, a key asset and means of livelihood among agro-pastoralist and pastoralist populations. Between March and May 2015, up to 2.9 million people required emergency food assistance and up to 1.6 million people required emergency water support.¹¹ The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) reported migration from Amhara due to water shortages. The number of “priority” hotspot districts, that is, districts at high risk from malnutrition, increased by 98 percent between February and June 2015.¹² In March 2015, there was a 15 percent increase in the number of children with severe acute malnutrition (SAM) that were admitted into therapeutic program feeding sites compared to March 2014.¹³ In 2016, severe drought conditions persisted in some parts of the country, while other areas experienced very heavy spring rainfall and flash floods displacing populations, destroying roads, and increasing the difficulties of providing relief operations and food distribution.¹⁴ By May 2016, 10.2 million people required emergency food assistance, up from 2.9 million in May 2015. More than 1.3 million households across Ethiopia required emergency livestock support to prevent further steep declines in the livestock population.

Contributing to food insecurity of poor rural households in hotspot areas was the reduction of opportunities for seasonal daily wage work on larger or commercial farms in 2015-2016. Insufficient rainfall affected production on these farms as well. Where seasonal work in plowing, weeding, and harvesting was available, the usual daily wage rates were reduced by as much as 50 percent in some places (e.g., Amhara, Southern Tigray, Oromia) because of the increased number of people looking for work increased the supply of wage laborers on these farms.¹⁵ Petty trade that relied on processing agricultural products, locally brewed beer for example, declined because of very low or failed harvests. Petty trade based on non-agricultural products for sale declined as well because the usual consumers no longer had the income for extra purchases.

Government of Ethiopia Productive Safety Net Program

The GOE PSNP is designed to increase the food security, economic well-being, and resilience of rural households in designated hot spots affected by recurrent drought. Many of the agriculturally-based households in these areas have become CFI and are vulnerable to food shortages, poverty, and malnutrition. PSNP began its third round of assistance (PSNP 3) in 2011 and was in its second year of operation in 2012 when the four FFP DFAPs were awarded to FH, REST, SCUS, and CRS. The PSNP provides qualifying households in woredas covered by the program with either food or a combination of food and cash transfers six times a year. In return, each able-bodied member of a beneficiary household provides their labor for a defined number of days per month to an organized public works program designed to benefit their village. PSNP involves a diverse number of programs, activities, and services in the areas of: agriculture; water and irrigation; NRM; reforestation and soil fertility improvements; financial services; and a livelihood development component to help beneficiaries graduate from the program. Within a village, only those households that meet the beneficiary criteria are enrolled in PSNP.

¹⁰ See USAID, 2016. Project El Nino in Ethiopia 2015-2016: A Real Time Review of Impacts and Responses. USAID/Ethiopia Agriculture Knowledge, Learning, Documentation and Policy Project.

¹¹ See USAID, Ethiopia-Complex Emergency Fact Sheet # 3, Fiscal Year 2015.

¹² Ibid. Hotspot priority classifications are defined by the level of vulnerability to malnutrition is measured by several indicators including severity of food insecurity, prevalence of moderate to high levels of malnutrition, and admission trends in therapeutic feeding of children. Priority 1 is the most severe hotspot classification.

¹³ Ibid.

¹⁴ See USAID, Ethiopia-Complex Emergency Fact Sheet # 10, Fiscal Year 2016.

¹⁵ See USAID, El Nino in Ethiopia 2015-2016: A Real Time Review of Impacts and Responses, USAID/Ethiopia Agriculture Knowledge, Learning, Documentation and Policy Project, 2016 pg. 12.

However, it is important to note that the number of qualified CFI households in woredas covered by PSNP exceeds the amount of resources the government has.¹⁶ By design, the DFAPs (and current DFSAs, see Ethiopia Baseline Report 2017) are directly aligned with PSNP policy, programming, and regulations. DFAP programming is for PSNP beneficiary households, and includes capacity development for PSNP officials at the woreda and kebele administrative levels.

Two important events were rolled out in PSNP covering the DFAP implementation timeframe (2012-2016) which, in addition to the effects of weather shocks and recurrent drought, have implications for the EL status of FFP outcome and impact indicators. The first event was the start of the targeted reduction of PSNP 3 beneficiaries, which began in 2011 one year prior to the start of the DFAP. The second event was based on changes in the amount of food transferred through food distribution packages, introduced in 2016 at the beginning of PSNP 4.

Targeted Reduction of Beneficiaries. Starting in the first year of PSNP 3, the GOE began graduating beneficiaries in the highlands area to meet a targeted reduction from 5.0 million beneficiaries in 2011/2012 to 1.3 million in 2014/2015.¹⁷ To meet the target, each region was given a yearly quota of PSNP beneficiaries to graduate. Woreda officials were given a specific number of beneficiary households to graduate based on the quota for their region. The final evaluation report of the DFAPs describes the graduation of PSNP beneficiaries according to the GOE targeting plan which was implemented without reference to the status of household food security required for beneficiary program graduation. The DFAPs were excluded from the process of selecting beneficiary households to graduate. According to PSNP policy, to graduate, a household must reach food self-sufficiency. As defined by the program, food self-sufficiency is reached when a household has been able to feed its members for a 12-month period. Households that were graduated in fulfillment of the annual regional quota had not reached food self-sufficiency.¹⁸ The process of graduating beneficiaries according to the targeting plan was stopped during the 2015 drought due to the magnitude of need for food support. Many of the households that were either self-graduated or graduated based on achieving food self-sufficiency lost those gains during the drought. According to the DFAP PE, some of these graduates and other CFI households received support from GOE contingency funds as Transitory Beneficiaries. Reportedly, some of these households were incorporated back into PSNP under stage four when retargeting took place in 2016. The DFAP PE report states that, in some areas, food insecure households that were graduated by quota from PSNP 3 have not been included in PSNP 4. The report includes a footnote briefly mentioning it was reported that in some woredas in Tigray and Oromia, as well as in Dire Dawa, forced graduates from PSNP 3 were not allowed to be re-enrolled under PSNP 4.¹⁹ PSNP 3 households that were graduated based on quotas could no longer be covered as beneficiaries under DFAP programming either. The DFAP PE states that they were unable to obtain the specific number of households graduated through implementation of the quota system. There were no funds or programming from the GOE or DFAP to follow-up with graduates (Tufts 2017).

Standardization of Amount of Food Transfers. The second event entailed a series of important changes introduced in 2016 under PSNP 4, the last year of the FY 2012-2016 DFAPs.²⁰ One of the key changes with implications for beneficiary food security was the standardization of the food distribution package based on the nutritional and caloric needs of a five-person household. Under previous rounds of PSNP, the food distribution package was based on the number of people living in the household. Under PSNP 4, beneficiary households with over five people received insufficient food to meet

¹⁶ Ibid, DFAP PE 2017.

¹⁷ The targeted reduction of beneficiaries is described in the GOE Growth and Transformation Plan (GTP), 2010. Targets for each region were set at the national level for woredas to implement.

¹⁸ See 2017 DFAP PE, pg. 10, footnote 1: "Genuine graduates are those who have achieved food sufficiency, while forced graduates are those obliged to leave the DFAP due to the application of a quota, without having achieved food sufficiency."

¹⁹ Ibid, footnote # 30, pg. 22. No source is cited for this reported information.

²⁰ See Project Implementation Plan (PIM) for description of changes introduced in 2016 for PSNP 4.

household food security needs and the nutritional and caloric requirements of each individual in the family. In these households, food distribution packages were reportedly divided up between family members.²¹ According to the DFAP PE (2017), approximately 39 percent of all beneficiary households comprised more than five family members. The composition of the food distribution packages was also changed. Protein-fortified oil was eliminated.

2. METHODOLOGY AND LIMITATIONS

2.1 METHODS FOR THE ENDLINE POPULATION-BASED HOUSEHOLD SURVEY

This section describes the methods used for the data collection for the EL PBS. The 2012 BL survey was conducted by Dadimos Development Consultants, PLC and funded by USAID. Methods for the BL survey are described in the “USAID Development Food Aid Program in Ethiopia Baseline Survey” Report, October 2012.²²

2.1.1 Study Design and Objectives

The EL study was conducted as part of a joint BL/EL PBS that was conducted in 2017. The EL component of the joint BL/EL PBS serves as the second phase of a pre-post survey cycle for the FY 2012-2016 DFAP awards. This pre-post design allows for the determination of statistically significant change in indicators between the 2012 BL and EL surveys; however, it does not allow statements about attribution or causation relating to project impact to be made.

The objectives of the EL PBS for the DFAPs are to assess the EL status of key FFP impact and outcome indicators and to conduct a statistical test of differences between relevant 2012 BL and EL indicators.

2.1.2 Sample Design

The target population for the joint BL/EL PBS consisted of two components: 1) all households in the areas where the FY 2012-2016 DFAPs were implemented;²³ and 2) all households in the areas where the newly awarded DFSAs will be implemented. These target populations overlap to a considerable extent,²⁴ since the DFSAs will be implemented in some of the same areas where the DFAPs were implemented.

The sample size for the joint BL/EL PBS was derived by: 1) identifying the sample size needed for the EL survey for the DFAPs; 2) calculating the sample size needed for the BL survey for the current DFSAs; and 3) deriving a joint sample size based on these sample sizes, taking into account the overlap between the current DFSA and prior DFAP implementation areas. The sample size calculation for the joint BL/EL

²¹ Reports of insufficient food in PSNP food distribution packages were heard from village respondents participating in focus group discussions (FGDs) for the performance evaluation of the four DFAPs conducted in 2016, and from village respondents and village chiefs participating in the 2017 QS across all data collection sites. Group interviews (GIs) with kebele officials related that this was one of the major complaints brought before kebele appeals committees. Village participants in GIs living in households with over five family members said they divided the food between them. Accordingly, food in these packages did not last as long as intended by PSNP. “*What else are we going to do? Give the food to five people in the family and have the other people in the household watch them eat it?*” The field researchers do not know if PSNP food was distributed equally between all members of the household.

²² Available at: http://pdf.usaid.gov/pdf_docs/pa00jnt1.pdf

²³ The lowland/pastoral areas of Somali (Liben Zone) and Oromia (Borena Zone) were not included. These areas were part of the prior DFAP implemented by SCUS.

²⁴ Thirty-five percent of households in the current CRS BL target areas are in areas where CRS worked before; 81 percent of households in the current FH BL target areas are in areas where FH worked before; 73 percent of households in the current REST BL target areas are in areas where REST worked before; and 41 percent of households in the current WV target area are in areas where the FH project worked before.

PBS is based on a multi-stage clustered sample designed to adequately power a test of differences between the BL and EL estimates for the FFP stunting indicator for both the DFSAs and the DFAPs.

Table I shows the areas covered and derived sample size by IP for the joint BL/EL. It is worth noting that the overall sample size for the joint BL/EL PBS (8,460 households) is substantially less than the sum of the sample sizes of the two individual PBSs (4,620 + 6,960 = 11,580 households); this comparison highlights the sample size (and related cost) savings realized by the joint administration of the two surveys, as compared to that had the two PBSs been administered separately.

A stratified multi-stage clustered sample design was used with three stages of sampling: 1) selection of kebeles; 2) selection of households; and 3) selection of individuals. Each DFAP represented one stratum and the sample was allocated to woredas within each stratum based on the number of households in each woreda (see Annex 2, “Ethiopia Joint Baseline/Endline PBS Protocol” for more details on the sample design and allocations).

Table I. Program Area and Sampled Households by Implementing Partner

Implementing Partner (DFAP)	Program Area	Number of sampled households for 2012 BL study	Number of households needed for 2017 EL study	Number of households needed for 2017 BL study	Number of sampled households for 2017 joint BL/EL study	Number of sampled kebeles (30 households per kebele)
CRS	Oromia and Dire Dawa	1,522	1,540	1,740	2,670	89
FH	Amhara	1,530	1,540	1,740	1,740	58
REST	Tigray	1,542	1,540	1,740	2,190	73
World Vision (WV)*	Oromia and Amhara	--	--	1,740	1,860	62
TOTAL		6,097	4,620	6,960	8,460	282

*Although WV was not an IP for the prior DFAPs, some areas covered by the prior FH DFAP are included in the WV DFSA target area.

2.1.3 Questionnaire

The questionnaire for the EL study was the same as that used for the 2017 BL study.²⁵ This joint BL/EL PBS questionnaire was developed through a series of consultations with FFP, the Food and Nutrition Technical Assistance III Project (FANTA), and the 2017 IPs before, during, and after the 2017 BL planning workshop in April 2017 (see Annex 3). All questionnaire modules follow FFP and Feed the Future guidelines, as described in the *FFP Indicators Handbook* (April 2015)²⁶ and the *Feed the Future Indicator Handbook* (September 2016).²⁷

The questionnaire consists of separate modules covering the following topics:

- Module A: Household Identification and Informed Consent
- Module B: Household Roster
- Module C: Household Food Security

²⁵ The questionnaire differed from that used for the 2013 BL study in that the 2013 BL questionnaire was not designed to collect data for all of the same EL indicators although some modules were essentially the same as those in the EL questionnaire. See Annex 2 for a description of the differences in the 2013 BL questionnaire.

²⁶ Food and Nutrition Technical Assistance III Project (FANTA III). 2015. *FFP Indicators Handbook Part I: Indicators for Baseline and Final Evaluation Surveys*. Washington, DC. Available at http://pdf.usaid.gov/pdf_docs/PBAAE201.pdf. A newer version of the FFP Indicators Handbook is pending release in 2017.

²⁷ Available at https://feedthefuture.gov/sites/default/files/resource/files/Feed_the_Future_Indicator_Handbook_Sept2016.pdf

- Module D: Children’s Nutrition and Health
- Module E: Women’s Nutrition and Health
- Module F: Water, Sanitation, and Hygiene (WASH)
- Module G: Agriculture
- Module H: Poverty
- Module J: Gender – Cash
- Module K: Gender – Maternal and Child Health and Nutrition (MCHN)

Questions for Modules A through G, J, and K were adapted using questions from the FFP Standard Indicators Handbook and the Demographic and Health Survey (DHS) questionnaire.²⁸ Questions for Module H were adapted from the World Bank’s Living Standards Measurement Study (LSMS). Questions requiring adaption for the local context for all modules were discussed and modified based on inputs provided during the BL workshop.

The questionnaires were prepared in English first and then translated into three local languages (Amharic, Tigrigna, and Afan Oromo) and pretested in the field. The total time for completing the survey was approximately 2-3 hours per household.

2.1.4 Field Procedures

Listing Exercise

The local data collection subcontractor (Kimetrica) conducted household listing and mapping in the 282 selected kebeles. Listers and mappers were trained over three days (May 13-15, 2017) to: locate a cluster; identify its geographical boundaries; draw sketch maps; identify locations of the households on the sketch map; and measure global positioning system (GPS) coordinates. The listing exercise was conducted from May 16 to June 11, 2017. Twenty teams consisting of four listers and a mapper carried out the household listing operation. The results from the household listing operation were used for the second stage sampling of households in each sampled kebele.

Pretest, Training, and Pilot Test

The EVELYN team developed training manuals based on FFP and DHS guidelines for training and for use in the field. These included a supervisor manual, an interviewer manual with a question-by-question guide, and an anthropometry manual. Both supervisor and interviewer manuals contain instructions on how to operate the tablet computers in their respective roles. The training manuals were translated into Amharic, the national language.

Pretest: Kimetrica conducted the pretest training for a select group of experienced interviewers and supervisors. It included an in-depth review of the questionnaire and the use of tablet computer to conduct the interviews. After the training, both a paper and computer-assisted personal interviewing software (CAPI) version of the questionnaire were pretested with non-sampled households in the three regions—Amhara, Oromia, and Tigray—where the four DFAPs operate. The paper-based pretest assessed the soundness of the questionnaire and identified potential problem areas, such as issues with filter questions, wording, sequencing of questions, instructions to interviewers, and the clarity of the questionnaire for coding. The CAPI-based pretests assessed the programming of the questionnaire flow and skips and use of the tablets in the field, including data transmissions. All proposed changes to the questionnaire were reviewed by the EVELYN team and submitted to FFP for approval. The revised questionnaire was used for the subsequent interviewer and supervisor trainings. The pretest training was conducted in Addis Ababa from May 25-30, 2017 and the pretest was conducted from May 31-June 4, 2017.

²⁸ MEASURE DHS. *DHS model questionnaire: Phase 6 (2008-2013) (English, French)*. Available at <http://www.measuredhs.com/publications/publication-dhsq6-dhs-questionnaires-and-manuals.cfm>

Training: The main survey training took place from June 13-28, 2017 at Ethiopian Red Cross Society Training Center in Addis Ababa. The training included combined and separate training for interviewers, supervisors, and anthropometry specialists. Training was conducted at a residential setting in which all participants were provided with accommodations and meals. The training consisted of lectures, classroom practice, group discussions, use of tablet computers, and role play. The trainings are described as follows:

- The interviewer training was held from June 13-27, 2017, and covered: roles and responsibilities of interviewers; objectives of the survey; selection of eligible respondents within households; call-back procedures; completion of field forms; a question-by-question review of the household questionnaire; and the use of tablet computer for interviews. The interviewer training was conducted in four groups with 50–60 participants in each group.

Several language sessions were conducted in some evenings throughout the interviewer training. Interviewers were divided into three groups based on the three languages of their native fluency (Amharic, Tigrinya, and Afan Oromo). In these language sessions, interviewers discussed and verified the appropriateness and accuracy of the translation and also practiced mock interviews.

- The supervisors were selected from the group of interviewer trainees. After the interviewer's training, they received a one-day training on June 28, 2017, focused on: the roles and responsibilities of supervisors; quality control procedures; identification of sampled households; selection of eligible respondents; and use of field control sheets, maps, and GPS devices for data collection.
- The anthropometry training was conducted from June 15-28, 2017, with classroom and hands-on training on: measurements of recumbent length and weight for children under two years of age and standing height and weight for children between two and five years of age and women 15-49 years of age. The training included standardization testing. One interviewer from each team was also trained to serve as an anthropometry assistant in the field. Supervisors and field coordinators received training on how to use the World Health Organization (WHO) Growth Charts for referral of severely malnourished children.

Pilot Test: All interviewers, supervisors, anthropometry specialists, and field coordinators participated in a full-scale pilot test in non-sampled enumeration areas close to Addis Ababa from June 29 to July 3, 2017. The pilot test provided a field practice for the interviewers, supervisors, and the field coordinators. It served as an opportunity to observe the preparedness of the interview teams, their contact strategies, their familiarity with the questionnaires, and their comprehension of the household sampling process. Each interviewer completed at least two survey questionnaires during the pilot test. At the post-pilot test debriefing, all interviewers received feedback on their performance, discussed difficulties, and clarified any questions.

Fieldwork

Kimetrica collected the data for the PBS from July 4-August 21, 2017, during the rainy season and towards the end of the hunger season.²⁹ The survey data collection team included the following personnel: the EVELYN survey coordinator, a local research director, 2 local survey monitors, 10 local field coordinators from Kimetrica, 5 local information technology (IT) specialists, 40 local supervisors, 160 local interviewers, and 40 local anthropometry specialists. Each of the 40 interview teams consisted of a supervisor, 4 interviewers, and an anthropometry specialist. In each interview team, interviewers served as anthropometry assistants and assisted taking the anthropometric measurements. Interviews were conducted in three major local languages—Amharic, Tigrinya, and Afan Oromo. Supervisors

²⁹ As a point of comparison, the data collection for BL in support of the FY 2012-2016 DFAPs was conducted in June/July of 2012.

managed the teams to ensure that the survey protocol was followed, reviewed each completed questionnaire, and conducted spot checks for at least 15 percent of all completed questionnaires.

Each of the 10 field coordinators from Kimetrica conducted quality control checks for 4-5 survey teams. Quality control checks were designed to verify whether the interviewers completed the questionnaires by interviewing the eligible respondents in the selected households and asking the correct modules and questions. Quality control checking was conducted both in the presence of and absence of the survey team, i.e., at times the checks were performed while the survey team collected data and, on other occasions, the checks were conducted after the survey team had completed and left the kebele.

In addition to the Kimetrica staff, the EVELYN survey coordinator and two local survey monitors were in the country throughout all critical phases of the survey, including the pretest, training, pilot test, and fieldwork, to coordinate and supervise the activities. Throughout fieldwork, the EVELYN survey coordinator received frequent updates from the survey monitors assigned to each of the DFAP areas.

2.1.5 Data Processing and Analysis

Sampling Weights

Sampling weights were computed and used in the data analyses. Weights were computed for the EL PBS according to the unique sampling scheme that was relevant for the associated sampled household or individual. This involved computing an overall sampling weight for each distinct sampling group by taking the inverse of the product of the probabilities of selection from each stage of sampling (cluster/kebele selection and household selection). Weights were calculated for the following distinct sampling groups:

- Households (used for indicators derived from Modules C, F, and H);
- Children under five years of age (Module D and Children’s Anthropometry);
- Women 15-49 years of age (Module E);
- Non-pregnant women 15-49 years (Women’s anthropometry);
- Farmers (Module G);
- Cash-earning adults (Module J); and
- Parents of children under two years of age (Module K).

Weights were calculated separately for each of the DFAP areas and adjusted to compensate for household- and individual-level non-response as shown in Table 2 for the EL PBS only.

Table 2. Endline PBS Response Rates, Ethiopia 2017

	Number Sampled	Number Interviewed	Response Rate (%)
Households (Modules C, F, and H)	5,400	5,227	96.8
Children 0-59 months of age (Module D)	3,418	3,403	99.6
Women 15-49 years of age (Module E)	5,042	4,937	97.9
Non-pregnant women 15-49 years of age (Anthropometry)	4,516	4,494	99.5
Farmers (Module G)	6,802	6,766	99.5
Male cash earners, married or in a union (Module J)	3,548	3,424	96.5
Female cash earners, married or in a union (Module J)	1,813	1,771	97.7
Fathers of children under two years of age (Module K)	1,102	1,051	95.4
Mothers of children under two years of age (Module K)	1,302	1,288	98.9

Indicator Definitions and Tabulations

For the EL study, definitions and methods for tabulation of all FFP indicators are presented in the Data Treatment and Analysis Plan (see Annex 4). The WHO child growth standards and associated software (WHO, 2011) are the basis for tabulating the child stunting and underweight indicator values.

Consumption aggregates, for computing the prevalence of poverty, mean depth of poverty, and per capita expenditure indicators, follow the World Bank LSMS methodology. Results for all indicators were weighted to represent the full target population. Variance estimates for each indicator were computed using Taylor series expansion, taking into account the design effect associated with the complex sampling design. Depending on the indicator, differences in indicator estimates by age, sex, and gendered household type were tested for statistical significance, taking into account the clustered sample design.³⁰ Additional bivariate and multivariate analyses were conducted to explore relationships between indicators. Throughout the report only those differences that are statistically significant are cited; the results of all analyses are provided in Annex 9.

For the 2012 BL study, weighted indicators were calculated based on the 2011 FFP Indicator Handbook definitions. Because some modules of the BL questionnaire were not administered in all BL implementation areas, indicators could only be calculated for those areas where the appropriate data were collected. Table 3 provides a list of the indicators collected at BL for each DFAP area for which data were also collected at EL and for which comparisons between BL and EL can be made. There were some methodological differences in the way indicators were computed at the time of the 2012 BL study (as compared to how they are computed at present) that required recalculation of EL indicator estimates in adherence with the BL methodology. These are footnoted in Table 3.

Table 3. 2012-2016 Indicators Collected at Baseline and Endline, Ethiopia 2017

Indicator	CRS	FH	REST
Average Household Dietary Diversity Score (HDDS)	✓	✓	✓
Per capita (adults only) expenditures (as a proxy for income) of USG-assisted areas*	✓	✓	✓
Prevalence of poverty: Percent of people (adults only) living on less than \$1.25/day*	✓	✓	✓
Mean depth of poverty (expressed as percent of poverty line)*	✓	✓	✓
Percentage of households using an improved source of drinking water	✓	✓	
Percentage of households using improved sanitation facilities	✓	✓	
Percentage of households practicing open defecation	✓	✓	
Percentage of households with soap and water at a handwashing station commonly used by family members		✓	✓
Percentage of births in the last two years receiving at least four antenatal care (ANC) visits during pregnancy**		✓	✓
Prevalence of underweight children under five years of age	✓	✓	✓
Prevalence of stunted children under five years of age	✓	✓	✓
Prevalence of wasted children under five years of age	✓	✓	✓
Percentage of children 0-23 months of age with diarrhea in the last two weeks**		✓	✓
Percentage of children 0-23 months of age with diarrhea treated with ORT**		✓	✓
Prevalence of exclusive breast-feeding of children under six months of age	✓	✓	✓
Prevalence of children 6-23 months of age receiving a minimum acceptable diet (MAD)	✓	✓	✓

*The target population is adults 18 and older.

**The target population is children less than two years of age.

³⁰ Differences are considered statistically significant based on the p-value for the significance test. P-values of <.10 are considered marginally significant, p-values of <.05 are significant, and p-values <.01 are highly significant.

Handling of Missing or Erroneous Data

Missing data points were excluded from the denominator and numerator for indicator calculations. The denominator included “Don’t Know” responses, recoded to the null value. For example, the denominator for the contraceptive prevalence rate included “Yes,” “No,” and “Don’t Know” responses, but the numerator included only “Yes” responses. For anthropometry indicators, the WHO software flagged biologically implausible cases according to WHO criteria (WHO Multicentre Growth Reference Study Group, 2006), which were excluded from the analysis but left in the data set. For poverty indicators, there are special methods for handling missing data (see Appendix B of Annex 4).

2.2 METHODS FOR QUALITATIVE BASELINE STUDY AND THE PERFORMANCE EVALUATION

2.2.1 Qualitative Data Sources and Purpose

The qualitative findings used for the Ethiopia EL Study are drawn from two sources:

1. Secondary data reported in the 2017 Report of the Performance Evaluation (PE) of the FFP DFAPs (2012-2016); and
2. Primary data collected for the 2017 Qualitative Baseline Study (QS).

A QS was not conducted for the EL report because a qualitative PE of the four DFAPs was conducted in 2016 that could serve as a source. However, the scope of work was developed to answer a wide range of specific FFP questions and there was no systematic data collection related to FFP impact and outcome indicators. To augment the qualitative information that could be used from the DFAP PE, findings were also drawn from the primary data collected for the 2017 Qualitative Baseline Study.

Qualitative Baseline Study: The QS was designed specifically to collect BL data for the 2016-2020 DFSAs. These data collection sites were chosen by the current DFSA IPs (see site selection process below in section 2.2.3. and Annex 6: Data Collection Sites Selected by Implementing Partners and Rationale). Data were collected in July and August 2017. The purposes served by the QS were to:

- Complement findings from the 2017 BL PBS with contextual information to increase and enrich understanding of BL data;
- Provide explanatory information for 2017 BL PBS findings from each sector where appropriate; and
- To serve as a comparison with the situation pertaining to the future PBS 2020 EL data.

Performance Evaluation of the FFP DFAPs: The qualitative PE of the four DFAPs was the final evaluation of the DFAPs covering the years 2012-2016. The data collection sites were selected by Tufts University. Methods for site selection for the PE of the four DFAPs are summarized in section 2.2.3. Data collection for this evaluation was conducted in October and November 2016.

The purposes of the PE were to:

- Evaluate the individual effectiveness of each of the four DFAPs with regard to achieving program objectives and targets, including their crosscutting objectives, and evaluate their contribution to USAID’s effort to improve food security of the target population in the project areas;
- Evaluate changes (results) produced by the programs—intended and unintended, direct and indirect; and
- Provide specific recommendations on aspects of design, sustainability strategies, and implementation approaches that the FFP and Mission should consider in the design and development of future programs in Ethiopia.

2.2.2 Qualitative Data Collection Sites Used for the Endline Study

There are 11 qualitative data collection sites from the DFAP PE that qualified for incorporation into the EL study. To qualify, the qualitative data sites had to be included as part of the PBS sample used for this EL study either as woredas having overlap with both 2012 BL and 2017 EL data, or as woredas included in the EL sample covered by the DFAPs having no overlap with current DFSAs (see Table 4). Two of the 11 sites were also part of the sample of data collection sites covered by the QS conducted for the DFSA baseline study.

Table 4. Qualitative Data Collection Sites Used for the Endline Study by Site Classification and Data Source

#	IP	Region	Woreda	Kebele	Site Classification		Data Source (QS 2017, PE 2016)
					EL Only	EL/BL Overlap	
1	FH	Amhara	Lay Gayint	Sofiya Meda and Mekubia		*	QS 2017-Both kebeles were also included in the PBS sample
2	FH	Amhara/South Gonder	Simada	Engudad		*	PE 2016 – Woreda only
3	REST	Tigray/Southern Tigray	Raya Azebo	Ebo:	*		PE 2016 – Woreda only
4	REST	Tigray/Eastern Tigray	Gula Mekeda	Marta:		*	PE 2016 – Woreda only
5	REST	Tigray/Eastern Tigray	Hawzen	Freyoyini and Debreselam:		*	PE 2016 – Woreda only
6	REST	Tigray/Central Tigray	Kola Tembien	Bega Sheka:		*	PE 2016 – Woreda only
7	REST	Tigray/Central Tigray	Tanqua Abergele	Sheka Teli	*		PE 2016 – Woreda only
8	WV	Amhara/Wag Hemra	Sekota	Hamusit		*	PE 2016 – Woreda only
9	WV	Amhara/North Wollo	Lasta	Bilbala		*	PE 2016, QS 2017 The kebele was also included in the PBS sample
10	CRS	Oromia/East Hararghe	Mete	Hawi Bilisuma	*		PE 2016
11	CRS	Dire Dawa	Dire Dawa	Adada	*		PE 2016

2.2.3 Sample Design, Data Collection Methods, and Participants

This section presents a summary of the methodology used for the QS conducted in 2017 and for the PE conducted in 2017.³¹

QS Sample

The QS used a purposive sample of eight data collection sites. Each site is defined as a single woreda, two kebeles within that woreda, and two villages, each one administered by one of the two kebeles selected. In total, qualitative data were collected in 8 woredas, 16 kebeles, and 16 villages.

³¹ For full details of the methodology used for the QS, see the Ethiopia Baseline Study Report (2018). The Performance Evaluation of the Four DFAPs Report (2017) provides full details of the methodology used for the PE.

The purposive sample design was based on site location criteria defined by each of the four IPs for their DFSA implementation area. Budget parameters for the entire QS meant limiting the number of locations for data collection to two woredas in the implementation area covered by each of the four IPs (REST, FH, CRS, and WV). IPs were asked to define their own criteria for selecting two woredas in their DFSA implementation area and they selected two kebeles within each woreda to serve as the primary loci of data collection. The four IPs selected two data collection sites that contrasted along several variables. Three of the four IPs (FH, REST, and CRS) selected woredas with different agro-ecological zones and, within woredas, kebeles with different agro-ecological zones at a sub- or more micro-level. Two of the four IPs (FH and REST) chose one woreda that overlapped with the DFAPs within which they implemented from 2012 to 2016, and a new woreda (where they had not previously worked). As a new IP for the current DFSAs, WV could not select sites on that basis. One of the criteria selected by CRS was based on sites implemented by different partners in the CRS consortium. Each IP's selection criteria included a high percentage of PSNP beneficiaries. Following the establishment of their criteria, IPs then selected the actual data collection sites (see Annex 6). Villages in each kebele were selected following the identification of randomly selected villages for the PBS. This was done to ensure that interviews for both the PBS and QS were not conducted in the same village to avoid interview overload.

QS Data Collection Methods and Participants

The qualitative survey was directed by EVELYN's Senior Evaluation Specialist and supported by Green Professional Services, a local firm located in Ethiopia. Green Professional Services arranged logistics and transportation, and provided personnel for data collection, preparation of transcripts, coding, data entry, and analysis. Team members were trained in data collection protocols and the use of each data collection instrument July 1-2, 2017. The teams pretested each instrument on July 3, 2017, and instruments were adjusted based on the results of the pretesting on July 4, 2017. Data collection began on July 5 and ended by August 4, 2017.

Data collection was conducted by two three-person teams comprising a team leader,³² a senior social scientist, and a junior/mid-level social scientist with qualitative data collection experience in rural areas on food security issues. Each team member had fluency in Amharic and in either Tigrinya or Oromo. Team 1 was headed by EVELYN's Senior Evaluation Specialist, and she was accompanied full-time by a local interpreter with fluency in English, Amharic, and Tigrinya. This team collected data in two data collection sites in Amhara in the FH implementation area and in two sites in Tigray in the REST implementation area. Team 2 was led by a local senior social scientist originally from Oromia with extensive experience in qualitative and quantitative data collection in rural agricultural areas of Ethiopia. Team 2 collected data in two sites in Oromia in the WV implementation area, and two sites in the CRS implementation area, one in Oromia and one in Amhara.

The QS conducted group interviews (GIs) with respondents at three levels: woreda, kebele, and village. At the village level, all participants in GIs were PSNP beneficiaries. At the woreda level, GIs were conducted with government officials associated with oversight and administration of PSNP in the kebeles and villages included in the woreda. At the kebele level, GIs were conducted with government officials associated with management and implementation of PSNP in the villages included in their kebele. At the village level, GIs were conducted with PSNP beneficiaries in four separate groups based on demographic characteristics. The four groups included: male heads of household (MHHH); female co-heads of household (FCo-HHH); women heads of household (WHHH); and mothers with infants and/or children under age five (MIC5). For the purpose of this study, WHHH were defined as women either widowed, divorced, or abandoned who head their own household. These households do not have any adult male family members. MIC5 were defined as young mothers age 29 and under. Key informant interviews (KIIs) were conducted with kebele Health Extension Workers (HEWs) to obtain information on gender issues, a more detailed understanding of WASH and MCHN issues in the villages they serve, and their

³² The team leaders were senior social scientists with team leadership experience.

perspectives on how village women understand and use WASH and MCHN practices. KIIs were also conducted with the village chief in each of the 16 villages included in the QS.

The QS questionnaires for GIs with woreda officials and kebele officials, for GIs at the village with MHHH, FCo-HHH, and WHHH, and for the KIIs with village chiefs contained many of the same questions. This was for the purposes of strengthening findings related to those questions during the analysis phase through a triangulation process, but also to highlight differences of opinion and attitude between woreda and kebele officials, and between those of these officials and village respondents. Similarly, many of the same questions in the questionnaire for MIC5 GIs on WASH and MCHN topics were also covered in the questionnaire for KIIs with the kebele HEW to cross-check and contrast responses. The questions for GIs with MHHH and FCo-HHH were all identical to obtain information on gender perspectives and experiences.

DFAP PE Sample Design

The sample for the DFAP PE was based on the selection of woredas. The sample included 20 woredas. In total, data were collected in 20 woredas and 26 kebeles. Information is not provided in the PE Report on the number of villages visited for data collection.

The first stage of sample selection took into account the fact that the number of DFAP woredas varied between IPs. Because the qualitative evaluation also sought to compare performance between IPs, a minimum sample size per IP was required in order to generate meaningful results. Based on the evaluation team's calculus, a minimum number of three woredas had to be chosen per DFAP.³³ The number of woredas selected for the PE by region included 11 in Tigray, 3 in Amhara, and 6 in Oromia/Dire Dawa. The SCUS DFAP was implemented in the Borena Zone of Oromia and in Somali Region. The evaluators noted that they could not choose woredas for data collection in Somali because of security conditions and logistical issues. Accordingly, only one woreda was visited for data collection in the Borena Zone.

Woreda agricultural officials were asked to select kebeles for data collection based on what they viewed as "the best and poorest kebeles."³⁴ There is no information in the DFAP PE report describing how villages were selected for data collection.

DFAP PE Data Collection Methods and Participants

The PE was based on a qualitative design. Data were collected through focus group discussions (FGDs), KIIs, and direct observation techniques.

At the woreda and kebele levels, KIIs were held with government officials in each location from the Kebele Food Security Task Force (KFSTF), the Woreda Food Security Task Force (WFSTF), the Woreda Disaster Risk Management (DRM) staff, and with HEWs and Development Agents (DAs). KIIs were also held with IP DFAP field agents. In each kebele, FGDs were held (one each) with the following groups: male beneficiaries, female beneficiaries, graduates (male and female together), and Permanent Direct Support Beneficiary (PDSBs) (male and female together). Groups were stipulated to be between 7 and 10 respondents but, in some cases, more were present. Presumably FGD participants were from nearby villages.³⁵ In addition, the evaluation team conducted observations of public works. A key aspect of the evaluation was the direct observational assessment of the activities that had been undertaken, taking note of the quality and sustainability of community works and activities, as well as their relevance

³³ The DFAP PE report does not include information regarding whether the actual woredas visited by the evaluation team were purposively or randomly selected. Additionally, the number of woredas selected for data collection for each DFAP IP is not included in the PE report.

³⁴ PE Report of the Four DFAPs, 2017, pg. 17.

³⁵ The DFAP PE report does not include information on villages represented in FGDs that were conducted in each kebele or how these participants were selected.

to different sections of the community. A checklist of questions was prepared, field tested by the entire team working together in the first kebele, and, subsequently, used when assessing such interventions.

2.2.4 Data Preparation, Coding, and Analysis

QS Coding, Data Preparation, and Additional Coding

EVELYN designed a code book with multiple codes for location, administrative level, type of participant or participant group, topic area, and sub-topical areas corresponding to modules in the PBS HH questionnaire. Additional coding was added based on resilience indicators appropriate to resilience analysis. Each data collection instrument was pre-coded with multiple codes. The Code Book and pre-coded data collection instruments were transmitted to a senior qualitative data analyst at Green Professional Services to develop a qualitative database using NVivo.

During data collection, transcripts were prepared for each interview by location and transmitted to Green Professional Services on an ongoing basis for translation into English. Completed transcripts were reviewed by the Green Professional Services General Manager, the Green Professional Services Senior Qualitative Data Analyst, and the EVELYN Study Director. Green Professional Services contacted team leaders and the senior qualitative data specialist from each team to review the English language transcript against the field notes they transmitted, to add missing responses and correct errors, and provide clarification. Following this process, transcript data were then entered into the database according to the Code Book. The analyst developed and applied additional sub-codes based on topics that emerged during the data collection phase.

QS Analytical Procedures

Analysis included the identification of an initial set of broad categories of responses to each group of related questions across all respondents, respondent groups, and data collection sites. In the next stage of analysis, the senior analyst identified distinct themes within each category of responses for each topic and sub-topic and developed narratives based on the thematic analysis. In a subsequent stage, ME&A conducted additional analysis of the data on selected topics. A comparative analysis of responses from woreda officials, kebele officials, and village residents participating in the qualitative study within and across data sites on the issues of recent and current climate shocks, yield and productivity outcomes, and food security was conducted. Within data collection sites, this entailed triangulating responses by respondent categories at the woreda and kebele administrative levels from each of the two kebeles selected for the qualitative study with responses from village resident sub-population groups from each of the two villages selected within the data collection site. These responses were then compared across all eight data collection sites. A comparative analysis was also conducted on issues related to adult female households across data collection sites from WHHH respondents, and where data existed, from woreda and kebele officials. Results of the qualitative analysis were subsequently used to develop findings.

PE Analytical Procedures

According to the PE report, qualitative responses from FGDs and KIIs were analyzed by a group discussion process. Each of the key questions raised in the original statement of work was discussed in turn by the entire evaluation team. *“A balanced response based upon all interviews and group discussions was agreed upon and regional differences noted where these were relevant. The draft balanced response to each question was circulated to all team members to ensure that it correctly captured their observations. This process was repeated for each of the findings, conclusions, and recommendations sections of the Evaluation Report.”*³⁶

³⁶ See Performance Evaluation of the Four Title II DFAPs, 2017, pg. 17.

Mixed-Method Analysis

Mixed-method analysis entails a comparison of the analytical findings from two or more data sources to strengthen findings from the primary data source, in this case, from the PBS EL data. The evaluation design for the QS was structured based on modules from the household questionnaire used by the PBS to purposefully support mixed-method analysis drawing on both data sets. This last stage of analysis was begun by the qualitative analyst who reviewed both sets of findings per topical area to determine if findings from the PBS could be corroborated by the QS or DFAP PE findings. In those instances where they could not, the team looked further into their respective data sets and, in some instances, to other data sources. The EVELYN quantitative and qualitative analysts also collaborated on the integration of findings from the PBS, the QS, and DFAP PE report. The qualitative analyst drew on findings from the QS and DFAP PE report to provide contextual information and explanation for significant statistical findings for each topic. The quantitative analysts then reviewed the integration of these findings and held discussions with the qualitative analyst to refine those statements.

2.3 DATA LIMITATIONS AND ISSUES ENCOUNTERED

2.3.1 Data Limitations

Effects of other donor programs. There were several other ongoing programs in the project implementation areas that may have direct effects on some project indicators. The attribution of effects to any specific program in the area are not able to be discerned.

Limitations of the 2012 baseline study data. The BL study dataset was provided by the prior data collection subcontractor and was used to generate weighted estimates for BL indicators.³⁷ There were some inconsistencies in the dataset with respect to modules administered for children 0-23 months of age. The results for indicators generated for this subgroup do not align with those presented in the BL study report. In addition, weighted estimates could not be generated for BL poverty estimates because the methods used to generate the BL poverty indicators could not be replicated. Due to the complex nature of deriving per capita expenditures and resulting poverty estimates, the BL poverty indicators cannot be directly compared to the EL poverty estimates which makes it difficult to assess changes in poverty status from BL to EL.

Limitations of the qualitative data. The SOW for the DFAP PE was developed to evaluate the performance of the DFAPs. The PE primary areas of focus were: 1) DFAP design and effectiveness; 2) PSNP graduation; 3) gender equality and empowerment; and 4) program management, implementation, and sustainability. As such, the primary focus was not on collecting qualitative data relevant to FFP impact and outcome indicators in each sector. To augment the qualitative data from the DFAP PE report, the EL study team drew from findings from the QS for explanations of PBS EL data for topics that the DFAP PE report did not cover.

Validity and reliability of self-reported data. Much of the data collected for the household PBS were self-reported, which has several limitations, such as: the possibility of exaggeration or omission of information; inaccurate recollection of experiences or events; social desirability bias or reporting of untruthful information; and reduced validity when respondents do not fully understand a question. These same limitations may apply to qualitative data collected through KIIs and GIs. However, to reduce the likelihood of these potential effects on validity and reliability, the analysts triangulated the PBS findings with the qualitative study findings which were themselves strengthened by a process of triangulating responses from different respondent groups. Specifically, problems with validity and reliability of qualitative data were minimized by the study design which asked the same or very similar questions

³⁷ The 2012 BL study did not use weighted analyses and sampling weights were unavailable. After communication with the BL study authors, sampling frames were provided and weights were constructed based on these sampling frames and the three stage multi-cluster sampling methodology.

during GIs with woreda and kebele officials and at the village level with MHHHs, FCo-HHHs, and WHHHs.

Incomplete coverage of Oromia and Somali Regions. Coverage of CRS DFAP implementation areas in Oromia woredas selected for the PE was limited by widespread unrest in the region during the field work period in 2016. The national state of emergency imposed by the GOE in response to this unrest exacerbated limited access to certain CRS iareas. Accordingly, Meta was the only woreda in Oromia included in the DFAP PE, placing a strong limitation on the PE team’s ability to produce findings from this region. CRS areas in Somali could not be included because of unrest (DFAP PE Report, 2017).

2.3.2 Issues Encountered

Compact schedule. In order to collect EL data during the same season as the prior BL study, it was necessary to complete the PBS data collection for the joint BL/EL by mid-August 2017. Because of the delayed timing of the EVELYN contract award, the timeframe for the survey was compressed, resulting in tight deadlines for the pre-survey activities. These activities included the: EL workshop; ethical review application; listing training and exercises; questionnaire pretest and modifications; CAPI programming and testing; interviewer and supervisor trainings; and pilot testing. Despite the above challenges, data collection was completed on time as planned with a 97 percent household level response rate. The QS faced the same challenges requiring a rigorous seven-day work week throughout the scheduled data collection period to complete all interviews on schedule in eight data collection sites.

Data transmission and Internet connectivity issues. There were periods throughout the training and fieldwork where the entire Internet was down due to government restrictions which created problems with transmission of PBS data from the field teams to the central office. Backup storage devices were used to temporarily store data during these Internet outages. The teams collecting data for the qualitative study encountered similar issues. To counter this problem, transcripts were transmitted from regional airports where Internet coverage was stronger to the Green Professional Services headquarters in Addis Ababa.

3. FINDINGS

The EL PBS findings are described in the following sections: 1) characteristics of the population; 2) food security and poverty; 3) WASH; 4) agriculture; 5) women’s health and nutrition; 6) children’s health and nutrition; and 7) gender. Each section discusses the findings from the EL PBS, the comparison between EL and BL, where relevant, and the supporting data from the qualitative study and secondary data sources as related to the relevant FFP indicators. Annex 8a provides a tabular summary of all indicators and indicator disaggregation along with sampling statistics.

3.1 CHARACTERISTICS OF THE STUDY POPULATION

This section presents the characteristics of the household head, the composition of households, and the educational attainment of individuals in the three DFAPS at BL and EL.

Table 5 illustrates BL-EL comparison of the household head characteristics. There was no change in the sex of the household head in FH but the percent of female-headed households increased in CRS from 5 percent at BL to 19.2 percent at EL. There was a modest increase in the percentage of female-headed households in REST from 21.8 percent to 28.9 percent. In all three project areas, most households at EL are headed by males (CRS, 80.8 percent; FH, 75.2 percent; REST, 71.1 percent). The age distribution of the head of households generally remained the same over time in the three DFAP implementation areas. The mean age of household heads remained relatively unchanged since BL in FH but increased in CRS and FH. Average household size decreased in all DFAP areas.

Table 5. Baseline-Endline Comparison of Household Head Characteristics, Ethiopia 2012 & 2017

	CRS			FH		Sig	REST		Sig
	Baseline 2012	Endline 2017		Baseline 2012	Endline 2017		Baseline 2012	Endline 2017	
Sex									
Male	95.0	80.8	***	77.6	75.2	ns	78.2	71.1	**
Female	5.0	19.2	***	22.4	24.8	ns	21.8	28.9	**
Age (years)									
16-24	4.1	7.4	***	3.0	5.1	*	2.1	3.6	**
25-34	29.2	24.7	†	18.0	18.2	ns	16.9	16.1	ns
35-44	37.6	22.8	***	22.0	21.5	ns	26.6	21.6	*
45-54	17.9	17.5	ns	24.1	19.9	*	21.7	17.9	*
55-64	11.2	14.5	***	32.9	17.4	*	32.7	17.9	ns
65+	N/A	13.2	***	N/A	17.9	***	N/A	22.9	***
Mean age (years)	39.0	44.1	***	47.0	47.7	ns	47.0	50.1	*
Marital Status									
Married/Living Together	94.5	79.9	***	75.6	73.5	ns	79.6	71.2	***
Divorced/Separated	0.5	5.5	***	1.8	12.1	ns	0.5	11.8	ns
Widowed	1.0	13.6	***	11.8	11.6	ns	10.1	15.8	***
Never Married/Lived Together	4.0	1.1	†	10.8	2.9	ns	9.8	1.2	ns
Educational attainment									
Never attended	N/A	56.9	ns	N/A	75.1	***	N/A	65.0	***
Church/mosque school/traditional	16.6	N/A		46	N/A	***	20.4	n/a	***
1st cycle primary (1st - 4th grade)	39.6	22.3	**	26.2	13.3	**	35.1	18.1	ns
2nd cycle primary (5th - 8th grade)	34.5	16.2	ns	20.6	8.6	ns	31.6	12.8	ns
Secondary level education (9th - 10th grade)	7.1	4.2	ns	5.8	2.8	ns	10.4	3.8	
Above 10th grade	2.2	0.5	ns	1.5	0.2	*	2.5	0.3	*
Average household size	5.8	5.0	ns	4.8	4.3	**	5.5	4.7	*
Number of households	1,523	1,497		1,530	2,141		1,542	1,586	

*** p<0.001, ** p<0.01, * p<0.05, † p<0.10, ns = not significant

Source: FFP Endline Survey, Ethiopia 2017. BL estimates were re-calculated to include sampling weights and therefore differ from the estimates provided in the BL study.

3.2 HOUSEHOLD FOOD SECURITY, POVERTY, AND LIVELIHOODS

This section uses data from the BL and EL household survey where possible to highlight change over time in the food security and poverty status of households. Livelihood activities are discussed since they are related to the food security and poverty status of households and can provide additional context related to the vulnerability of households to food insecurity and poverty.

3.2.1 Household Food Security and Poverty

The USG global food security strategy defines food security as “access to—and availability, utilization, and stability of— sufficient food to meet caloric and nutritional needs for an active and healthy life” (U.S

Government, 2016; 10). This underscores the four pillars of food security: availability, access, utilization, and stability (FAO 2009). To measure household food security, the BL and EL surveys collected data on household dietary diversity (HDDS), the prevalence of moderate or severe hunger and the prevalence of moderate or severe food insecurity.

Household dietary diversity score: The HDDS score is a count of the number of different food groups that households on average consume from a total of 12 food groups. It is both an indicator of food security and a measure of socioeconomic status because wealthier households can afford to grow or consume a wider range of food groups. Table 6a illustrates BL and EL estimates of HDDS and the percentage of households consuming the HDDS food groups by DFAP implementation area. HDDS at EL is statistically significantly higher than at BL in all three DFAP areas, indicating an increase in the number of food groups that households consume but also underscoring moderate access to food.

In all three project areas cereals continued to be the top contributors to household diets and remained unchanged from BL to EL. Household intake of animal protein—namely, meat and poultry—increased in the FH and REST project areas but decreased in the CRS area. On the other hand consumption of fish and seafood decreased in FH and REST. In all three DFAP areas, the consumption of eggs and milk or milk products increased from BL to EL. In CRS, the percentage of households consuming roots and tubers increased from 23.7 percent to 38.2 percent and more than doubled in FH from 6.2 percent to 14.7 percent, but decreased in REST from 27.4 percent to 10.3 percent. In REST, the consumption of vegetables showed a large increase from 18.8 percent at BL to 73.5 percent at EL. Increases in the consumption of vegetables were more modest in CRS and FH. Consumption of miscellaneous foods such as condiments, coffee, tea, etc. increased in all three DFAP areas.

Table 6a. Baseline-Endline Comparison of HDDS and Food Groups, Ethiopia 2012 & 2017

	CRS			FH			REST		
	Baseline 2012	Endline 2017	Sig.	Baseline 2012	Endline 2017	Sig.	Baseline 2012	Endline 2017	Sig.
Average Household Dietary Diversity Score	3.9	4.8	***	3.1	4.3	***	4.8	5.5	***
Household dietary diversity score food groups									
Cereals	97.4	97.0	ns	98.4	98.5	ns	96.4	96.3	ns
Roots and tubers	23.7	38.2	**	6.2	14.7	***	27.4	10.3	***
Vegetables	38.8	42.3	ns	5.2	17.6	***	18.8	73.5	***
Fruits	9.6	7.5	ns	1.4	3.8	**	11.6	29.4	***
Meat and poultry	2.5	0.9	*	0.7	7.0	***	3.2	9.5	***
Eggs	6.4	4.0	†	1.5	7.9	**	7.8	17.0	***
Fish and seafood	2.0	0.1	†	0.8	0.1	*	2.5	0.2	***
Pulses/legumes/nuts	30.7	33.2	ns	63.0	88.6	***	74.4	65.1	*
Milk and milk products	30.5	44.6	***	4.2	8.8	***	11.1	14.4	ns
Oils/fats	59.2	69.1	†	40.8	68.6	***	75.3	78.3	ns
Sugar/honey	48.1	50.0	ns	13.9	20.3	**	73.1	59.9	***
Miscellaneous (coffee, tea, condiments, etc.)	35.1	93.9	***	69.1	97.9	***	82.6	99.2	***
Number of responding households	1,519	1,463		1,512	2,141		1,510	1,489	

*** p<0.001, ** p<0.01, * p<0.05, † p<0.10, ns = not significant

NOTE: T-tests were used to assess the statistical significance of the difference between the BL and EL estimates for HDDS. Chi square tests were used to assess the statistical significance of the difference between the BL and EL estimates for household consumption of the food groups.

Source: FFP Endline Survey, Ethiopia 2017. BL estimates were re-calculated to include sampling weights and therefore differ from the estimates provided in the BL study.

Findings from the Tufts DFAP PE state that one area of clear improvement is dietary diversity, noting that the DFAPs enhanced dietary diversity among some households. In some DFAP implementation areas such as Oromia, CRS promoted household backyard gardens for cultivating vegetables and fruits. Where these were established and maintained, given sufficient rain, they made a contribution to dietary diversity. However, the PE also reported their finding dietary diversity among the poorest remains a problem, especially for large households and for PSNP PDSB.³⁸ FGD participants from PDSB households noted that prior to PSNP they normally consumed food from only two food groups, but benefited from access to three food groups during the first years of the program. When PSNP 4 reduced food distribution packages to two food groups, the dietary diversity of these households declined.

Food Insecurity: The household hunger scale (HHS) was used to measure the prevalence of hunger at BL. It captures household food insecurity in the four weeks prior to the survey based on three questions: 1) In the past [4 weeks/30 days] was there ever no food to eat of any kind in your house because of lack of resources to get food?; 2) In the past [4 weeks/30 days] did you or any household member go to sleep at night hungry because there was no enough food?; and 3) In the past [4 weeks/30 days] did you or any household member go a whole day and night without eating anything at all because there was no enough food? The BL results for the HHS indicate that about one-quarter of households in CRS (22.6 percent) and FH (26.8 percent) experienced moderate or severe hunger at BL. The prevalence of hunger was lower in REST at 12.1 percent.

At EL, the food insecurity experience scale (FIES) was used to measure the prevalence of moderate or severe food insecurity for two different reference periods—30 days and 12 months prior to the survey. The FIES is based on a more diverse battery of questions and due to methodological differences, cannot be compared to the HHS. Although a BL-EL comparison cannot be performed, the FIES-based EL estimates give context to the household food insecurity situation in the DFAP areas at EL.

As illustrated in Table 6b, overall, more than one-third of households (36.9 percent) experienced moderate or severe food insecurity in the 30 days prior to the survey and close to one-half (53.5 percent) in the past 12 months. The higher rate of moderate or severe food insecurity experienced in the past 12 months (compared to the 30 days prior to the survey) includes the food gap months which occur between sowing of seeds for crop cultivation and the period before those crops can be harvested, and this period can be extended in areas experiencing poor yields or crop failure because of weather events. Price increases in basic food commodities following poor and failed harvests contributes to the prevalence of hunger.³⁹

The overall average masks differences between DFAP implementation areas. In both reference periods, the CRS area experienced the highest food insecurity (63.7 and 76.7 percent) and the REST area experienced the lowest food insecurity (30.9 and 46 percent). The prevalence of hunger in the FH project area is similar to that of the REST area (30.4 percent and 50.2 percent, respectively). In all three DFAP areas and for both reference periods, the prevalence of hunger was highest among adult female-only households and lowest among adult male-only households. The high rate of food insecurity among adult female-only households compared to other type of households is corroborated by findings from qualitative data sites included in the QS. An overview of the factors that underlie the higher rate of food insecurity experienced by these women is found in the Ethiopia BL study (2018).⁴⁰

The significantly higher rate of food insecurity in the CRS DFAP implementation areas of Dire Dawa and Oromia can be explained by the extensiveness of severe drought. The FEWS NET Ethiopia food

³⁸ PDSB households do not have any able-bodied workers. Under PSNP 4, the number of food distribution packages/cash distributions provided to PDSB households increased from six months per year to 12 months per year.

³⁹ See FEWS NET Food Security Outlook Reports from the years 2011, 2012, 2013, 2014, 2015, and 2016. These reports include data on price increases in basic crops consumed by households in rural areas.

⁴⁰ See Ethiopia Baseline Report, 2018, for a discussion. The Derg Regime recognized the vulnerable status of women headed households and addressed their situation in implementation of a major land reform enacted in 1976. Or else it is through the implementation procedures used by village committee to implement the land reform.

insecurity outlook map in the regions of Ethiopia covering February-May 2016 indicates greater surface area covering central and eastern Oromia designated as experiencing high food insecurity, and a greater area designated as extreme food insecurity, compared to the regions of Amhara and Tigray. In 2016, the zones of East Hararghe and West Haraghe were expected to face extreme food insecurity based on poor harvests in 2015 and reduced income from labor and livestock. These two zones were in the CRS DFAP implementation area in Oromia. Dire Dawa was also shown as an area expected to experience extreme food insecurity. These conditions were expected to remain through September 2016.⁴¹ In addition to the greater severity of drought in Dire Dawa and Oromia, the Tufts DFAP PE report notes because family sizes in these areas are large, households experience larger food gaps compared to Tigray and Amhara.

Table 6b. Prevalence of Moderate or Severe Food Insecurity (FIES), Ethiopia 2017

	Overall	CRS	FH	REST
Prevalence of moderate or severe food insecurity based on 30-day recall (FIES)	36.9	63.7	30.4	30.9
Male and female adults	35.3	62.6	28.6	28.2
Adult female, no adult male	44.7	72.4	39.4	41.3
Adult male, no adult female	33.9	59.7	24.1	30.6
Child, no adults				
Prevalence of moderate or severe food insecurity based on 12-month recall (FIES)	53.5	76.7	50.2	46.0
Male and female adults	51.8	76.2	48.4	43.2
Adult female, no adult male	61.8	80.7	60.1	57.8
Adult male, no adult female	48.4	75.6	40.0	41.4
Child, no adults	N/A	N/A	N/A	N/A
Number of responding households	5,224	1,497	2,139	1,588
Adult female, no adult male	4,170	1,244	1,688	1,238
Adult male, no adult female	857	187	361	309
Male and female adults	187	64	87	36
Child no adults	10	2	3	5

*Too few cases to include estimates for child only households.

Source: FFP Endline Survey, Ethiopia 2017.

Within DFAP implementation areas there exist a diversity of household situations and agro-ecological zones affecting prevalence of hunger and levels of food security. For example, PSNP beneficiary households with five or fewer members experienced greater food security because the standardization of the amount of food provided under food distribution packages based on a five-member household introduced under PSNP 4 covers their needs for at least part of the year. As mentioned, larger families, more frequently found in Oromia and Dire Dawa, experience greater food insecurity and longer periods of food gaps. Households in PSNP woredas that were graduated by quota under PSNP 3, and especially those that were graduated on this basis that have over five people, were among the most food insecure. Not only did they lose PSNP benefits, but they also lost the benefits from DFAP programming.

The 2017 DFAP PE reports a finding based on FGDs with villagers and with kebele food security task forces in indicating that in the last year of the DFAP program, the effects of the severe 2015-2016 drought resulted in households losing many of the gains they made toward their food security over the previous years. The PE also reports that in the highlands area, crop failures extended the months of household food gaps. This effect was compounded in PSNP beneficiary families with over five household

⁴¹ The FEWSNET food security outlook map is found in the Ethiopia Complex Emergency Fact Sheet #7, March 30, 2016.

members once the size of the food distribution package was reduced and in households that were graduated by the GOE quota-based system between 2012 and the early years of 2015 (see Section 2.1.1, Factors Affecting Food Security Situation 2012-2016). Households that were better able to withstand the effects of this drought included PSNP households with five or fewer members that remained under the PSNP program spanning the five-year period covering 2012-2016. However, even many of the households that graduated from PSNP according to program criteria based on achieving food self-sufficiency had to rely on emergency relief. The severity of El Nino effects from 2015-2016 also varied by agro-ecological zones in GOE hotspot areas as well as in agro-ecological zones within DFAP implementation areas. In more lowland areas for example, the severity and length of drought leading to crop failure was much more serious compared to midland and highland areas. For example, in the woreda of Lasta (Amhara region), GIs with kebele officials and in villages with MHHH related that because of rain shortages starting before the 2015-2016 drought, they had not been able to cultivate their land for four years, and were totally dependent on government support from PSNP.⁴² Major flooding from the highlands led to crop failure or greatly reduced crop yields in the highlands and downstream in midland areas (USAID 2016, Ethiopia Baseline Report 2018).

Poverty: FFP projects aim to improve nutrition and food security for vulnerable households in the project area. Poverty indicators are calculated based on household consumption expenditures, which include foods, non-food items, durable goods, and rent or rental equivalence. Food consumption expenditures account for items that are purchased, home-grown, or received in-kind. Typically, the poverty indicators are calculated after adjusting consumption expenditures to the size. Household consumption expenditures are used as a proxy for income and provide a measure of the poverty status for each household relative to the international defined daily per capita threshold for extreme poverty.⁴³ In October 2015 the World Bank announced a shift from the \$1.25 line using 2005 purchasing power parity (PPP) rates to a new international poverty line of \$1.90 per capita per day using 2011 PPP rates. See Annex 4 for a detailed explanation and methodology for calculating the poverty indicators.

There are several methodological differences in the calculation of the BL and EL poverty indicators that makes it difficult to make comparisons between them. The EL poverty estimates are based on a broader range of food and non-food consumption expenditures and a more detailed approach to estimating housing expenditures compared to the BL data. The estimation of the EL poverty indicators is based on the World Bank's LSMS approach. The approach used to aggregate the BL data on consumption expenditures and to estimate the prevalence of poverty at BL is not fully documented in the BL study report.

However, here are some of the major methodological differences in the calculation of the BL and EL poverty indicators:

1. The BL survey gathered information on household consumption of 58 food items while the EL covered 172 food items. The EL collected data on the monetary value of food consumed that came from own production and that was received in-kind. Thus, the EL estimate for daily per capita consumption expenditures, which is the basis for determining the percentage of poor households and depth of poverty, includes the value of food consumed that was purchased on the market, homegrown, or received in-kind. On the other hand, the BL survey did not collect data on the monetary value of food consumed that came from own production or received in kind.
2. The EL survey collected information on a diverse range of non-food consumption expenditures including detailed information on education and health expenses (74 items in total including the breakouts for specific education and health expenses). On the other hand, the BL survey

⁴² See Ethiopia Baseline Report, 2018.

⁴³ Income in most developing countries and rural areas is difficult to measure due to the limited and often seasonal nature of cash earning opportunities. In comparison, expenditure data are typically less prone to recall error and more evenly distributed over time than income data.

collected information on a less diverse range of non-food expenditures (35 items into some of which can be lumped in same group—e.g., clothing and shoes for women/men and boys/girls).

3. The EL survey collected information on rent and detailed information needed to impute a rental equivalent for individuals who own their home. The BL survey collected information on rent only, but not rental equivalence for homeowners.

More comprehensive information on household consumption expenditures that was collected at EL can contribute to a higher consumption aggregate at the per capita level, which could lead to a lower estimate of the prevalence of poverty.

At BL, the daily per capita consumption expenditures (adults only) was highest in REST [\$1.86 constant 2010 United States Dollars (USD)], followed by CRS (\$1.71 constant 2010 USD), and lowest in FH (\$1.36 constant 2010 USD). Relatedly, the prevalence of poverty was lowest in REST (35 percent) and highest in FH (57 percent). The prevalence of poverty at BL in CRS was 45 percent.

Table 6c illustrates variability between the DFAP areas in the poverty estimates at EL. The EL poverty estimates are presented based on adult members in the household only and using the \$1.25 threshold for extreme poverty with 2005 PPP rates. Daily per capita consumption expenditures (adults only) in all three DFAP areas was \$2.40 (constant 2010 USD) With the exception of the REST area, adult male only households have the highest daily per capita consumption expenditures, lowest prevalence of poverty, and lowest mean depth of poverty. At EL, the prevalence of poverty was highest in FH (24 percent) and REST (21.5 percent) and lowest in CRS (14.4 percent). The depth of poverty across the three DFAPs was 5.4 percent of the poverty line.

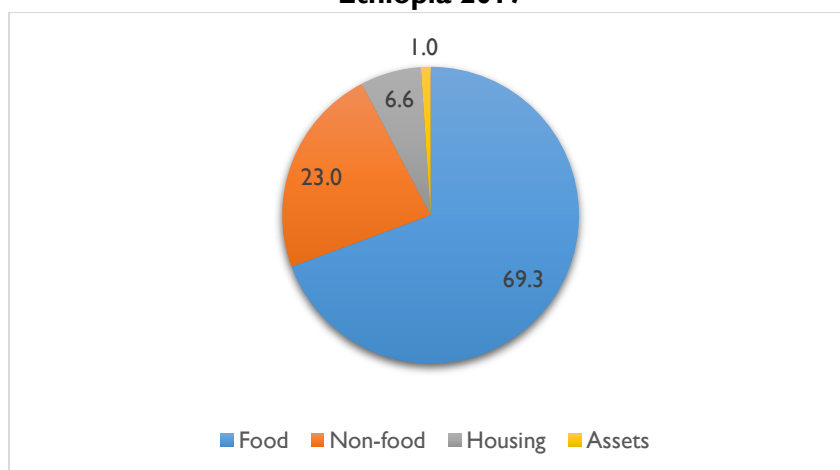
Table 6c. Endline Estimates of Poverty Indicators, Ethiopia 2017

	ALL	CRS	FH	REST
Per capita expenditures (adults only) (as a proxy for income) of USG-assisted areas	\$2.40	\$2.80	\$2.26	\$2.35
Male and female adults	\$2.37	\$2.76	\$2.24	\$2.31
Adult female, no adult male	\$2.54	\$3.08	\$2.22	\$2.66
Adult male, no adult female	\$2.79	\$3.48	\$2.92	\$2.14
Child, no adults*	N/A	N/A	N/A	N/A
Prevalence of poverty: Percent of people (adults only) living on less than \$1.25/day	21.1	14.4	24.0	21.5
Male and female adults	21.2	14.8	23.6	22.1
Adult female, no adult male	20.4	13.2	29.3	15.0
Adult male, no adult female	18.2	1.3	17.0	30.9
Child, no adults*	N/A	N/A	N/A	N/A
Depth of poverty: Mean percent shortfall relative to the \$1.25 poverty line	5.4	3.9	6.3	5.2
Male and female adults	5.4	3.9	6.2	5.4
Adult female, no adult male	5.7	3.8	8.1	4.1
Adult male, no adult female	3.5	0.4	4.1	4.6
Child, no adults*	N/A	N/A	N/A	N/A
Number of adult household members in responding households	11,655	3,277	4,707	3,671
Male and female adults	10,411	2,992	4,176	3,243
Adult female, no adult male	1,022	213	432	377
Adult male, no adult female	222	72	99	51
Child, no adults*	N/A	N/A	N/A	N/A

N/A=Not applicable. *Too few cases
Source: FFP Endline Survey, Ethiopia 2017.

The distribution of average daily per capita consumption expenditures at EL are presented in Figure 1. In the combined DFAP area food consumption expenditures account for the largest share of daily per capita consumption expenditures (69.3 percent), followed by non-food (23.0 percent), housing (6.6 percent), and durable goods (1 percent). These expenditures patterns were similar across the three project areas.

Figure 1. Distribution of Average Daily Per Capita Expenditures, Combined Project Areas, Ethiopia 2017



Source: FFP Endline Survey, Ethiopia 2017.

The preponderant share of household expenditures on food underscores households' poor economic status and the allocation of household consumption expenditures to food appears to be unchanged since the baseline (Table 6d).

Table 6d. Baseline-Endline Comparison of the Share of Food Consumption Expenditures, Ethiopia 2012 & 2017

	CRS		FH		REST	
	Baseline 2012	Endline 2017	Baseline 2012	Endline 2017	Baseline 2012	Endline 2017
Percentage share of food expenditures	71.9	72.8	77.1	72.3	77.1	65.4

Source: FFP Baseline Study 2012 & Endline Study 2017.

NOTE: The BL estimates are reported as average annual per capita consumption expenditures while the EL estimates are reported as average daily per capita consumption expenditures.

3.2.2 Livelihood Activities and Other Sources of Income

Household food security and poverty are closely related to livelihood and other income opportunity options available to households. Table 7 presents the distribution of households by types of livelihood activities and other sources of income. Because the BL report did not provide information on livelihood activities, only EL estimates are provided and are intended to add additional context to help explain the economic strategies and status of households in the project areas.

The majority of households engage in two or more livelihood activities for sources of income, primarily to purchase food for the household (see Table 7). For analytical purposes, livelihood activities are divided into three broad groups: agriculture-related livelihoods, non-agriculture related livelihoods, and wage labor. The survey data do not distinguish between wage labor done in agriculture and non-agriculture settings. Qualitative findings indicate that most wage labor households engage in is seasonal work in the agricultural sector on larger farms or on commercial farms outside their immediate areas.

Remittances, gifts or inheritance, and safety net food or cash assistance are considered as other sources of income.

Table 7. Households by Type of Livelihood Activity and Other Sources of Income in the Year Preceding the Survey (percentage), Ethiopia 2017

	CRS	FH	REST
Agricultural activities	97.8	91.6	94.5
Farming/Crop production and sales	93.3	90.5	92.8
Livestock production/fattening and sale	56.9	35.0	42.7
Honey production and sales	1.7	2.6	5.7
Other self-employment/Own bus (agri.)	17.0	3.0	1.5
Non-agricultural activities	23.2	29.4	22.2
Petty trade (selling other products)	6.1	5.6	4.8
Petty trade (selling own products)	2.0	6.1	2.6
Sale of wild/bush products	11.6	5.7	0.7
Rental of land, house, rooms	0.9	5.7	3.3
Salaried work	2.2	7.4	5.9
Other self-employment/Own bus (non-agri.)	1.6	2.3	6.6
Wage labor	34.8	22.1	39.8
Wage labor (within the community)	24.6	11.1	23.4
Wage labor (outside the community)	14.8	13.7	21.9
Other sources of income	35.4	52.7	61.3
Remittances	4.6	5.1	4.7
Gifts/Inheritance	5.5	4.1	11.0
Safety net food/Cash assistance	27.1	40.5	54.3
Other (specify):	2.2	7.1	3.5
Number of responding households	1,498	2,141	1,588

Source: FFP Endline Survey, Ethiopia 2017.

The majority of rural households in DFAP implementation areas are agro-pastoralists or pastoralists. Unsurprisingly, the overwhelming majority of households in CRS (97.8 percent), REST (94.5 percent), and FH (91.6 percent) project areas are involved in agricultural activities for their livelihood. While the majority of agricultural income is from crop production and sales, Table 7 also shows the importance of livestock to the rural economy.

More than one-third of the households in REST (39.8 percent) and in CRS (34.8 percent) also engage in wage labor as a source of income. In FH, the percentage of households engaged in wage labor is also sizeable (22.1 percent), but significantly less than that found among households in CRS and REST. Depending on the season, daily wage labor in the agricultural sector includes preparation of land for cultivation, weeding, and harvesting. These sources of income are pursued after households harvest their own crops and before the next cultivation season. In the non-agriculture sector one of the daily wage labor activities reported by men was working on road crews when opportunities were available in their area. Qualitative findings from the 2017 QS also showed that in Lasta (Amhara) some young unmarried women migrate seasonally for work in factories.

Engagement in non-agricultural activities provides an additional source of income for households. Just under 30 percent (29.4) of households in FH, and in CRS and REST similar percentages of households, engage in non-agricultural activities for income (respectively 23.2 percent and 22.2 percent). However, except for FH, the predominant source of livelihood activities after engagement in agricultural activities is from wage labor. In CRS and REST, wage labor activities predominate over non-agricultural activities (34.8 percent versus 23.2 percent in CRS, and 39.8 percent versus 22.2 percent in REST). In contrast,

the percentage of household engaged in non-agricultural activities for income in FH is higher than the percentage of households engaged in wage labor (29.4 percent versus 22.1 percent).

Sources of income from remittances, gifts, inheritances, and safety net/cash assistance are very important to the household economy. They comprise a source of income to over 60 percent (61.3 percent) of households in REST, over half in FH (52.7 percent), and over 30 percent of households in CRS (35.4 percent). The most important source of income among these categories is from safety net/cash assistance,⁴⁴ clearly showing how critical government assistance is to the food security of households in DFAP implementation areas. More than one-half of households in the REST area (54.3 percent) rely on safety net food or cash assistance compared to 40.5 percent of households in FH. Significantly fewer households in the CRS area (27.1 percent) rely on this source.

3.3 AGRICULTURE

This section uses data from the EL household survey to describe the agriculture status of households. The EL survey collected agriculture-related data primarily to estimate FFP agricultural indicators for financial services, value chain activities, and the use of sustainable agricultural practices (for crops, livestock, and NRM) and improved storage practices. These services and practices are expected to directly benefit households and lead to increased food security. The 2012 BL survey did not collect this information so BL-EL comparisons cannot be presented.

The agricultural component of the EL PBS questionnaire was completed by 6,776 farmers in the combined DFAP areas. All individuals in the household who met the definition of a farmer⁴⁵ were interviewed. Of these farmers, about 58.4 percent were male and 41.6 percent were female. In addition to reporting on the core agriculture-related FFP outcome indicators, this section provides an overview of the types of crops planted and livestock raised.

3.3.1 Crop and Livestock Production

Types of Crops Cultivated

Almost all farmers (99.4 percent) planted at least one crop in the 12 months preceding the survey. There is variation in the crops cultivated by project area although farmers in all three DFAP areas planted teff and/or maize. In the CRS area, the major crops cultivated by farmers were maize (75.9 percent), chat (49.4 percent), sorghum (46.1 percent), and millet (24.4 percent). The major crops cultivated by farmers in the FH areas include wheat (73.7 percent), teff (63.2 percent), barley (61.4 percent), legumes (57.9 percent), sorghum (44.5 percent), potato (34.8 percent), and vegetables (23.8 percent). Farmers in the REST area cultivated teff (73.7 percent), maize (60.5 percent), wheat (54.7 percent), sorghum (53.7 percent),/ barley (51.3 percent), millet (39.4 percent), legumes (29.1 percent), and vegetables (23.2 percent).

⁴⁴ There are several sources of safety net food/cash resources. These include PSNP, emergency assistance provided during or immediately after severe weather events such as droughts or flooding, and assistance from GOE contingency funds. Reportedly the major source of emergency assistance is from GOE contingency funds, but contingency funds have also been used as Transitory Assistance for PSNP graduates and other chronically food insecure households that are not enrolled as PSNP beneficiaries. The PBS household survey did not ask respondents to indicate the specific source of safety net food/cash resources.

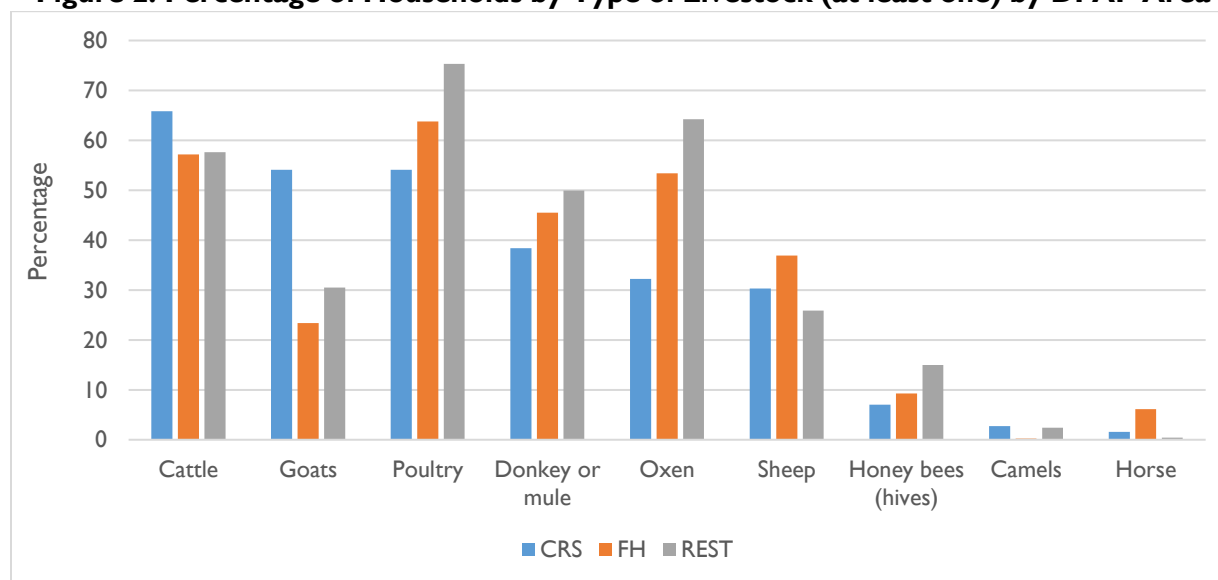
⁴⁵ Farmers, including herders and fishers, are defined as: 1) men and women who have access to a plot of land (even if very small) over which they make decisions about what will be grown, how it will be grown, and how to dispose of the harvest; or 2) men and women who have animals or aquaculture products over which they have decision-making power, or both. Farmers produce food, feed, and fiber, where "food" includes: agronomic crops (crops grown in large scale, such as grains); horticulture crops (vegetables, fruit, nuts, berries, and herbs); animal and aquaculture products; and natural products (e.g., non-timber forest products, wild fisheries). These farmers may engage in the processing and marketing of food, feed, and fiber and may reside in settled communities, mobile pastoralist communities, or refugee/internally displaced person camps. An adult member of the household who does farm work but does not have decision-making responsibility over the plot or animals would not be considered a "farmer."

Male and female farmers generally do not differ in the types of crops they planted, with a few exceptions. Table A9.1, Annex 9 provides details on the type of crops planted by DFAP implementation area and by sex of the farmer.

Types of Livestock Owned

Livestock and livestock production are integral to the household economy as an important source of, labor, food, dairy products, and income. In the highlands and midlands areas, livestock are also viewed as an investment and will be sold when cash needs are high. In pastoral areas of the lowlands, livestock production is the predominant means of livelihood. The majority of households in the DFAP areas reported owning at least one livestock (CRS, 90.7 percent; FH, 86.4 percent; REST, 90.4 percent). All DFAP areas showed some livestock diversity (see Figure 2 and Table A9.2, Annex 9).

Figure 2. Percentage of Households by Type of Livestock (at least one) by DFAP Area



Source: Endline Study, Ethiopia 2017.

3.3.2 Use of Financial Services, Value Chain Activities, Sustainable Agricultural Practices, and Improved Storage Practices

Table 8 provides the estimates for the FFP indicators on financial services, value chain activities, sustainable agricultural practices, and improved storage practices by sex of the farmer.

Table 8. Agricultural Indicators, Ethiopia 2017

	Overall		CRS		FH		REST	
Percentage of farmers who used financial services (savings, agricultural credit, and/or agricultural insurance) in the past 12 months	37.5		17.3		46.9		37.5	
Male	40.3	***	18.6	*	49.6	**	42.8	*
Female	33.5		13.8		42.5		32.3	
Percentage of farmers who practiced the value chain activities promoted by the project in the past 12 months	85.8		81.7		87.7		86.0	
Male	87.8	***	83.3	*	89.8	**	88.6	*
Female	82.3		76.0		83.3		83.1	
Percentage of farmers who used at least three sustainable agriculture (crop, livestock, and/or NRM) practices and/or technologies in the past 12 months	94.7		94.7		94.0		95.3	
Male	97.6	***	96.7	***	97.5	***	98.0	***

	Overall		CRS		FH		REST	
Female	90.8		89.3		88.1		92.5	
Percentage of farmers who used at least three sustainable crop practices and/or technologies in the past 12 months	92.1		87.3		91.9		94.0	
Male	94.1	***	88.7	*	95.2	***	96.0	***
Female	89.0		83.1		86.2		91.8	
Percentage of farmers who used at least three sustainable livestock practices and/or technologies in the past 12 months	71.5		45.9		71.1		79.8	
Male	75.2	***	47.6	ns	76.2	***	86.3	***
Female	66.3		41.4		61.9		73.0	
Percentage of farmers who used at least three sustainable NRM practices and/or technologies in the past 12 months	44.1		30.2		43.9		49.3	
Male	51.9	***	33.4	***	53.8	***	59.7	***
Female	33.2		21.5		27.0		38.9	
Percentage of farmers who used improved storage practices in the past 12 months ⁵	26.1		26.9		23.2		27.9	
Male	27.0	ns	28.4	ns	23.8		29.2	*
Female	24.7		22.4		22.1		26.6	
Number of responding farmers	6,764		1,750		2,681		2,335	
Male	4,104		1,268		1,663		1,168	
Female	2,662		482		1,013		1,167	
*** p<0.001, ** p<0.01, * p<0.05, † p<0.10, ns = not significant								
NOTE: Chi squared tests were used to assess the statistical significance of the relationship between the sex of farmer and core FFP agriculture indicators.								

Source: FFP Endline Survey, Ethiopia 2017.

Financial Services

Increased use of financial services can help farmers to access inputs and other resources to improve agricultural productivity. Farmers are considered to have used a financial service in the 12 months prior to the survey if they reported taking agricultural credit in cash or in-kind,⁴⁶ saved any cash,⁴⁷ or bought agricultural insurance to protect their agricultural production against negative unexpected circumstances such as droughts, floods, or pests. Overall, more than one-third (37.5 percent) of farmers in the project area used at least one financial service (Table 8). Use of financial services varies widely by the project area. Farmers' use of financial services is lowest in CRS (17.3 percent). Compared to CRS, use of financial services is about three times higher in the FH project area (46.9 percent) and about two times higher in REST (37.5 percent). Table A9.2, Annex 9 shows that in FH and REST the most commonly used type of financial service is making cash savings, followed by taking out agricultural credit. In CRS, farmers were as likely to make cash savings as to borrow. In all project areas, the purchase of agricultural insurance is very limited (CRS, 0.8 percent; FH, 0.6 percent; REST, 3 percent).

Value Chain Activities

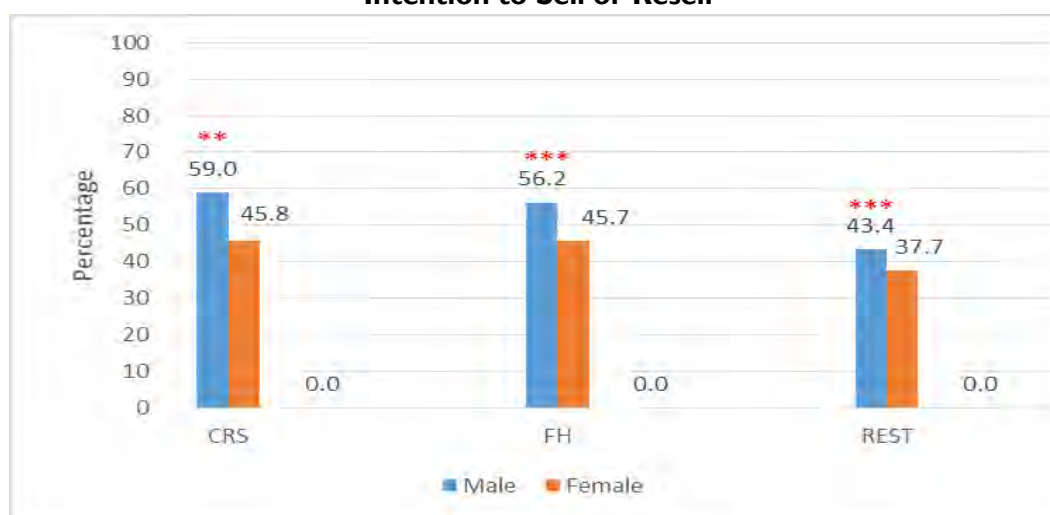
About one-half of farmers in CRS, FH, and REST project areas plant any crops or raise any livestock with the intention to sell or resell them. As illustrated in Figure 3, commercial farming is more

⁴⁶ The survey considered both formal and informal sources of agricultural credit that are locally available which include the following: village savings and credit groups, farmer groups, MFIs, banks, or Rural Savings and Credit Cooperatives (RUSACCO).

⁴⁷ The survey considered both formal and informal saving facilities including the following: village savings and credit groups, MFIs, cooperatives, and mobile banking services.

commonly practiced by male farmers than female farmers and this difference is statistically significant in each of the project areas.

Figure 3. Percentage of Farmers That Plant Crops or Raise/Buy Livestock with the Specific Intention to Sell or Resell



*p<0.05, **p<0.01, *** p<0.001
Source: Endline Study, Ethiopia 2017.

In all three project areas, the majority of farmers engaged in commercial farming practiced at least one value chain activity (CRS, 81.7 percent; FH, 87.7 percent; REST, 86 percent). As shown in Table 8, use of a value chain activity was more commonly practiced by male farmers than female farmers in each of the project areas and this difference is statistically significant ($p<0.01$). The most commonly used value chain practice in the project areas is the purchase of inputs through agro-dealers and/or community associations (64.2 percent), followed by use of feed lots or pen feeding (34.3 percent), use of training and extension services (29.5 percent), and use of formal marketing systems (21.8 percent). Annex 9 Table A9.3b provides the details on the percentage of farmers by type of value chain activity and sex of farmer in each of the DFAP areas.

Sustainable Agricultural Practices

The EL survey asked farmers to report on the use of sustainable agricultural practices or technologies. Sustainable agricultural practices (USAID 2015) were divided into three subcategories: 1) crop practices; 2) livestock practices; and 3) NRM practices (see Table 7). The majority of farmers in the DFAP areas used at least three sustainable agriculture practices. In the combined DFAP implementation areas, farmers are more likely to use at least three sustainable crop practices (92.1 percent) and at least three sustainable livestock practices (71.5 percent) than three sustainable NRM practices (44.1 percent). With the exception of use of sustainable livestock practices in CRS, in each of the project areas male farmers compared to female farmers are generally more likely to use at least three sustainable crop practices three sustainable livestock practices or at least three sustainable NRM practices and these differences are statistically significant.

Use of sustainable crop practices: Use of sustainable crop practices is similar across the three project areas. Table A9.5, Annex 9 indicates that the most common crop practices used by farmers in the combined project areas are weed control (88 percent), crop rotation (77.2 percent), use of manure (68.6 percent), and use of improved fertilizer (65.8 percent). Generally, a similar pattern in the use of crop practices by type is observed across the project areas. Annex 9, Table A9.5 provides details on the percentage of farmers by type of crop practice.

Use of sustainable livestock practices: Use of at least three sustainable livestock practices is highest in REST (79.8 percent) followed by FH (71.1 percent) and is lowest in CRS (45.9 percent). In the combined DFAP areas, farmers most commonly used vaccinations (70.8 percent) and cut and carry systems (63.6 percent). The patterns of most commonly used sustainable livestock practices are consistent across the three project areas, but, in REST, the use of emergency feed reserve (61.1 percent) and deworming (60.2 percent) are also common practice. See Annex 9, Table A9.5 for details on the percentage of farmers by type of livestock practice.

Use of NRM practices: Use of NRM practices ranges between 49.3 percent in REST and 43.9 percent in FH to 30.2 percent in CRS. In the combined DFAP areas, the management or protection of watersheds and catchments is the widely practiced NRM practice (57.3 percent). Table A9.5, Annex 9 illustrates the similarity in the NRM practices used by farmers across the three project areas.

Improved Storage Practices

Improved storage practices refer to cost-effective methods and procedures to store seeds, grains, and animal feed and aquaculture products for the short and long term. These practices help farmers safely store excess harvest for subsequent sale, consumption, or propagation of plant material, such as seeds for future planting. Specific practices included in the survey were: hermetic storage; improved granaries; warehousing or cereal banks; use of traps for mice; grain bags with pesticides; and diffused light storage.

Overall, 26.1 percent of farmers used at least one of the improved storage practices in the past 12 months. With the exception of the REST implementation area, generally, use of improved storage practices did not differ by sex of the farmer. The percentage of farmers that use improved storage practices has little to no variation across the DFAP areas (see Annex 9, Table A9.6).

3.4 WATER, SANITATION, AND HYGIENE

Poor WASH practices are associated with increased morbidity and mortality, particularly for diarrheal diseases. In addition, a fecal-contaminated environment is associated with chronic undernutrition, poor gut health, and suboptimal absorption of nutrients.⁴⁸ Worldwide, it is estimated that improved water sources reduce diarrheal morbidity by 21 percent, improved sanitation reduces diarrhea morbidity by 37.5 percent, and the simple act of washing hands at critical times can reduce the number of diarrhea cases by as much as 35 percent.⁴⁹

Water Shortages

In 2015, the GOE led assessment in May of that year reported that 1.6 million Ethiopians required emergency water support due to major drought related shortages affecting the country at that time.⁵⁰ As the drought continued, a GOE-led assessment in early 2016 reported approximately 5.8 million people lacked access to WASH services. As of March 2016, relief organizations had provided emergency water trucking services to approximately 1.1 million people with plans to reach up to 3 million people.⁵¹ Although the wide spread drought of 2015-2016 ended, water shortages persisted in 2017 in many of the GOE hotspot areas due to insufficient rainfall. According to GIs conducted with woreda and kebele officials in Oromia for the QS, some areas experienced several years of no rainfall at all. It is within this context that the WASH findings must be understood.

⁴⁸ USAID. (January 2015) *WASH and Nutrition: Water and Development Strategy Implementation Brief*. Available at https://www.usaid.gov/sites/default/files/documents/1865/WASH_Nutrition_Implementation_Brief_Jan_2015.pdf.

⁴⁹ WHO. (2004). *Facts and Figures: Water, Sanitation and Hygiene Links to Health*. Available at http://apps.who.int/iris/bitstream/10665/69489/1/factsfigures_2004_eng.pdf.

⁵⁰ Reported in the USAID Ethiopia Complex Emergency Fact Sheet, June 26, 2015.

⁵¹ Reported in the USAID Ethiopia Complex Emergency Fact Sheet, Fact Sheet # 6, March 16, 2016.

3.4.1 Household WASH Practices

Availability and access to water is one of the key determinants of household and community hygienic and sanitation practices. The DFAPs aimed to improve household water, sanitation, and hygiene practices and infrastructure because basic water, hygiene, and sanitation services are vitally important for human health. Both the BL and EL surveys collected information on household use of an improved drinking water source, use of improved sanitation facilities, open defecation, and availability of soap and water at a handwashing station. The EL study also collected data on correct use of water treatment technologies and time to fetch water.

This section provides a comparison of BL and EL estimates for indicators measured at both BL and EL (see Table 9). The EL survey collected information on availability of water in less than 30 minutes and correct use of water treatment technologies whereas the BL did not collect this information. Those results are described to provide additional context to better understand the WASH status of households in the project areas at EL.

Table 9. Baseline-Endline Comparison of WASH Indicators, Ethiopia 2012 & 2017

	CRS		FH			REST			
	Baseline 2012	Endline 2017	Sig	Baseline 2012	Endline 2017	Sig	Baseline 2012	Endline 2017	Sig
Percentage of households using an improved water source ¹	27.2	25.8	NS	47.9	49.8	NS	N/A	44.9	
Percentage of households in target areas practicing correct use of recommended household water treatment technologies	N/A	9.4		N/A	9.0		N/A	15.6	
Chlorination	N/A	4.1		N/A	6.0		N/A	9.0	
Flocculent/Disinfectant	N/A	2.0		N/A	0.9		N/A	5.0	
Filtration	N/A	2.6		N/A	0.9		N/A	0.6	
Solar disinfection	N/A	0.0		N/A	0.0		N/A	0.0	
Boiling	N/A	1.2		N/A	1.5		N/A	1.1	
Percentage of households that can obtain drinking water in less than 30 minutes round trip	N/A	20.4		N/A	30.2		N/A	18.8	
Percentage of households using improved sanitation facilities ²	41.7	6.8	***	23.0	6.6	***	N/A	8.2	
Percentage of households practicing open defecation	38.3	47.5	ns	29.2	44.4	**	N/A	64.8	
Percentage of households with soap and water at a handwashing station commonly used by family members ³	N/A	0.9		8.2	2.0	***	7.6	0.3	***
Number of responding households	1,515	1,498		1,502	2,141		1,531	1,588	

N/A= Not available
 *** p<0.001, ** p<0.01, * p<0.05, † p<0.10, ns = not significant
 NOTE: Chi squared tests were used to assess the statistical significance of the difference between the BL and EL estimates of the WASH indicators.

¹ The BL estimates for use of an improved water source are reported for the wet season and dry season separately, and no overall estimate is provided. The EL survey was collected during the wet season so the results are comparable with the BL estimates for the wet season. BL data for the percent of households using an improved water source in the REST area were not collected.
² BL data for the percent of households using improved sanitation facilities in the REST area were not collected.
³ BL data for the percent of households with soap and water at a commonly used handwashing station in the CRS area were not collected.

Source: FFP Endline Survey, Ethiopia 2017. BL estimates were recalculated to include sampling weights and therefore differ from the estimates provided in the BL study report.

3.4.2 Use of Improved Water Source and Correct Water Treatment

The Joint Monitoring Programme (JMP) for Water Supply and Sanitation defines improved drinking water sources as sources that are protected by the nature of their construction or through an active intervention against outside contamination from fecal matter [WHO/ United Nations Children’s Fund (UNICEF) 2016]. These sources include: water piped into the dwelling, plot, or yard; a public tap or standpipe; a tube well or borehole; a protected dug well; a protected spring; or rainwater collection. An “improved” water source means that a household can access water from the source year-round without experiencing interruptions of a day or longer in a two-week period (USAID 2015).

The BL survey collected information on seasonal differences for drinking water sources during the wet and dry season. The EL survey did not collect information on seasonal differences in the use of improved water sources. Since the EL survey was conducted during the rainy season, the results are comparable to the BL estimates for the wet season only. In the CRS project area, the percentage of households using an improved water source did not change between BL (27.2 percent) and EL (25.8 percent). In the FH project area, the rate remained stable (47.9 percent at BL and 49.8 percent at EL).

Table A9.7, Annex 9 illustrates the source of drinking water at BL and EL by type. A sizeable percentage of households in the project areas rely on public taps and tube wells or boreholes to obtain their water. Many households also get their water from unprotected springs. Results show a decline in access to water from a public tap and standpipe in both CRS and FH. At BL, 42.5 percent of households in CRS and 44.1 percent in FH accessed their water from a public tap in the wet season compared to 28.9 percent and 22.9 percent at EL respectively. In CRS, reliance on unprotected springs is highest; at EL 41.3 percent of households get their water from an unprotected spring, compared to 16.3 percent at BL. At EL, about 3 in 10 households in the combined DFAP areas (29.3 percent) reported that water is not available the entire year around, and 13.7 percent indicated that water from the source was unavailable for a day or more in the two weeks prior to the survey (see Annex 9, Table A9.7); reflecting the extent to which drought conditions persisted in affecting water shortages in 2017.

The EL estimates for the use of water treatment technologies and access to a drink water source in less than 30 minutes underscore that access to water is a challenge. About one in five households (11.8 percent) in the combined DFAP areas use a correct treatment technology or practice. The most commonly used method is chlorination. About one-quarter of households (23.5 percent) can obtain drinking water in less than 30 minutes. This percentage is highest in FH (30.2 percent) followed by CRS (20.4 percent) and lowest in REST (18.8 percent).

3.4.3 Handwashing Practices

In the combined project areas, the percentage of households with soap and water at a commonly used handwashing station is very low at EL (1.1 percent). The BL data, available from FH and REST, for this indicator were also low (respectively 8.2 percent and 7.6 percent), but by 2017 dropped to 2.0 percent in FH and 0.3 percent in REST. EL data for the CRS DFAP area show only 0.9 percent of households had soap and water at a commonly used handwashing station. The key reason that explains this low percentage is the shortage of water. With recurrent drought occurring from 2010 through 2016, in some years more severe and widespread than in others, water sources have dried up or contracted. The Tufts DFAP PE Report (2017) notes that the availability of water for handwashing outside latrines was a constraint in almost all woredas the evaluation team visited covering Amhara, Tigray, Oromio, and Dire Dawa. The report concludes that WASH messages were well received and understood by DFAP communities, but respondents reported difficulties in implementing WASH practices such as handwashing mainly because of the limited availability of water. However, where spring-capture or dam projects had been implemented or water pumps installed, a greater degree of handwashing practices was noted by the evaluation team. Mothers participating in GIs in the QS (2017) reported that, with the severe shortage of water, the first and most important use for water is drinking.

3.4.4 Improved Sanitation

An improved sanitation facility is defined as a facility that hygienically prevents human contact with human excreta, and must not be shared with other households. This includes: flush to piped sewer system or septic tank or pit latrine; ventilated improved latrine; pit latrine with slab; and composting toilet. Other types of facilities such as flush or pour and flush toilets without a sewer connection, pit latrines without slab, open pits, bucket latrines, and hanging toilets or latrines are considered unimproved. As illustrated in Table 9, sanitation conditions in the implementation areas worsened over time in CRS and FH. Use of an improved sanitation facility declined markedly in CRS from 41.7 percent to 6.8 percent. A sharp decline (but of a smaller magnitude) is also observed in FH where use of an improved sanitation facility decreased from 23.0 percent to 6.6 percent. Although there is a lack of qualitative data from the DFAP PE Report that may explain this decrease, data collected for the QS in 2017 provide findings indicating one of the key factors that most likely contributed to this decline is that the model of toilet used is not durable. They do not stand up to long use before they become broken. Village respondents explained they cannot afford to repurchase the materials necessary for building a replacement toilet (see Ethiopia BL study, 2018). At EL, about half of households in the combined DFAP areas (53.7 percent) practice open defecation. The practice of open defecation in the FH implementation area increased from 29.2 at BL to 44.4 percent at EL. Details on the type of sanitation facility by shared status are provided in Annex 9, Table A9.7.

3.5 WOMEN'S HEALTH AND NUTRITION

This section provides the findings on: women's nutritional status and food consumption practices; contraceptive use and choice of methods; and health care seeking behavior during pregnancy. The EL estimates of women's health and nutrition indicators for the combined DFAP areas and by each DFAP area are summarized in Table 10a. BL estimates are only available for antenatal care (ANC) visits for women's most recent live birth in the last 24 months. Table 10b provides a BL-EL comparison of the percentage of births receiving at least four ANC visits and the results of the test of statistical difference.

Table 10a. Women's Health and Nutrition Indicators, Endline Survey

	Overall	CRS	FH	REST
Prevalence of underweight women ¹	36.2	32.2	29.5	43.5
Prevalence of women of reproductive age who are consuming a minimum dietary diversity (MDD-W) ²	7.9	7.5	3.1	12.1
Contraceptive Prevalence Rate ³	37.3	30.1	40.4	38.0
Modern methods	36.2	27.8	39.9	37.0
Traditional methods	1.1	2.3	0.5	1.1
Number of responding women (15-49 years)	4,937	1,418	1,941	1,578
Number of responding non-pregnant women (15-49 years)	4,494	1,253	1,785	1,456
Number of responding women aged 15-49 who are married or in a union	2,812	845	1,132	835
¹ Percentage of non-pregnant women with a Body Mass Index (BMI) less than 18.5. BMI is defined as weight in kilograms divided by height in meters squared (kg/m ²).				
² A minimum dietary diversity is defined as consumption of 5 or more of 10 food groups in the past 24 hours.				
³ The percentage of women of reproductive age (married or in a union) who are currently using, or whose sexual partner is currently using, at least one contraceptive method, regardless of the method used.				

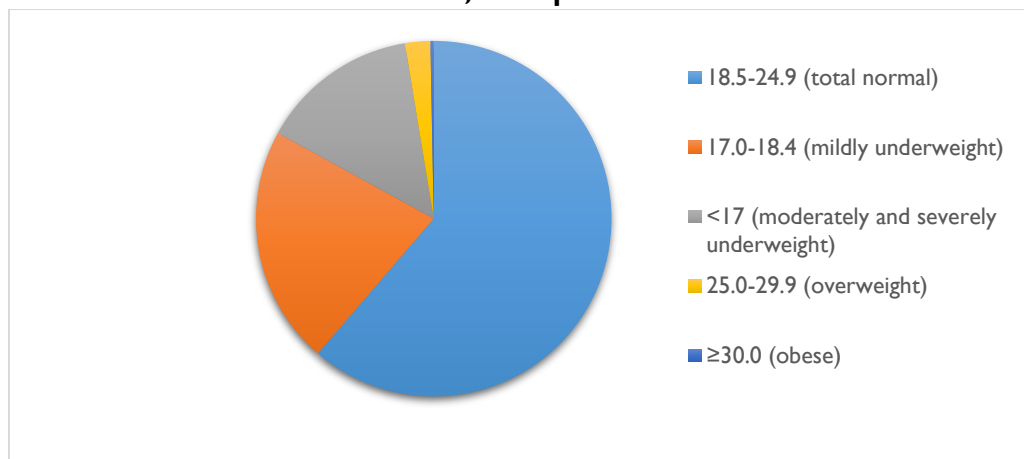
Source: Endline Study, Ethiopia 2017.

3.5.1 Women's Nutritional Status

Undernutrition among women of reproductive age is associated with increased morbidity, poor food security, and adverse birth outcomes in future pregnancies. Improvements in women's nutritional status are expected to improve women's work productivity, which may also have benefits for agricultural production. Figure 4 indicates that the most women in the combined DFAP areas have a normal body mass index (BMI) implying they have a normal weight. About one-third (36.2) of non-pregnant women

15-49 years are underweight. The prevalence of underweight women is highest in REST (43.5 percent) and lowest in FH (27.7 percent). Table A9.8, Annex 9 provides details on the height and BMI levels of non-pregnant women 15-49 years of age.

Figure 4. BMI Levels of Non-Pregnant Women of Reproductive Age, Combined DFAP Areas, Ethiopia 2017



Source: Endline Study, Ethiopia 2017.

3.5.2 Women’s Minimum Dietary Diversity

The women’s minimum dietary diversity indicator (MDD-W) was introduced in 2014 to improve the usefulness of the women’s dietary diversity score (WDDS) indicator.⁵² The WDDS and MDD-W differ in two ways: 1) the MDD-W is a proportion, compared to the WDDS, which is a quasi-continuous score; and 2) the food groups used to calculate MDD-W are slightly different from those used to calculate the WDDS. The MDD-W uses 10 food groups, and the WDDS uses nine food groups.⁵³ The WDDS reflects the number of food groups that women on average consume over the last 24 hours from a total of nine groups. The MDD-W reflects the percentage of women consuming at least 5 of 10 nutritiously diverse food groups over the last 24 hours.

The BL study reported on the women’s WDDS. At BL, women’s dietary diversity was low: the WDDS was 2.48 in CRS, 1.73 in FH, and 2.10 in REST reflecting two or fewer of the nine food groups were consumed by women at BL. The EL study reported on MDD-W. The MDD-W was highest in REST (12.1 percent) followed by CRS (7.5 percent) and FH (3.1 percent). Despite the relatively higher percentage in REST, it is important to note that dietary diversity is very low in each DFAP implementation area at BL and EL.

While a direct comparison between the WDDS and MDD-W cannot be made, it is possible to compare the BL and EL estimates of overlapping food groups. Because the BL report provides information on women’s food consumption patterns in CRS and FH only this comparison is restricted to those DFAP areas. Figures 5a and 5b underscore a continued dependence on grains, roots, and tubers.⁵⁴ Only 8 of the 10 possible food groups are illustrated because whereas the EL survey collected information on

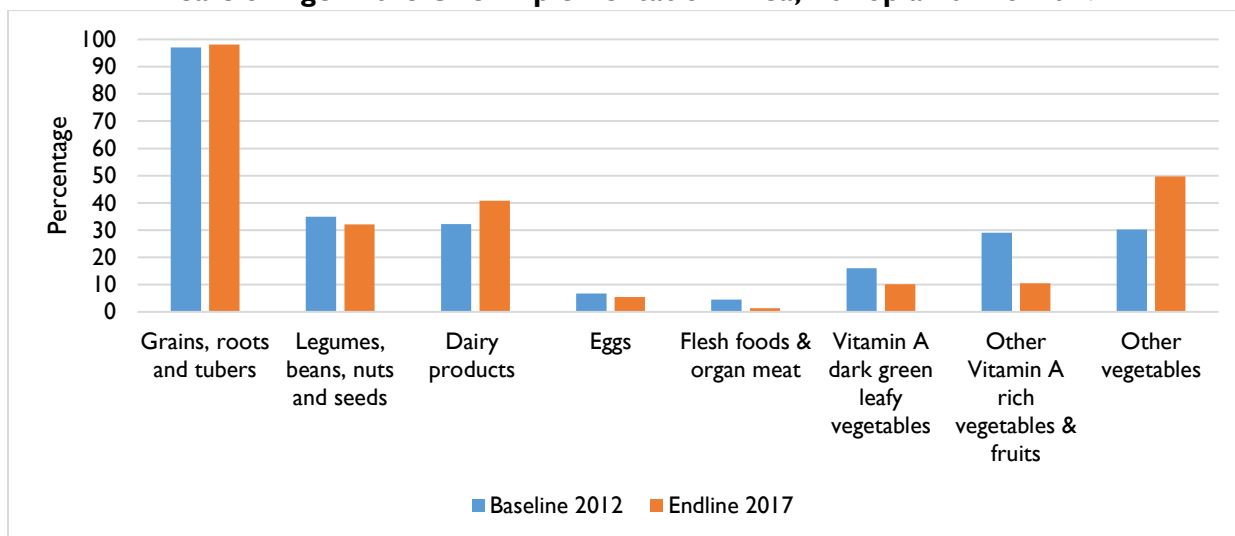
⁵² Introducing the Minimum Dietary Diversity-Women (MDD-W) Global Dietary Diversity Indicator for Women. Available at: http://www.fao.org/fileadmin/templates/nutrition_assessment/Dietary_Diversity/Minimum_dietary_diversity_-_women__MDD-W__Sept_2014.pdf.

⁵³ The following three characteristics summarize the key differences in the Women’s Dietary Diversity Score (WDDS) food groups and the Minimum Dietary Diversity-Women (MDD-W) food groups: 1) the WDDS combines beans, legumes, nuts, and seeds in one category, while the MDD-W distinguishes between legumes and beans on one hand, and nuts and seeds on the other; 2) the MDD-W combines organ meat and flesh foods into one group, while the WDDS distinguishes between organ meat as one group and flesh foods as another; and 3) the MDD-W treats other fruits and other vegetables as two separate categories, while the WDDS combines them into one food group.

⁵⁴ The BL report provided information on women’s food consumption patterns in CRS and FH only, therefore BL data is provided for those project areas only. Additionally, the BL estimates are unweighted, but the EL estimates are weighted.

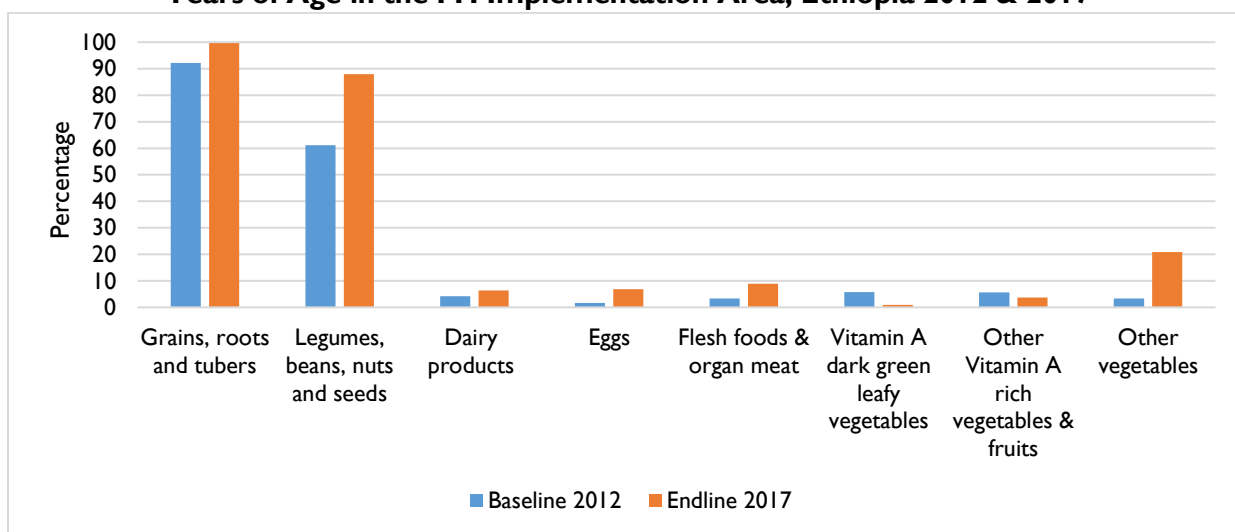
women’s consumption of other fruits and vegetables in two separate questions, the BL combined these two categories in one question so it is not possible to disaggregate the BL estimate.

Figure 5a. Comparison of Baseline and Endline Food Groups Consumed by Women 15-49 Years of Age in the CRS Implementation Area, Ethiopia 2012 & 2017



Source: Endline Study, Ethiopia 2017.

Figure 5b. Comparison of Baseline and Endline Food Groups Consumed by Women 15-49 Years of Age in the FH Implementation Area, Ethiopia 2012 & 2017



Source: Endline Study, Ethiopia 2017.

The percentage of women consuming the various food groups at EL is illustrated in Annex 9 Table A9.9 for the three DFAPs and these indicates that women’s food consumption patterns parallel the overall household consumption patterns illustrated in Table 6a. Women’s food consumption patterns are also consistent with the types of crops planted by project area as illustrated in Table A9.1, Annex 9, indicating that households rely on foods produced on their own land and locally available food groups. As illustrated in Annex 9 Table A9.9, grains, roots, and tubers are the most commonly consumed food groups by women in all the project areas. Few women consume eggs, flesh foods, nuts and seeds, vitamin A-rich dark green leafy vegetables, or other vitamin A-rich fruits and vegetables. Women in PSNP beneficiary households also have access to pulses and grains three or four times per year from

food distribution packages. This provides 15 kg of cereals and 4 kg of pulses based on a five-person household, but, as described earlier in this report, women in larger households would not get the amount of food calculated to fill nutritional and caloric requirements of an individual.

The DFAP PE report (2017) concludes that Maternal Health and Nutrition (MHN) messaging and trainings on the importance of dietary diversity and other issues related to ANC, contraceptive use, and child care was effective in terms of promoting awareness and understanding across DFAP project areas. The DFAP PE Report (2017) and QS (2018) findings confirm this conclusion. However, based on FGDs and KIIs with HEWs, there has not been appreciable change in practice partly because of lack of access to required foods.⁵⁵ QS findings from GIs with MIC5 and HEWS also show access and availability are key factors limiting women from improving their dietary diversity. Several interacting factors underlie limited access and availability. One is the high rates of household food insecurity exacerbated by poor yields and crop failure from consecutive years of rain shortages and drought. The types of food available in local markets are also limited. For example, vegetables, and particularly fruit, requiring more water than grain, roots, and tubers, are not widely available on a consistent basis. Protein-based foods—e.g., milk, dairy, eggs, and meat—are unaffordable by food insecure households, particularly during food gap periods. Another is the high price of basic foods consumed by people in each region following poor harvests (see USAID 2016 and FEWS NET reports from years 2015-2017). The types of food available during food gap periods is also limited. Dietary diversity of PSNP households was reduced by the elimination of vitamin-fortified cooking oils in food distribution packages. Lastly, in some locations women’s dietary diversity is limited by following traditional household feeding practices, reportedly dying out according to GIs with FCo-HHH and MIC5 and KIIs with HEWs conducted for the QS. According to tradition, women feed their husbands first, and the men receive the largest amount of food, and the best types of food. Then the children are fed. The women eat whatever is left over, usually injera, or go to bed without eating. However, the primary reasons for the low rates of women’s dietary diversity are access and availability.

3.5.3 Women’s Antenatal Care and Contraceptive Prevalence

Table 10b illustrates the BL and EL percentages of women who had a live birth in the two years prior to the survey and who received the WHO minimum recommended four ANC visits during their pregnancy with a doctor, nurse, midwife, skilled birth attendant, or clinical officer during pregnancy.⁵⁶ Results indicate no significant changes in the receipt of at least four ANC visits between BL and EL in the FH and REST implementation areas. The BL report did not provide an estimate for CRS therefore a trend analysis is not provided. At EL one-third of births in CRS (33.9 percent) and FH (31.1 percent) received at least four ANC visits compared to one-half in REST (55.8 percent)

Table 10b. Baseline-Endline Comparison of Antenatal Care Visits

	CRS			FH			REST		
	Baseline 2012	Endline 2017	Sig	Baseline 2012	Endline 2017	Sig	Baseline 2012	Endline 2017	Sig
Percentage of births receiving at least four antenatal care (ANC) visits during pregnancy ¹	N/A	33.9		34.0	31.1	ns	72.4	55.8	ns
Number of responding women aged 15-49 with live birth in the past two years	N/A	427		289	488		40	388	

⁵⁵ See DFA PE Report, pg. 30. The evaluators state these findings are confirmed by limited data in some Indicator Performance Tracking Tables (IPTTs) and observations.

⁵⁶ This indicator does not measure the quality of the ANC visit, and is limited to counting occurrences of visits with a skilled health professional (doctor, nurse, midwife, skilled birth attendant, or clinical officer).

	CRS			FH			REST		
	Baseline 2012	Endline 2017	Sig	Baseline 2012	Endline 2017	Sig	Baseline 2012	Endline 2017	Sig
N/A = not applicable *** p<0.001, ** p<0.01, * p<0.05, † p<0.10, ns = not significant									
NOTE: Chi squared tests were used to assess the statistical significance of the difference between the BL and EL estimates of the percentage of births receiving at least four ANC visits during pregnancy.									
† ANC visits are reported for the most recent live birth in the two years preceding the survey. BL estimates for the percentage of births receiving at least four ANC visits were not reported for the CRS project area.									

Source: FFP Ethiopia Baseline Study 2012 & FFP Ethiopia Endline Survey 2017.

The contraceptive prevalence rate in the combined project areas at EL is 37.3 percent. Table A9.10, Annex 9 provides details on modern and traditional methods of contraception used by women in the project areas and indicates that the most commonly used method among women in the three project areas is injectables (76 percent). The lower contraceptive prevalence rate in the CRS DFSA implementation area compared to the FH and REST areas can be explained in part because of the areas in Oromia that are predominantly Muslim. They believe that the use of contraceptives is not allowed by their religion, and men in these families make all the decisions. Findings from the 2017 QS also indicate that some women fear the use of contraceptives believing that they are bad for one's health, their own religious beliefs that all children should be welcome, and, in some cases, husbands' disapproval of the concept of family planning. Furthermore, the DFAP PE report notes that DFAPs were not involved in family planning activities. The promotion of family planning and the use of modern contraceptives were the responsibility of HEWs.

3.6 CHILDREN'S HEALTH AND NUTRITION

This section covers the prevalence of underweight, stunted, and wasted children, the prevalence of exclusive breastfeeding (EBF), children's receipt of a minimum acceptable diet (MAD), the prevalence of diarrhea and use of oral rehydration therapy (ORT). BL and EL estimates of children's health and nutrition indicators by project area are summarized in Table 11.

Table 11. Baseline-Endline Comparison of Children's Health and Nutrition Indicators

	CRS			FH			REST		
	Baseline 2012	Endline 2017	Sig	Baseline 2012	Endline 2017	Sig	Baseline 2012	Endline 2017	Sig
Prevalence of underweight children under five years of age ¹	27.1	23.0	*	50.2	32.0	***	29.4	25.1	†
Male	25.0	23.6	ns	48.8	34.7	***	28.0	25.4	ns
Female	32.0	22.5	**	55.3	28.8	***	32.6	24.7	†
Prevalence of stunted children under five years of age ²	44.6	36.5	*	63.1	54.5	**	50.9	44.3	*
Male	43.8	37.2	*	62.1	57.6	ns	51.2	46.4	ns
Female	46.3	35.9	*	66.2	50.9	**	50.5	41.8	*
Prevalence of wasted children under five years of age ³	12.8	9.1	*	20.4	7.0	***	8.6	4.8	**
Male	12.2	9.7	ns	19.2	7.5	***	7.3	4.1	*
Female	14.2	8.4	*	24.5	6.5	***	11.0	5.7	*
Percentage of children under age two who had diarrhea in the last two weeks ⁴	N/A	18.7		26.1	26.7	ns	68.9	21.0	***

	CRS			FH			REST		
	Baseline 2012	Endline 2017		Baseline 2012	Endline 2017		Baseline 2012	Endline 2017	
Male	N/A	19.7		23.9	30.7	ns	N/A	21.4	
Female	N/A	17.7		27.7	22.2	ns	N/A	20.5	
Percentage of children under age two with diarrhea treated with ORT	N/A	60.7		23.6	24.1	ns	N/A	34.2	
Male	N/A	59.1		N/A	26.7		N/A	30.1	
Female	N/A	62.7		14.4	20.1	ns	N/A	39.4	
Prevalence of exclusive breast-feeding of children under six months of age	24.9	67.5	***	40.0	87.9	***	66.4	71.0	ns
Male	21.2	63.4	***	28.5	86.2	***	75.9	69.2	ns
Female	29.5	72.7	***	49.1	89.7	***	57.6	72.8	ns
Prevalence of children 6-23 months of age receiving a minimum acceptable diet (MAD)	2.8	6.9	*	0.5	6.6	***	5.1	12.4	**
Male	2.6	5.4	ns	1.2	8.3	**	8.0	15.2	†
Female	3.0	8.2	*	0.0	4.7	**	3.4	8.9	†
Number of children under five	1,491	1,217		679	1,167		850	1,018	
Male	1,034	611		523	616		593	545	
Female	457	606		156	551		256	473	
Number of children under two	N/A	432		261	494		42	394	
Male	N/A	222		109	257		16	214	
Female	N/A	210		152	237		26	180	
Number of children under 6 months	144	132		95	137		104	111	
Male	80	72		42	69		50	54	
Female	64	60		53	68		54	57	
Number of children 6-23 months	463	300		188	357		223	283	
Male	229	150		80	188		87	160	
Female	234	150		108	169		146	123	
<p>N/A = not applicable *** p<0.001, ** p<0.01, * p<0.05, † p<0.10, ns = not significant</p> <p>NOTE: Chi squared tests were used to assess the statistical significance of the difference between the BL and EL estimates of CHN indicators.</p> <p>¹ The EL percentage of underweight children is based on the sample of children with valid weight-for-age measurements. ² The EL percentage of stunted children is based on the sample of children with valid height-for-age measurements. ³ The EL percentage of underweight children is based on the sample of children with valid weight-for-height measurements. ⁴ The BL survey did not collect data on the prevalence of diarrhea or treatment with ORT in the CRS Project area.</p>									

Source: FFP Endline Survey, Ethiopia 2017. BL estimates were re-calculated to include sampling weights and therefore differ from the estimates provided in the BL study report.

3.6.1 Underweight, Stunting, and Wasting

Child undernutrition can lead to serious short- and long-term consequences, such as increased susceptibility to disease and infection and impaired cognitive development. Children who are stunted (height-for-age), underweight (weight-for-age), or wasted (weight-for-height) are considered undernourished.

Weight-for-age takes into account both chronic and acute malnutrition and is often used to monitor nutritional status longitudinally. Children who are below minus two standard deviations (SDs) from the median of the WHO child growth standards population for weight-for-age are considered underweight. The prevalence of underweight among children under five years of age is a strong indicator of undernourishment and food insecurity.

The height-for-age index provides an indicator of linear growth retardation (stunting) among children. Children who are below minus two standard deviations from the median of the WHO child growth standards population for height-for-age may be considered short for their age (stunted) or chronically malnourished. Severe linear growth retardation (stunting) reflects the outcome of a failure to receive adequate nutrition over a number of years and the effect of recurrent and chronic illness. Height-for-age, therefore, represents a measure of the long-term effects of malnutrition in a population and does not vary appreciably according to the season of data collection.

Weight-for height (wasting) is a robust predictor of under-five mortality and often is a consequence of acute and dire food shortage or disease. Children who are below minus two SDs from the median of the WHO child growth standards population for weight-for-height are considered wasted.⁵⁷

The prevalence of undernourished children has been a persistent problem among CFI households in GOE hotspot areas, but the seriousness of the problem increased with the onset of widespread drought in 2015 and continued growing through 2016. The UNICEF Ethiopia Humanitarian Situation Report reported that 264,515 children from six months to 59 months will require therapeutic feeding and treatment for severe acute malnutrition in 2015 through the Community Management of Acute Malnutrition (CMAM) program. The number of children admitted into CMAM is used as one of the monitoring mechanisms of children's nutrition situation.⁵⁸ As reported in the May 2016 USAID Complex Emergency Fact Sheet, the GOE projected that 2.6 million Ethiopian children would experience acute or severe malnutrition that year resulting from the deteriorated food security situation because of the 2015-2016 drought.⁵⁹

Results (Table 11) indicate modest statistically significant improvements from BL in children's underweight, stunting, and wasting across the project areas. The EL results also highlight variation by project area in the severity of children's malnutrition. At EL, about one-quarter of children in CRS (23.0 percent) and REST (25.1 percent) were underweight compared to about one-third in FH (32 percent). The prevalence of stunting was highest in FH where more than one-half of children under five (54.5 percent) were chronically malnourished. The prevalence of stunting was lower in CRS (36.5 percent) and REST (44.3 percent). The prevalence of acute malnutrition (wasting) also varied by project area ranging from 4.8 percent in REST to 7 percent in FH. The prevalence of wasting in CRS was 9.1 percent, close to the threshold 10 percent threshold which warrants immediate action according to the United Nations High Commissioner for Refugees (UNHCR).⁶⁰ Given the serious threat to food security during the 2015-2016 drought, it is likely that without interventions from PSNP, the DFAPs, UNICEF, and

⁵⁷ http://www.unicef.org/progressforchildren/2007n6/index_41505.htm.

⁵⁸ See UNICEF Ethiopia Humanitarian Situation Report, SitRep #3, June-July Reporting Period, 2015.

⁵⁹ As reported in the USAID Ethiopia Complex Emergency Fact Sheet #10, May 2016.

⁶⁰ UNHCR. n.d. Guidance on thresholds for child malnourishment. Available at <https://emergency.unhcr.org/entry/32605/acute-malnutrition-threshold>.

other external assistance, there would have been a deterioration in children's underweight, stunting, and wasting instead of modest improvements.

Although there is a lack specific data to portray the actual situations, differences in these measures will also be found within each DFAP implementation area. Variation in the percentage of underweight, stunted, and wasted children will be affected by the level of household food insecurity and by the severity of effects on household agricultural productivity from insufficient rainfall, drought, and flood in different locations. Gains made in earlier years by many households could not withstand the shock of the severity of the 2015-2016 drought.

3.6.2 Bivariate and Multivariate Analyses of the Prevalence of Stunting

Additional analyses were performed to assess the correlates of the prevalence of moderate or severe stunting among children under five in the DFAPs in Ethiopia. Chi squared tests were used to assess differences for categorical variables and t-test of statistical differences were used for continuous variables. Subsequently, multivariate analysis controlling for key factors was used to explore the factors that are associated with stunting. To better understand the relationship between chronic malnutrition (stunting) and children's dietary diversity and feeding practices additional bivariate analyses were conducted to assess the relationship between stunting and the prevalence of a MAD for children 6-23 months as well as the relationship between stunting and the prevalence of EBF for children under six months. Details on the methodology and the results are provided in Annex 10. The results of the bivariate and multivariate analyses are summarized below.

Child's characteristics and the prevalence of stunting: Results of the bivariate analysis indicated that the sex of the child was related to the prevalence of stunting only in FH; 46.9 percent of females were stunted compared to 53.7 percent of males. In all three project areas, the age of the child was significantly related with the prevalence of stunting and followed a somewhat inverted U-shape implying that stunting peaks by the age of two underscoring that the first two years of a child's life are critical periods in their development and growth. In FH, the prevalence of stunting decreased with higher order births—that is, second and third-born children are less likely to be stunted compared to first-borns, but in CRS and REST the association was statistically nonsignificant.

Mother's characteristics: Mother's marital status, age, education, and whether she achieved an MDD-W were not related to the prevalence of stunting in any of the DFAP areas. In CRS, the prevalence of stunting of children whose mothers engaged in paid work (29.3 percent) was lower than that of children whose mothers did not work (36.1 percent) or whose mothers worked in-kind (40.6 percent).⁶¹

Household sociodemographic characteristics: In all three DFAP areas, the prevalence of stunting was not related to the age of the household head. However, in FH, the prevalence of stunting differed markedly by the sex of the household head—30.5 percent of children in female-headed households were stunted compared to 52.5 percent of children in male-headed households. The prevalence of stunting increased with the number of adult males in the household and number of adult females in the household only in FH, but was otherwise unrelated to the prevalence of stunting in CRS and REST. There was an inverse association between number of children under five in the household and the prevalence of stunting only in FH. The prevalence of stunting did not vary by the number of children 5-17 in the household in all of the DFAPs.

Household food security status: There was no association between the prevalence of hunger and the prevalence of stunting in any of the implementation areas. HDDS, an indicator of food security but

⁶¹ Work includes jobs in the formal and/or informal sector, full time, part time, or seasonal work that is done within and/or outside the home. It includes, but is not limited to: agricultural daily wage labor, off-farm daily wage labor, income generation activities, sale of goods produced or processed outside the home or at the home, homestead garden or farm (e.g., vegetables, eggs, fish, livestock, artisanal goods), or petty trading. For this indicator, work does not include participating in cash for work, food for work, or conditional transfers and/or productive safety net programs. It does not include: caring for own children, cooking, cleaning or doing other routine chores for own household (e.g., fetching water, collecting firewood), or being involved in agricultural production solely for household consumption.

also a proxy for socio economic status, was associated with the prevalence of stunting only in REST; more children who were not stunted reside in households with a higher HDDS (5.93) compared to children who are stunted (5.52).

Household WASH status: Bivariate analyses explored the prevalence of stunting in relation to households' use of an improved water source, correct water treatment, improved sanitation facility, and a proper handwashing station. The results indicated that the difference in the prevalence of stunting by households' WASH status was statistically nonsignificant across the three DFAPs.

Household agriculture practices: In all three project areas, the prevalence of stunting did not differ statistically between households that did not plant any crops, households that planted crops but did not use at least three sustainable crop practices, and households that used three or more crop practices. Similarly, there was no difference in the prevalence of stunting for children among households that did not raise livestock, households that raised livestock but did not use at least three sustainable livestock practices, and households that used at least three sustainable livestock practices. The prevalence of stunting was also compared among households that planted crops and/or raised livestock with the intention of selling, households that did not use a value chain activity, and households that used at least one value chain activity and no statistically significant difference was detected. A similar lack of statistical significance was observed for the relationship of stunting with use of improved storage, use of credit, and farm size.

Household poverty status: There was no association between the prevalence of hunger and the daily per capita consumption expenditures except in REST; children who were not stunted reside in households with higher average daily per capita consumption expenditures (\$1.19) compared to children who are stunted (\$1.04).

Receipt of cash and/or food assistance and savings: The prevalence of stunting did not differ statistically between households that relied on cash and/or food assistance as a source of income in the 12 months prior to the survey and those that did not.

Region and DFAP area: The prevalence of stunting differs statistically by region and DFAP implementation area. It is highest in Amhara (50.4 percent) followed by Tigray (43 percent) and lowest in Oromia (34.3 percent) and Dire Diwa (35.5 percent). The prevalence of stunting is highest in FH (50.4 percent) followed by REST (43 percent) and lowest in CRS (34.5 percent).

Children's dietary diversity and feeding practices: Additional bivariate analyses were conducted for a subsample of children 6-23 months to explore the association of stunting with dietary diversity and a subsample of children under six months to assess the relationship between stunting and EBF. Table 10.1b indicates that there is no difference in the prevalence of stunting between children 6-23 months who achieve a MAD and children 6-23 months who do not achieve a MAD. Similarly, the prevalence of stunting among children under six months did not differ by EBF status. Because stunting is a measure long-term malnutrition and MAD is based on the last 24 hours, it is possible that differences in MAD status are not reflected in stunting. Similarly, the lack of statistical association between stunting and EBF may be partially explained by the fact that the breastfeeding indicator is measured based on behavior in the last 24 hours as a proxy for long-term behavior.

Table 10.4, Annex 10 illustrates the results of the multivariate analysis of stunting for children under five that was performed using the EL data. For the purposes of parsimony, only variables that showed a statistically significant bivariate association were included. Child's age remains a statistically significant correlate of stunting even after controlling for a host of mother-, household-, region-, and project-related variables. The odds of stunting of children increases with age and are highest for children 30-35 months compared to children under 6 months, thus underscoring the importance of the first two years in determining the long-term nutritional trajectory of children. The odds of stunting decline after 30-35 months but peak again at 42-47 months and 54-59 months suggesting a cohort effect for children born

three years or more prior to the EL survey. The odds of being stunted are lower for children living in female-headed-households compared to male-headed households. Children living in households whose head has a primary education or some primary education are less likely to be stunted compared to children in households headed by someone who never attended any school. Mothers' participation in any form of work (cash or in-kind) is associated with lower odds of stunting compared to children whose mothers do not engage in economic activities. But the effect of mothers' work washes out when the model controls for the sociodemographic and economic characteristics of the household. The addition of daily per capita consumption expenditures is likely to have washed out the effect of mother's work on stunting since household consumption expenditures rolls in expenditures resulting from mother's work. Regional differences in the prevalence of stunting that were observed in the bivariate analyses wash out in the full model but the effect of DFAP activities remains statistically significant. The odds of a child under five being stunted are twice as high in FH compared to CRS. Children living in REST are more likely to be stunted than children in CRS.

To facilitate comparison with the BL study, a simpler model of the prevalence of stunting was conducted using EL data. In most cases, the results are similar for the BL and EL models indicating a consistency in the correlates of stunting.⁶²

- Sex of household head: The association is statistically significant in both the BL and EL models.
- Age of the mother: The association is statistically significant in the BL model but not in EL model.
- Whether the mother (or primary caretaker) is literate: The association is statistically nonsignificant in the BL model. Similarly, in the EL model, mother's educational attainment was statistically nonsignificant.
- Whether the household is a PSNP recipient: This association was statistically nonsignificant in the BL model even though PSNP 3 had started in 2011 and the BL was conducted in 2012. Participation in PSNP was not collected at EL, but, in lieu of this variable, the EL model included a whether the household received cash or food emergency assistance and the analysis shows no association.
- Number of cows: This association is statistically nonsignificant in the BL model. The EL did not collect data on the number of cows so this variable was omitted from the EL model.
- Number of shoats (sheep or goats): This association is marginally statistically significant in the BL model but nonsignificant at EL.
- Children under the age of 15 (dependents): This association is statistically significant in the BL model. The EL model distinguished between the number of children under five and the number of children 5-17 and in the EL model the association of stunting with the number of children under five is statistically significant but not for children 5-17.

3.6.3 Minimum Acceptable Diet

Adequate nutrition from birth to two years of age is critical for a child's optimal growth, health, and development. During this period, growth faltering, micronutrient deficiencies, and common childhood illnesses, such as diarrhea and acute respiratory infection, are likely to occur. Adequate nutrition requires a minimum dietary diversity, which is measured in seven key food groups. In addition to dietary diversity, feeding frequency—the number of times a child is fed—and the consumption of other types of milk or milk products, apart from breastmilk, are considered. All three dimensions are aggregated in the MAD indicator—which measures the percentage of children 6-23 months of age who receive a MAD—by breastfeeding status (i.e., breastfed versus non-breastfed). The MAD indicator measures both the

⁶² The BL study model for the logit regression of stunting did not account for sampling design nor does it include sampling weights. The EL model account for the two-stage clustered sample design and includes sampling weights.

minimum feeding frequency and minimum dietary diversity as appropriate for various age groups and whether or not the child is breastfed, because both of these characteristics will influence how often the child should be fed and what to feed the child. If a child meets the minimum feeding frequency⁶³ and minimum dietary diversity⁶⁴ for his or her age group and breastfeeding status, the child is considered to be receiving a MAD.

Results (Table 11) indicate improvements in the prevalence of children with a MAD but also point to the low levels of children meeting the minimum guidance on children's feeding practices and the need for continued improvement. The magnitude of improvement was largest in CRS where the prevalence of children with a MAD increased from 2.8 percent at BL to 6.9 percent at EL. In FH, the percentage of children with a MAD increased from the BL level of 0.5 percent to 6.6 percent at EL. At EL, the prevalence of MAD was highest in REST implementation area (12.4 percent) where it more than doubled from BL (4.9 percent). Nevertheless, the rates at both BL and EL are unacceptably low.

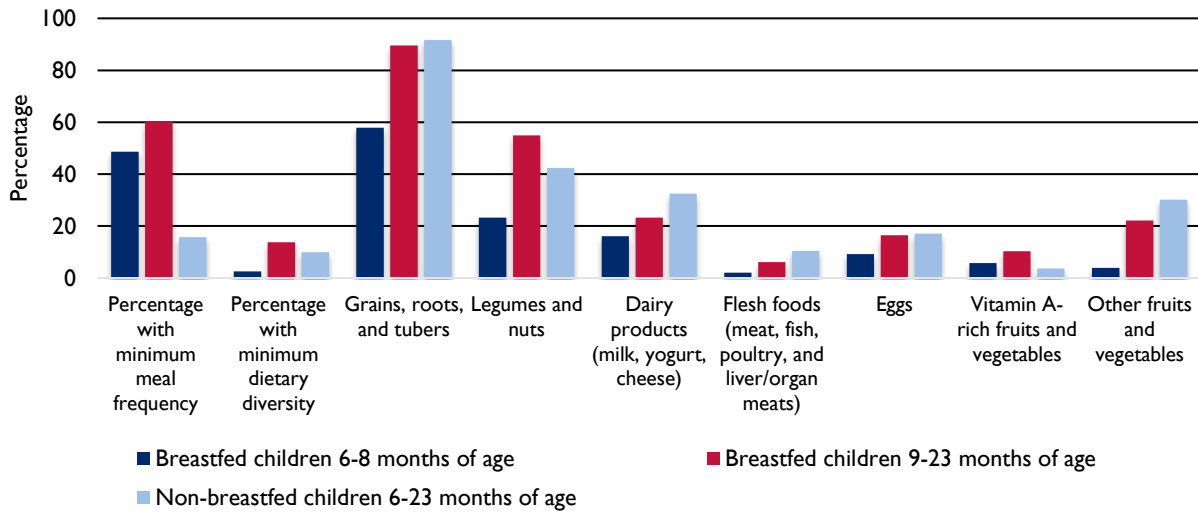
It is of interest to break down the MAD into its component parts and analyze these separately, as the components provide essential information. Figure 6 indicates that in the combined project areas the percentage of children 6-23 months of age with a minimum meal frequency is highest among breastfed children 9-23 months of age (60.2 percent) and breastfed children 6-8 months of age (48.7 percent). It is lowest among non-breastfed children 6-23 months (15.7 percent). The prevalence of children meeting the threshold for minimum dietary diversity is low for children of all ages and breastfeeding statuses. The prevalence of children with a minimum dietary diversity is highest among breastfed children 9-23 months (13.8 percent). Only 2.6 percent of breastfed children 6-8 months achieve a minimum dietary diversity and 9.9 percent among non-breastfed children 6-23 months. Food groups consumed follow similar patterns among all three groups of children and the data indicate that grains, roots, and tubers are commonly eaten.

Annex 9, Table A9.11 provides details on the components of MAD by age group and breastfeeding status, disaggregated by DFAP area. A similar pattern of meal frequency and dietary diversity is observed across the three DFAP implementation areas—namely, that meal frequency is highest among breastfed children of all ages and lowest among non-breastfed children and that dietary diversity is generally low among breastfed children 6-8 months and lowest when compared to other age groups. However, there is variation by DFAP area in the percentage of children achieving the thresholds for appropriate meal frequency and dietary diversity given their breastfeeding status and age. While grains, roots, and tubers are commonly consumed by all children in all three project areas there are some differences in some of the food groups consumed: dairy products are commonly consumed by children in CRS while in FH and REST legumes and nuts are the second most commonly consumed foods after grains, roots, and tubers.

⁶³ Minimum meal frequency for breastfed children is defined as two or more feedings of solid, semi-solid, or soft food for children 6-8 months of age and three or more feedings of solid, semi-solid, or soft food for children 9-23 months of age. Minimum meal frequency for non-breastfed children is defined as four or more feedings of solid, semi-solid, or soft food, or milk feeds for children 6-23 months of age, with at least two of these feedings being milk feeds.

⁶⁴ Minimum dietary diversity for breastfed children 6-23 months of age is defined as four or more food groups out of seven food groups. Minimum dietary diversity for non-breastfed children is defined as four or more food groups out of six food groups.

Figure 6. Components of MAD Among Children 6-23 Months of Age by Age and Breastfeeding Status, Combined DFAP Areas, Ethiopia 2017



Source: Endline Study, Ethiopia 2017.

There is little qualitative data from the DFAP PE Report to shed light on the increases in the prevalence of MAD, but information on the intensive training of HEWs in mother and child health and nutrition provided by DFAPs and, in turn, the training provided to mothers by HEWs and to mothers by DFAPs in different settings have likely played a role in the achievements gained. Under PSNP 4, pregnant and lactating mothers were excused from providing labor to community public works for some months but, in exchange, were required to attend sessions on CHN requirements, the importance of EBF during the first six months, and how to feed young children with diverse and nutritious locally available foods, as well as practices to increase the health and nutritional status of mothers themselves. The MIC5 interviewed for the QS stated they understood the importance of a diverse, nutritious diet for the healthy development of the child; however, across all data sites said they did the best they could in purchasing foods to fulfill this requirement based on the what money they had at the time and what food was available. Accordingly, young children were fed a diet based on the recommendations on an inconsistent basis.

3.6.4 Exclusive Breastfeeding

Breastfeeding is an important factor in contributing to the future health of children. Research indicates a strong link between breastfeeding and the development of a child's immune system. Breastfeeding can protect against conditions, such as diarrhea, which lead to other diseases and respiratory infections, such as pneumonia, and breastfeeding lowers the chances of infant mortality and morbidity (Debes et al. 2013; Khan et al. 2015; Lamberti et al. 2011). Breastfeeding has also been linked to child cognitive development (Kramer et al. 2008). Longer durations of breastfeeding have been associated with reduced risk of obesity in later life (Harder et al. 2005).

UNICEF and WHO recommend that children be exclusively breastfed, that is, no other liquid or solid food or plain water, during the first six months of life and that children be given solid or semi-solid complementary food, in addition to continued breastfeeding, beginning when the child is six months of age and continuing to two years of age. Introducing breastmilk substitutes to infants before six months of age can contribute to limited breastfeeding, which has negative implications for a child's health and development. The lack of appropriate complementary feeding may lead to malnutrition, frequent illnesses, and, in some cases, death.

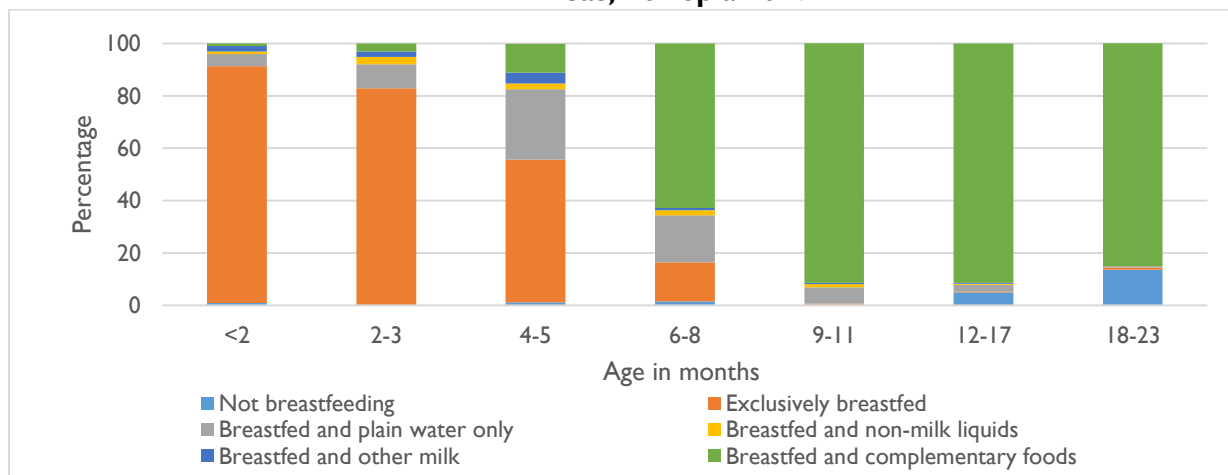
As illustrated in Table 11, at EL more than two-thirds of children under 6 months in CRS were breastfed exclusively (67.5 percent) and close to three-quarters (71 percent) in REST. In FH, the majority of children under 6 months (87.9 percent) are breastfed exclusively. BL-EL comparison shows marked improvement since BL in all three project areas. This may be attributed to the extensive messaging and training provided to HEWs and to women of reproductive age on the importance of EBF as part of the overall emphasis on improving MCHN described in Section 3.6.3 regarding improvements in MAD. During the QS field work (2017), a young mother in one location proudly noted that after being trained in the importance of EBF by their HEW, she was appointed as a leader in the effort to encourage and promote EBF among lactating mothers in her village. The team does not have information on how widespread this practice was among the DFAP implementation areas, but it is likely that encouraging follow-up from community mothers contributed to this improvement. Across all data collection sites from the 2017 QS, women participating in GIs with young mothers were able to describe the importance of EBF to the health and development of their infant when asked the reason why they follow this practice.

Figure 7 illustrates the breastfeeding status of children under two by age in months in the combined project areas and indicates that EBF is pervasive among children under three months. By 4-5 months, only one-half of children are breastfed exclusively. The decline in the prevalence of EBF before the WHO-recommended age of six months appears to be related to the introduction of plain water (26.9 percent), and complimentary foods (11 percent). By 6-8 months about two-thirds of children under two (62.8 percent) are receiving breastmilk and complimentary foods.

Qualitative data from the 2017 QS provide several explanations for the introduction of plain water within the first six months. Young mothers interviewed in two villages noted that their breast milk dried up at four months. They attributed this to their poor diet. Young mothers in other locations indicated that their own mothers or aunts fed their infants with water or tea when they had to go out into the field to perform agricultural chores.

Annex 9 Table A9.12 provides details on breastfeeding status by DFAP implementation area. Generally, a similar pattern in EBF up until 4-5 months and the introduction of complimentary foods by 6 months is observed across the DFAP areas. However, some differences are noteworthy. In FH, EBF is near universal among children under 2 months (96.2 percent) and 2-3 months (92.5 percent), and most children 4-5 months a fed breastmilk only (73.1 percent). The drop-off in EBF before 6 months is highest in CRS where only 32.7 percent of children 4-5 months are breastfed exclusively.

Figure 7. Breastfeeding Status for Children 0-23 Months by Age in Months, Combined DFAP Areas, Ethiopia 2017



Source: Endline Study, Ethiopia 2017.

3.6.5 Diarrhea and Oral Rehydration Therapy

Dehydration as a result of severe diarrhea is a major cause of morbidity and mortality among young children. The prevalence of diarrhea in the two weeks prior to the survey among children 0-23 months declined markedly in the REST implementation area from 68.9 percent at BL to 21 percent at EL. In FH, there was no change in the percentage of children 0-23 months with diarrhea (26.1 percent at BL and 26.7 percent at EL). In CRS, the prevalence of diarrhea is lowest at EL (18.7 percent). Because the BL did not collect data on diarrhea in CRS, a BL-EL comparison is not possible.

There is great variability between project areas in the use of ORT among children with diarrhea. At EL, use of ORT was highest in CRS (60.7 percent) followed by REST (34.2 percent). In FH, less than one quarter (24.1 percent) of children with diarrhea received ORT and did not change significantly from the BL level of 23.6 percent.

3.6.6 Diarrhea and Household Water, Sanitation, and Hygiene Status

The prevalence of diarrhea was analyzed by households' use of improved WASH facilities and practices (Annex 9, Table A9.13). In all three DFAP areas, the prevalence of diarrhea among children 0-23 months does not differ statistically by use of an improved water source. Use of a correct water practice or technology is associated with lower prevalence of diarrhea in all three project areas and these differences are statistically significant. In CRS, the prevalence of diarrhea among children 0-23 months is 8.6 percent of children in households that use correct water treatment but it is twice (19.8 percent) as high among children in households that do not use correct water treatment. The prevalence of diarrhea does not differ by use of improved toilet facilities, but this may be because most children live in households lacking an improved toilet facility. The association of diarrhea with a proper handwashing station was not assessed because of lack of adequate sample size; only 13 of 1,320 children 0-23 months in the combined project areas reside in a household with soap and water at a handwashing station.

3.7 GENDER

The USAID Ethiopia Country Development and Cooperation Strategy 2011-2018 (CDCS)⁶⁵ highlighted key gender issues and challenges such as: gender differences in school enrolment; gender differences in access to land and farm size; gender differences in access to credit; and gender differences in the burden of water shortages and access to clean water. The Ethiopia CDCS 2011-2018 also underscored the persistence of gender-based violence, female-genital mutilation, and early marriage and early childbearing. Gender differences in access to credit are discussed in Section 3.3 on Agriculture. The BL study collected information on: women's decision-making role in the purchase and sale of household assets; wife beating; female circumcision; women's decision-making related to health-seeking behavior; and women's self-reported self-efficacy. This section uses data from the EL survey to address: women's and men's participation in cash-earning opportunities; mothers' and fathers' correct knowledge of MCHN practices; and men's and women's participation in self-earned cash decision-making and MCHN decision-making. These indicators are intended to measure women's inclusion in processes that impact the overall achievement of poverty reduction and improved food security and nutrition. Since the BL study focused on a different set of gender issues than the EL study, it is not possible to assess improvement in the topics covered at BL but the EL gender-related indicators provide context to better understand the projects' achievements and remaining challenges.

3.7.1 Participation in Cash-Earning Activities and Self-Earned Cash Decision-Making

Table 12 illustrates the EL estimates of participation in cash-earning activities and women's and men's control over self-earned cash. About one-half of adults (54.6 percent) in the combined project areas participate in cash-earning opportunities. Men are more likely to partake in cash-earning activities (65.2

⁶⁵ USAID Ethiopia Country Development and Cooperation Strategy 2011-2018 accessed at https://www.usaid.gov/sites/default/files/documents/1860/CDCS_Ethiopia_December_2018r1.pdf.

percent) compared to women (44.6 percent). Joint decision-making on use of self-earned cash is more common than deciding alone. About one-half of men (57.6 percent) and women (55.1 percent) decide with their spouses on the use of self-earned cash. Approximately one-third of men (33.1 percent) and one-quarter of women (26.1 percent) decide alone on the use of self-earned cash. Gender differences in the participation in cash-earning opportunities and decision-making related to self-earned cash are generally consistent across the project areas. There are several reasons contributing to women's lesser participation in cash-earning activities compared to men. The Ethiopia 2017 BL report provides explanations based on GIs with both women and men in study villages that women with children are less able to partake in cash-earning activities because of their traditional role as child caretaker in the household. Women are also responsible for the household and preparing family meals. Finally, in PSNP households, women with children have less time for engaging in cash earning opportunities compared to men due to program requirements. Unless PSNP women are in the later stages of pregnancy and/or lactating, able-bodied women with children must contribute labor for community public-works program as a pre-condition for receiving food/cash benefits. Under PSNP 4, the GOE recognized the heavy workload of women compared to men based on their childcare and household duties. These women are now permitted to work less hours per day on those days they are scheduled to contribute to public works by starting work later in the morning, and ending earlier in the day.

Gender differences in the participation in cash-earning opportunities and decision-making related to self-earned cash are generally consistent across the DFAP implementation areas. Joint decision-making on self-earned cash is highest in FH (men, 71.7 percent; women, 67.9) and lowest in CRS (men 36.9 percent; women 44 percent). Sole decision-making on self-earned cash is more commonly practiced in CRS (men, 40.8 percent; women, 31 percent). Qualitative findings from the 2017 QS based on GIs with MIC5 and KIs with HEWs provide a probable interpretation. The CRS project area contains Muslim majority woredas. In these woredas, men have the primary decision-making authority. However, the EL estimates underscore that most women have some participation in self-earned cash decision making.

Table 12. Self-Earned Cash Decision-Making, Ethiopia 2017

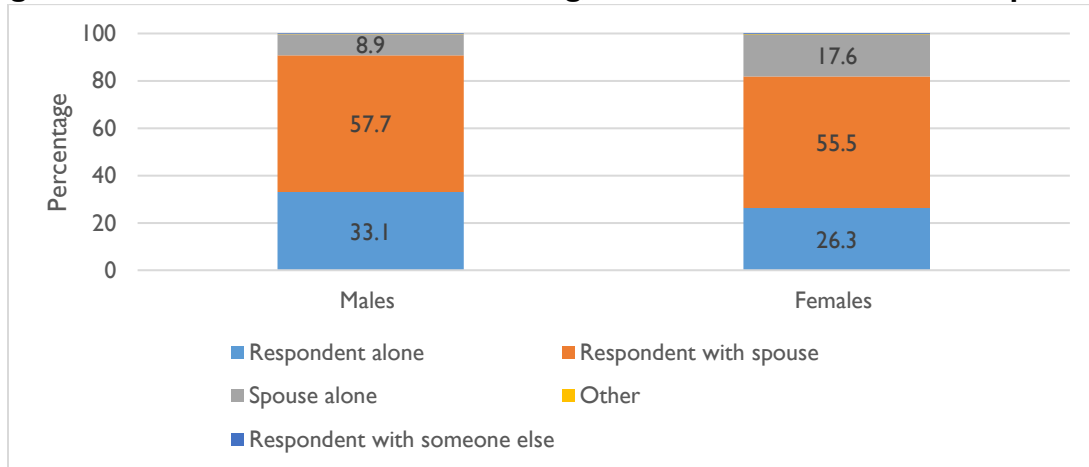
	Overall	CRS	FH	REST
Percentage of men and women who earned cash in the past 12 months ¹	54.6	52.1	50.6	59.1
Male	65.2	67.8	63.7	65.4
Female	44.6	36.5	38.3	53.2
Percentage of men/women in union and earning cash who make decisions alone about the use of self-earned cash				
Male	33.1	40.8	23.4	38.2
Female	26.1	31.0	22.0	27.2
Percentage of men/women in union and earning cash who make decisions jointly with spouse/partner about the use of self-earned cash				
Male	57.6	36.9	71.7	54.8
Female	55.1	44.0	67.9	50.8
Number of men and women (age 15 or older)				
Men	13,407	3,795	5,373	4,239
Women	6,553	1,893	2,629	2,031
Number of men/women in union and earning cash in the past 12 months				
Men	6,854	1,902	2,744	2,208
Women	3,424	1,028	1,409	987

¹Includes all household members who are 15 years of age or older, have worked in the past 12 months and were usually paid in cash (or cash and in-kind) for this work during the 12-month period.

Source: FFP Endline Survey, Ethiopia 2017

The overall indicator masks the percentage of cash-earning women who do not participate in decision-making on how to spend their self-earned cash. Figure 8 indicates that 17.6 percent of women have no say on how their self-earned cash will be spent compared to 8.9 percent of men. However, over 50 percent of both men and women respondents reported that how to spend cash is a joint decision made between husband and wife. According to qualitative findings from the QS, joint decision-making is important to the overall well-being of the household given the overwhelming needs of CFI households. Consultations are held on the allocation of cash for expenses on food items to purchase for the family, school fees and school clothes for children, and medical costs. Annex 9, Table A9.14 provides details on self-earned cash decision-making for the combined project areas and by implementation area.

Figure 8. Self-Earned Cash Decision-Making, Combined DFAP Areas, Ethiopia 2017



Source: FFP Endline Survey, Ethiopia 2017.

3.7.2 Maternal and Child Health Decision-Making

An important part of gender integration and awareness raising is to promote equity between men and women in their access to resources, MCHN information, and knowledge and skills. The EL estimates of MCHN knowledge and decision-making are illustrated in Table 13.

Knowledge of the four core MCHN practices implies that mothers and fathers correctly answered at least three of the four questions on core MCHN practices: 1) optimal number of maternal antenatal visits during pregnancy; 2) nutrition during pregnancy; 3) early initiation of breastfeeding; and 4) introduction of complementary foods at six months of age. These four practices do not constitute a comprehensive set of practices, but they are relevant to the 1,000-day window from pregnancy to a child's second birthday. In the combined DFAP areas, most mothers and fathers of children under two have correct knowledge of MCHN practices, but more women (82.9 percent) with children under two years of age have knowledge of four core MCHN practices than men (71.2 percent).

Men and women in a union and with children under two years of age were asked about MCHN decision-making in the household. Female respondents were asked who usually makes decisions about their own health and nutrition and male respondents were asked who usually makes decisions about their wives' or partners' health and nutrition. Both female and male respondents were asked who usually makes decisions about the health and nutrition of children under two years of age.

Across the three project areas it is more common for MHN and CHN decisions to be made alone and usually by the woman than jointly by spouses. Findings from the DFAP PE Report corroborate this finding across the DFAP implementation areas. Health and nutrition is one area in which women's decision-making predominates. According to GIs with MIC5, most husbands consider it is the woman's role to make these decisions. In the combined project areas, about 56.6 percent of women decide alone

on MHN issues compared to 23.9 percent of men. A total of 59.4 percent of women decide alone on CHN matters compared to only 13.2 percent of men. Joint MHN and CHN decision-making is less common than joint decision making on self-earned cash, but nonetheless, approximately one-third of men and women agree that decision-making is done together. These statistics are also corroborated by the qualitative findings from the QS. In the combined DFAP areas, a total of 27.2 percent of women decide jointly with their spouse on MHN issues compared to 30.5 percent of men. A similar trend is observed for CHN decisions: 29.3 percent of women decide with men on CHN matters compared to 32.7 percent of men. These results underscore differences in males' and females' perceptions of decision-making. Generally, similar patterns of decision making are observed by implementation area.

Table 13. Maternal and Child Health Knowledge and Decision-Making

	Overall	CRS	FH	REST
Percentage of men and women with children under two who have knowledge of maternal and child health and nutrition (MCHN) practices ¹	77.7	77.4	70.7	83.8
Male	71.2	76.2	64.0	74.9
Female	82.9	78.4	76.3	90.8
Percentage of men/women in union with children under two who make maternal health and nutrition (MHN) decisions alone				
Male	23.9	27.9	21.3	24.0
Female	56.6	50.5	52.8	63.0
Percentage of men/women in union with children under two who make MHN decisions jointly with spouse/partner				
Male	30.5	20.3	40.2	27.3
Female	27.2	20.7	33.7	25.1
Percentage of men/women in union with children under two who make child health and nutrition (CHN) decisions alone				
Male	13.2	18.6	10.0	13.1
Female	59.4	54.6	51.8	68.1
Percentage of men/women in union with children under two who make CHN decisions jointly with spouse/partner				
Male	32.7	22.8	42.1	29.6
Female	29.3	23.3	38.1	25.2
Number of men and women with children under two	2,339	759	887	693
Men	1,051	343	404	304
Women	1,288	416	483	389
Number of men/women in union with children under two	2,225	731	838	656
Men	1,049	343	403	303
Women	1,176	388	435	353

¹ Correctly answered at least three of four MCHN questions.

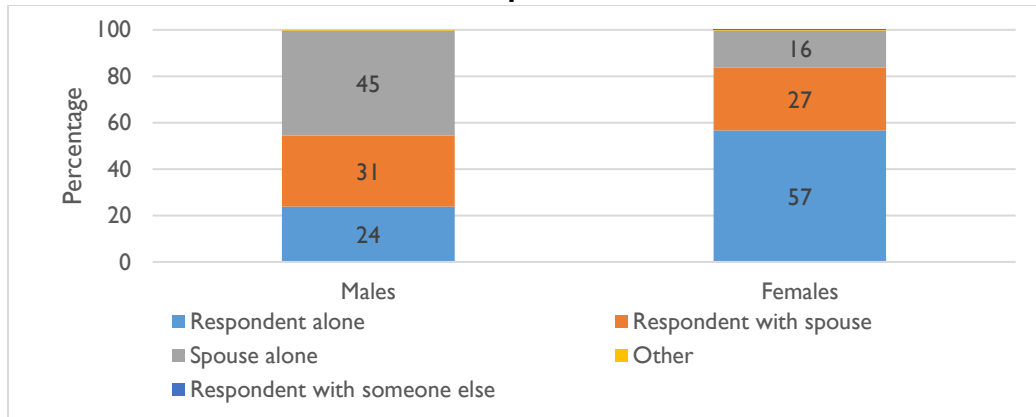
The overall indicators mask the percentage of men and women who are not involved in MHN or CHN decisions. Figure 9 illustrates that the majority of women in the combined DFAP areas (83.9 percent) have some participation in decisions having to do with their own health and nutrition and that 57 percent make this decision alone.⁶⁶ A total of 16.1 percent of women do not participate in MHN decision-making because their husbands decide alone (15.9 percent) or someone else decides (0.2 percent). Relatedly, about 24.2 percent of men do not engage their wives in MHN decision-making.⁶⁷

⁶⁶ This includes women who reported deciding alone, women who reported deciding with their spouse, and women who reported deciding with someone else on their own health and nutrition.

⁶⁷ This includes men who reported deciding alone or with someone else or "other" on decisions having to do with the health and nutrition of their wives.

Annex 9, Table A9.14 provides additional details on MHN decision-making by DFAP area and indicates a similar pattern of MHN decision-making across the three DFAP implementation areas.

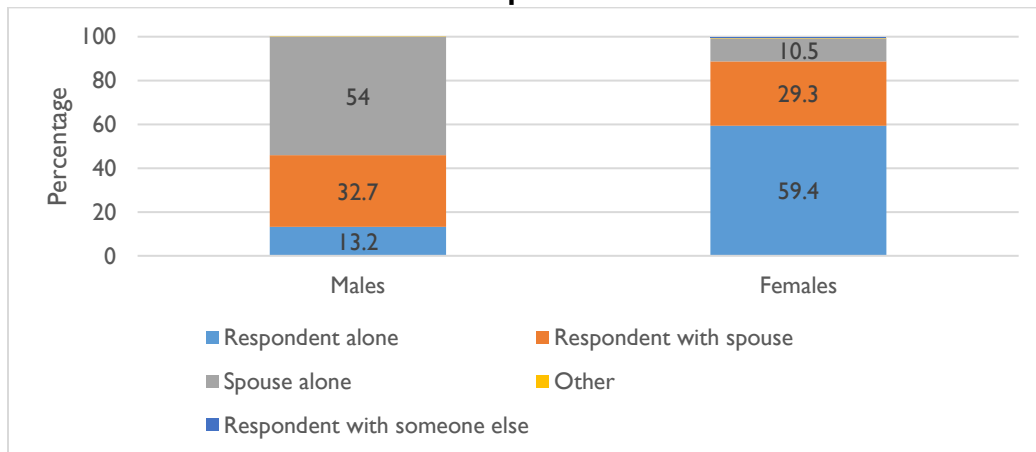
Figure 9. Maternal Health and Nutrition Decision-Making, Combined DFAP Areas, Ethiopia 2017



Source: FFP Endline Survey, Ethiopia 2017.

Figure 10 indicates that the majority of women (89 percent) in the combined project areas participate in decisions having to do with the health and nutrition of their children.⁶⁸ Similar to the data on women’s decision-making about their own health and nutrition, most women (59.4 percent) make decisions on behalf of their children by themselves. Only 10.9 percent of women have no input into CHN decisions and a similar percentage of men (13.3 percent) report that they decide alone (13.2 percent) on CHN issues or let someone else make the decision (0.1 percent). On the other hand, about one-half of fathers (54.1 percent) are not involved in CHN decision-making.⁶⁹ Annex 9, Table A9.15 provides additional details on CHN decision-making by project area. Generally, the pattern of CHN decision-making is similar across the DFAP areas. It is noteworthy however that the percentage of mothers who are excluded from CHN decision-making in CRS is almost double (22.1 percent) the average for the combined project areas (10.9 percent).

Figure 10. Child Health and Nutrition Decision-Making, Combined DFAP Areas, Ethiopia 2017



Source: FFP Endline Survey, Ethiopia 2017.

⁶⁸ This includes women who reported deciding alone, women who reported deciding with their spouse, and women who reported deciding with someone else on their children’s health and nutrition.

⁶⁹ This includes men who reported their wives or someone else deciding on the health and nutrition of their children.

4. CONCLUSIONS

Meta Conclusions about Food Security and Poverty

The relatively modest gains in DFAP implementation areas for food security are predominantly because of the devastating drought of 2015-2016. Households reliant on rainfed agriculture experienced ongoing production challenges from successive years of insufficient rain, water shortages, drought, and destructive flooding during the DFAP implementation period, leaving them particularly vulnerable and less able to cope with the severe drought that began in 2015. Some of the gains won toward greater food security and reduction in malnutrition were lost by households that graduated from PSNP once they achieved food self-sufficiency. Households that remained as PSNP and DFAP beneficiaries from 2012-2016 who were seeing improvements in their situation lost some of their gains as well. Despite the adverse effects of these weather patterns and the severity of the 2015-2016 drought, higher levels of food security and improvements in MCHN may have been achieved were it not for several important factors related to changes in the GOE PSNP policies and the amount of resources available to cover all CFI households. These factors, outside of the management influence of the DFAP IPs, include:

- Non-PSNP households in the PBS sample included the CFI. The number of CFI households per woreda in each region exceeded the amount of PSNP resources in a given year. Not every household meeting the criteria for PSNP could be included. Because they were not included in PSNP, these households could not be included as DFAP beneficiaries either. While these households may have been indirect beneficiaries of some program activities, they lacked the one of the pillars of PSNP developed to shorten food gaps and maintain or increase assets—specifically, food and cash transfers.
- Based on nationally set targets established in the GOE Growth and Transformation Plan (2010), 3.5 million beneficiary households were graduated from PSNP because of the quotas established in the highlands per region to graduate households from the program.⁷⁰ Many of these households had not achieved self-sufficiency, a key criterion for graduation based on the GOE Program Implementation Manual. These quota-based graduates lost their DFAP beneficiary status as well. Not all of these households were reinstated in the program during the 2015-2016 drought or through the retargeting process which was conducted in 2016.
- All PSNP households with more than five family members became more food insecure with the introduction of a standardized package of food based on the nutritional and caloric requirements of a five-person household.

Household Dietary Diversity

Household dietary diversity has increased overall, but the degree of increase varies in each project area. Not only does the increase in dietary diversity vary across DFAP areas, but also within project areas. This increase is based on a combination of factors that gave some households, across all project areas, the ability to purchase a diversity of nutritious foods. Further increases in dietary diversity may have been achieved if not for the effects of the severe drought of 2015-2016 on agricultural production. The households most likely contributing to the increase in dietary diversity include those households:

- With five or fewer household members that were selected as PSNP 3 beneficiaries and remained so throughout the DFAP implementation period carrying over into PSNP 4;

⁷⁰ The actual target was 3.7 million households but GOE halted the program of graduation by quota given the enormity of humanitarian needs for food, water, and other forms of assistance during the 2015-2016 drought.

- Located in less drought-affected areas with sufficient good quality land relative to the size of the household that use agro-inputs and pesticides;
- Whose crop production benefitted from access to irrigation infrastructure completed through public work efforts;
- Who cultivate and maintain backyard vegetable gardens in areas where year-round rainfall occurred; and
- Who were able to establish successful agriculture-related micro-enterprises based on small-scale irrigation for cash crop production of vegetables or fruit.

Poverty

Because a direct comparison of BL and EL poverty indicators was not feasible, it was only possible to make limited conclusions. The prevalence of poverty seen at EL was affected by crop failures, declines in livestock productivity, and livestock death from multiple years of erratic rainfall, and location-specific incidents of drought and flooding. These effects on household poverty levels were further exacerbated by the 2015-2016 drought. The drought also caused a reversal of food self-sufficiency achieved by some households. Households frequently search for wage earning opportunities in times of crop failure, but the daily wage rate paid for agricultural labor declined significantly because of the few commercial farms unaffected by drought conditions and the large number of people seeking opportunities on these farms.

Water, Sanitation, and Hygiene

Data from FEWS NET, USAID Complex Emergency Fact Sheets for Ethiopia in 2015 and 2016, and findings from the DFAP PE Report show that years of insufficient rain—and particularly the major drought of 2015-2016—created severe water shortages in many of Ethiopia’s hotspot woredas. Steps were taken by the GOE, donors, and relief organizations to address the resulting crisis of insufficient drinking water such as deploying emergency water delivery trucks. The contraction or disappearance of water sources during this major drought certainly contributed to low percentage of households that can obtain drinking water in less than 30 minutes round trip. Despite the growing understanding reported on the importance of handwashing at critical times from messaging and training provided by DFAP IPs and HEWS, shortages of water coupled with the prioritization of available water for drinking purposes contributed to the decline of handwashing practices across the three project areas. There are two key factors that may have contributed to the decline in use of improved sanitary facilities and the increase in open defecation. The more important factor concerns the quality of the latrine model that was widely introduced. Findings indicate that these latrines break down approximately one year after use. The second factor is that households do not replace the latrines once they have broken because of the high replacement cost. Behavioral issues may contribute to this decline in some of the DFAP implementation areas as suggested by interviews with HEWs and young mothers conducted for the 2017 DFSA BL study. The team does not have data to form conclusions about the low use of water improvement technologies across the three DFAP implementation areas.⁷¹

Maternal Health and Nutrition

At EL about one-third (36.2 percent) of women in the combined DFAP areas are underweight indicating the need for further improvements in women’s nutritional status. The low levels of dietary diversity as evidenced by the WDDS (on average women consume two or less of nine nutritional rich food groups) at BL and the MDD-W (on average, less than 10 percent of women consume 5 of 10 nutritionally rich food groups) at EL are related to multiple factors described in the findings that, taken together, create barriers to women’s food access and availability. These barriers explain women’s consumption of

⁷¹ During the November 2017 Data Utilization Workshop in Addis Ababa, IPs were not able to explain the low use of these technologies to improve water. Some noted plans to conduct assessment to identify the causes.

cheaper and locally grown foods, specifically grains, roots, and tubers, as the basis of their diet. Data from the 2017 QS indicate that several factors account for the relatively low use of contraceptives. Among them are: religious beliefs against family planning and the use of contraceptives; women's lack of decision-making over issues that affect the health and nutrition of themselves and their children among communities that are predominantly Muslim; and women's fears that contraceptives may be harmful. According to the Tufts DFAP PE report, DFAPs did not include interventions to promote family planning and the use of contraceptives. These efforts are the responsibility of HEWs in kebele health centers and rural health posts. The team does not have data to form conclusions on the lack of statistically significant change between BL and EL in prevalence of women making at least four ANC visits during their last pregnancy in the REST and FH implementation areas, or why EL ANC results in REST are higher than in the CRS and FH implementation areas. The data do suggest that ongoing efforts tailored to specific location features and sociocultural norms and practices within each DFAP area are required for successful family planning and health care seeking during pregnancy as well interventions to supplement messaging.

Children's Health and Nutrition

There have been moderate improvements in CHN indicators (malnutrition) in all three DFAP areas despite the deterioration in WASH indicators. The improvement in the CHN indicators (malnutrition, MAD) is supported by moderate improvements in HDDS. The data on malnutrition would have likely deteriorated given the food security situation and serious water shortages during the 2015-2016 drought. However, emergency feeding programs implemented by IPs and the GOE and the treatment of children with severe acute malnutrition in government-designated malnutrition hotspots may have contributed to maintaining some of the increases that were achieved prior to 2015. The finding from the multivariate analyses that children living in female-headed households are less likely to be stunted suggests differences in decision-making and resource allocation for households where women are the sole decision-makers—namely, that decision-making in female-headed households may lead to resource allocations that are favorable to CHN compared to male-headed households.

The prevalence of diarrhea in the REST area declined markedly by almost 50 percentage from 68.9 percent to 21 percent even with the decrease in the use of a proper handwashing station. In FH, the prevalence of children 0-23 months with diarrhea remained stable at around 26 percent despite the: deterioration in the use of a proper handwashing station, decline in the use of an improved sanitation facility, and increase in practice of open defecation. Based on bivariate analysis of the prevalence of diarrhea and WASH indicators, the use of water treatment technologies is one of the important factors associated with the decrease in diarrhea in REST between 2012 and 2017. Additional analysis could be conducted to identify other factors that contributed to this decrease.

Gender

The predominance of women's participation in MCHN decisions and their perceived participation in other household decisions such as use of self-earned cash are likely the result of the ongoing focus on gender equity and the importance of women's participation promoted by each IP and by government officials over the duration of the DFAP implementation period.⁷² IPs provided gender training of government officials including HEWs to sensitize them on gender issues and to engage them in promoting changes, and direct support to village women.

Each IP used a variety of techniques to promote these changes including different forms of messaging such as: role playing, holding community conversations on gender, and through the establishment of gender clubs in schools. Government officials also actively promoted greater gender equity and women's

⁷² The various approaches and methods used by IPs and conducted by government officials are described in the DFAP PE Report (2017) on under the findings on gender equity and empowerment. Interviews with woreda officials and HEWS during the QS field work provided examples of the contribution and commitment of GOE officials to promoting gender equity and women's empowerment.

empowerment through similar activities as gender officers or as officials working in Women's and Children's Activity Offices. Examples from qualitative data include the arrangement of literacy training for village women and working with woreda legal offices, schools, and local police to stop child marriages.

REFERENCES

- El Nino in Ethiopia 2015-2016: A Real Time Review of Impacts and Responses, USAID/Ethiopia Agriculture Knowledge, Learning, Documentation and Policy Project. Andy Catley, Adrian Cullis and Dawit Abebe, Tufts University, March 2016.
- FAO, Ethiopia Situation Report, August 13, 2017.
- Federal Democratic Government of Ethiopia, Growth and Transformation Plan (GTP), 2010/2011-2014/2015, Ministry of Finance and Economic Development (MoFED), Addis Ababa, 2010.
- FEWSNET, Informing Climate Change Adaptation Series, Fact Sheet. A Climate Trend Analysis of Ethiopia. April 2012.
- FEWSNET Food Security Outlook Update, World Food Programme, November 2012.
- FEWSNET Food Security Outlook, World Food Programme, October 2013-March 2014, March 2014
- FEWSNET Horn of Africa: Ethiopia. Special Report. Illustrating the Extent and Severity of the 2015 Drought. December 2015.
- FEWSNET, Food Security Alert, World Food Programme, December 4, 2015.
- Performance Evaluation of Title II Funded Development Food Assistance Programs in Ethiopia Agriculture Knowledge, Learning, Documentation and Policy project (AKLDP Ethiopia), Tufts University, May 2017.
- Productive Safety Net Programme, Phase IV, Programme Implementation Manual Government of Ethiopia, Ministry of Agriculture, Addis Ababa, December 2014.
- UNICEF Humanitarian Assistance Situation Report # 18: Ethiopia. UN Fund for Children, NY, Reporting Period November 6 – December 5, 2017, December 5, 2017.
- USAID/Food for Peace, Baseline Study of Development Food Security Activities Report in Ethiopia. EVELYN Contract, Patricia Vondal, Benita O’Colmain, Gheeta Temsah, and Ephraim Mebrate Disasa. February 2018.
- USAID/OFDA, Ethiopia Complex Emergency Fact Sheet # 13, Fiscal Year 2014, January 2014.
- USAID/OFDA, Ethiopia Complex Emergency Fact Sheet # 1, Fiscal Year 2015, January 21, 2015.
- USAID/OFDA, Ethiopia Complex Emergency Fact Sheet # 3, Fiscal Year 2015, June 26, 2015.
- USAID/OFDA, Ethiopia Complex Emergency Fact Sheet # 7, Fiscal Year 2016, March 30, 2016.
- USAID/OFDA, Ethiopia Complex Emergency Fact Sheet # 10, Fiscal Year 2016, May 13, 2016.
- The Rising Costs of Nutritious Foods in Ethiopia, Ethiopia Strategy Support Program, Research Note #67. Fantu Bachewe, Kalle Hirvonen, Bart Minten, and Feiruz Yimer, USAID/UKAID/European Union. June 2017.
- World Bank Development Research Group. Land Governance Policy Brief. Does Large Farm Establishment Create Benefits for Neighboring Smallholders? Evidence from Ethiopia. Daniel Ali, Klaus Deininger, and Anthony Harris. Issue 3, January 2018.

ANNEX I
Statement of Work

SECTION C – DESCRIPTION STATEMENT OF WORK

C.1 BACKGROUND

C.1.a. History of Food for Peace

Established by the Agricultural Trade and Development Assistance Act in 1954, and situated in USAID's Bureau for Democracy, Conflict and Humanitarian Assistance, FFP is the USG's primary food assistance agency, and has been reducing hunger and malnutrition among vulnerable groups around the world for more than 60 years. Congress authorizes the majority of FFP resources through the Food for Peace Act of the Farm Bill. These funds are intended to buy and transport U.S. in-kind commodities for use in FFP's overseas programs. Since 2010, FFP has received additional funding flexibility through the Congressional authorization of cash resources for local and regional procurement of in-kind commodities, cash transfers or vouchers for food, as well as complementary programming addressing the drivers of food insecurity. Between 2010 and 2015, FFP programs have reached an average 52 million people in 50 countries per year.

C.1.b. FFP Program Description

FFP aims to reduce hunger and malnutrition and assure that adequate, safe and nutritious food is available, accessible to, and well-utilized by all individuals at all times to support a healthy and productive life.

FFP programs approximately \$2 billion annually to meet both chronic and acute food needs in vulnerable populations, uniquely working in both emergency and development contexts to improve food security. Emergency and recovery programs comprise 80% of total spending, and the remainder of funding supports broad-based resilience-focused development programs assisting chronically food insecure populations.

Through its short-term emergency programs, FFP provides food assistance to save lives, reduce suffering, and support the early recovery of populations affected by both acute and chronic emergencies. FFP responds to crises where the food supply is severely disrupted and populations lack access to sufficient food through normally available means (e.g., production, barter, purchase in markets, etc.) Such crises may involve drought, floods, earthquakes, and/or civil conflict. In addition to resource transfers to help populations meet immediate food needs, FFP emergency programs may be accompanied by complementary programming that has a direct impact on food security.

Through its five-year development food assistance programs, FFP works to reduce hunger and extreme poverty in vulnerable populations by addressing the underlying causes of chronic food insecurity. This includes a focus on improving food access and incomes through agriculture and other livelihoods initiatives; enhancing natural resource and environmental management; combating under-nutrition, especially for children under two and pregnant and lactating women; and mitigating disaster impact through early warning and community preparedness activities. Development programs are intended to build resilience in populations vulnerable to chronic hunger and repeated hunger crises, and to reduce future need for ongoing or emergency food assistance. These programs are increasingly integrated with other USAID efforts to promote resilience and reduce extreme poverty.

FFP establishes cooperative agreements with the awardees of the development food assistance projects. The development food assistance projects contain two unique features that strive to increase the 'fit to context' of project activities:

- Each development food assistance project applicant is asked to develop a comprehensive theory of change (ToC) for the proposed project, and to update it as needed throughout implementation.
- FFP is piloting a new approach, known as Refine and Implement, in its FY16 development food assistance projects. Refine and implement includes two stages: (1) a refinement period during the first year of a development project during which successful applicants carry out pre-implementation studies, refine the project's design, and undertake the preparation for implementation (e.g., hiring, training, procurements, etc.), followed by (2) the implementation of the activities beginning at the onset of the second year of the project.

C.1.c. Strategic Objectives of Food for Peace

FFP's strategic goal is "Food and nutrition security of vulnerable populations improved and sustained." To achieve this goal, FFP's new 2016-2025 strategy sets out two strategic objectives that cut across both emergency and development programs to support change at the individual and household level, as well as work to strengthen local systems and support more sustainable and transformative change.

SO1: Lives and livelihoods protected and enhanced

FFP works to protect and enhance the lives and livelihoods of those affected by crisis, and those vulnerable to crisis due to chronic poverty and hunger. In acute emergency situations, this may be by meeting immediate food and nutrition needs of those most vulnerable to food deficits. In recovery and development settings, the emphasis may shift towards improving the lives of the most marginalized and protecting investments. Activities that support these objectives include capacity building, knowledge transfer, household asset-building, and/or other productive investments that contribute to improved food security across a range of sectors.

SO2: Communities and institutions transformed

Even in the most acute crisis, work that avoids doing harm and succeeds in strengthening local systems can lay an important foundation for transformative change. Under SO2, FFP works to strengthen communities and institutions which then serve as catalysts for greater and more sustainable change in emergency response and long-term development. SO2 provides a pathway to address root causes and drivers of food insecurity through efforts at the community level and, where appropriate, all the way up to national policy and planning. This is achieved by strengthening the capacity of institutions, reducing risks, and providing engines of growth, opportunity, and change.

C.2 INTRODUCTION OF THE FFP PROJECTS' EVALUATION AND LEARNING MECHANISM (EVELYN)

In order to ensure evidence-based program design and implementation, as well as to improve accountability of government resources, FFP has decided to contract a qualified firm to conduct various studies and evaluations. The performance evaluations are generally conducted in two steps: first, a baseline study is undertaken to establish the baseline values for key indicators (which helps the awardee to refine the project design and set targets), and second, an endline study is carried out to collect data on the same set of indicators so that comparisons can be made to identify the differences.

The objective of Evelyn is to provide FFP with empirical evidence through the following:

- 1) Population based surveys;
- 2) Performance and impact evaluations;
- 3) Post-project evaluations; and,
- 4) Process evaluations and thematic studies on:
 - a) how the FFP projects are performing;

- b) how well the services are being delivered and the quality of the services;
- c) which interventions, approaches, tools, and methodologies can be attributed to the changes in key outcomes of interest;
- d) how sustainable are the changes that our investments produce; and
- e) what FFP and its implementing partners can learn from investments to date to inform project design to achieve sustained improvements in food and nutrition security, as well as greater accountability — even in humanitarian emergencies.

Evelyn contains a robust utilization and learning element to ensure that knowledge gained through baseline surveys, evaluations, and thematic studies is well communicated and applied throughout the program cycle, providing a better understanding of how FFP projects are functioning: whether the projects are achieving targeted results, how the projects are perceived by the primary stakeholders, and whether approaches, methods and interventions promoted by FFP are cost-efficient and effective. This information will also inform the degree to which specific approaches and interventions are scalable, and whether the outcomes achieved and the mechanisms to support them in the future have been sustained. The information and knowledge generated through baseline surveys, evaluations and thematic studies will be used to strengthen accountability, shape resource allocation decisions, improve guidance and policy, and allow USAID and implementing partners to design projects and modify existing projects and interventions in ways that bolster performance, efficiency and effectiveness. Evaluations will focus primarily on FFP development projects, as the critical nature of emergency programs generally only allows for ex-post assessments, without the benefit of baseline information. Further, due to their often inherent unpredictability, emergency food situations are often well underway by the time FFP responds, making the collection of baseline data pre-crisis impossible, and the postponement of activities to collect data prior to assistance ill-advised.

The Office for Learning, Evaluation, and Research in USAID's Bureau for Policy, Planning, and Learning (PPL/LER) issued a new Evaluation Policy in early 2011 which outlines USAID policy on evaluations. Evelyn enables FFP to meet the requirements of USAID's Evaluation Policy and ADS 203 by supporting evaluations. All activities must be carried out in compliance with the Evaluation Policy, which can be found here: [http://www.usaid.gov/evaluation/.](http://www.usaid.gov/evaluation/)

C.3 STATEMENT OF WORK

The majority of Evelyn's resources will be allocated to baseline and endline studies and performance evaluations of FFP development projects. Performance evaluations will use a mixed method approach – requiring both quantitative and qualitative data collection and analysis methodologies – and will utilize and integrate secondary data and project performance monitoring data. Methods will be chosen in order to generate the highest quality and the most credible and robust evidence possible to answer evaluation questions. While performance evaluations will use baseline and endline comparisons, the impact evaluation will require counterfactual data or more sophisticated methodologies. The process evaluation will use primarily qualitative methods while the post-project evaluation may require a mixed method approach.

FFP's indicators¹ will be used to evaluate the development and humanitarian response investments and how well they support the FFP strategy. While evaluation data will be collected through Population Based Surveys (PBS) carried out by the incumbent, standard practice is for implementing partners (IP) to collect project monitoring data. Both the evaluation data as well as the performance monitoring data are reported through the FFP Management Information System (FFPMIS). The evaluations must incorporate existing monitoring data reported into the FFPMIS to evaluate the performance of the project.

¹ FFP periodically revises the list of indicators, as a result there may be changes in the number of indicators or the definition, and the incumbent is expected to be responsive to any changes to Agency indicators, when appropriate and feasible.

Throughout the award, the incumbent will work closely with FFP/W, Missions, and Implementing Partners (IP) on the design and implementation of the PBS, evaluations, and the policy and program implications of evaluation and study findings. On occasion, the incumbent will be required to liaise with host-government entities to secure government approvals, as well as engage with the host-country's Department/Office of Statistics on policies and instruments related to data collection. While FFP/W will be the primary contact and the manager of the contract, Mission staff will provide oversight during the field work, help address issues related to data collection, and participate in the baseline workshop to ensure that the learning from the evaluations influences project design and implementation. The incumbent will also closely work with the IPs to better understand the survey area and logistical needs, get the sampling frame, and contextualize the indicators. The incumbent is expected to share the draft tools and reports for FFP/W, Mission, and IP input/feedback.

Evelyn will serve as FFP's principal mechanism for rigorous evaluation-based learning. The incumbent will be required to do the following:

- a) implement population-based surveys (PBS) at baseline and endline to support evaluations;
- b) conduct performance evaluations for development and select humanitarian response projects;
- c) conduct up to one impact evaluation;
- d) conduct up to one thematic study;
- e) conduct up to one process evaluation;
- f) conduct up to one post project evaluation to evaluate sustainability of outcomes; and
- g) provide support for the synthesis, dissemination and application of results, lessons learned and best practices.

a) Population-based mixed method surveys

Evelyn will facilitate data collection on approximately 35 to 40 high-level food and nutrition security outcome and poverty indicators through PBSs. Each year, FFP awards several development projects in two or more countries; a baseline study will be needed for each of these countries stratified by award (project) (NB: the survey results must be generalizable to all new awards in country). The incumbent must be prepared to conduct studies in two or more² countries concurrently. In addition to the baseline surveys, a number of projects will also require representative population-based endline surveys. The next PBS studies are expected to occur in 2017. The table below provides an approximate list of baseline and endline surveys by year.

Table 1: List of Stratified Baseline and Endline PBS by Country

Year	Baseline PBS		Endline PBS		Baseline and Endline Combined PBS	
	Country	Number of strata ³	Country	Number of strata	Country	Number of strata ³
Base year	Democratic Republic of the Congo and Liberia	Up to 4 ⁴	Niger and Uganda	Up to 5 ⁵	Ethiopia	Up to 4 ⁶

² The baseline studies will be carried out in two to three countries simultaneously, and the endline studies for the final evaluations will be carried out in four to five countries. These studies likely will be carried out simultaneously, but if not, the incumbent needs to plan for there to be significant overlap in timing.

³ Each country represents one PBS; each project/award should be used as a stratum in designing the PBS.

⁴ Three strata in DRC and one stratum in Liberia.

Option year 1	Uganda	Up to 2	Guatemala, Madagascar, Malawi, Nepal and Zimbabwe	Up to 10	N/A	N/A
---------------	--------	---------	---	----------	-----	-----

The list of countries is subject to change by FFP

Key tasks for the surveys will include:

- Design, plan, and implement up to three PBS (stratified by award) baseline surveys in FY2017. In addition, design, plan and implement up to two distinct PBS endline surveys in FY 2017. **Note: The baseline and endline surveys for Ethiopia only will be combined into one PBS survey; the endline survey will be designed in such a way so that the data collection can be combined with the baseline PBS.** Design, plan, and implement up to one PBS baseline survey, and up to five endline surveys, for the option year (FY 2018). The incumbent must adhere to the draft FFP M&E and Reporting Policy and Guidance. The representative population-based quantitative household surveys will collect data on 35 to 40 high-level food and nutrition security outcome and poverty indicators using computer-assisted personal interviewing (CAPI). In addition, these surveys will also collect data on food insecurity shocks and stressors as well as household and community capacities to absorb, adapt to and recover from shocks.
- The survey will be stratified by award to generalize the data at the award level as well as for the entire FFP development projects' implementation area in a country. Table 1 presents the maximum number of countries and strata both for FY 2017 as well as for the option year FY 2018.
- The PBS baseline study will use a mixed-methods survey approach except in countries piloting FFP's refine and implement model. When conducting a mixed method study, the incumbent should design the qualitative research questions either based on the preliminary analyses of the quantitative data, or using secondary data from the target region. FFP's refine and implement model launches in DRC and Liberia during FY 2017; in these two countries, the baseline study will use only the quantitative method.
- The PBS endline survey will be a part of the performance evaluation. In analyzing the endline survey data, it is expected that the incumbent will perform both descriptive and inferential analyses. The incumbent will compare the endline data for each stratum⁷ with that of the baseline for that particular stratum, and also for the overall country level in order to statistically detect changes (if any) for all key indicators. The incumbent will conduct inferential analyses as well as econometric analyses to determine the magnitude and direction of changes.
- The following documents are already developed by FFP and the incumbent is expected to adapt them to the country and survey context. The incumbent must take this into account when estimating the LOE.
 - Sampling Design Protocol
 - Field Procedure Manuals for Enumerators and Supervisors
 - Anthropometry Guide
 - Data Treatment and Analysis Plan

⁵ Three strata in Niger and two strata in Uganda.

⁶ There are four strata in the baseline and four strata in the endline. The geographic overlap between baseline and endline is approximately 50 - 60 percent.

⁷ Each stratum is an award; therefore, the comparison needs to be made both at the stratum level as well as for the overall.

- Survey Instruments

- The incumbent will carry out a number of activities to facilitate data use and inform FFP’s program and policy decision-making: (1) analyze data to understand patterns, unexpected findings, and associations between data points; (2) hold utilization workshops with implementing partners and Mission staff in-country to ensure baseline findings inform potential adaptations in a project’s theory of change, behavior change messaging, and other aspects of implementation; (3) summarize findings of baseline and endline surveys, key implications and lessons learned for broader dissemination to Mission staff, FFP/W, and the wider implementer community.

Indicators for the PBS:

In each country, the incumbent will be responsible for collecting data on FFP indicators, in addition to resilience indicators and a limited number of additional project-specific indicators selected by each awardee. The final list of indicators to be collected must be discussed and agreed upon in consultation with FFP, the USAID Mission in each country, and FFP awardees. The FFP indicators for the baseline study can be found [here](#).⁸ N.B. Many indicators have been updated since the release of this Task Order; a current list will be forwarded upon award.

The incumbent must adhere to the [“FFP Indicators Handbook - Part I: Indicators for Baseline and Final Evaluation Surveys”](#) for definitions, collection methodology, and analysis of the indicators.⁹ In several instances, the incumbent will need to refer to the source documents used to develop the indicators handbook for instructions on adapting questionnaires to the local context, and other important details on data collection and tabulation. When carrying out the survey, the incumbent is required to collect household level GPS coordinates to geo reference the PBS data sets.

In addition, for USAID resilience focus countries, the incumbent will collect data to create indices that measure the resilience, specifically the absorptive, adaptive, and transformative capacities, of households in the FFP project implementation areas. The list below is illustrative of the type of information to be collected for the resilience indices:

Absorptive capacity:

- Bonding social capital
- Shock preparedness and mitigation
- Access to informal safety nets
- Availability of hazard insurance
- Household ability to recover from shocks

Adaptive capacity:

- Human capital
- Bonding social capital
- Linking social capital
- Exposure to information
- Diversity of livelihoods
- Access to financial resources
- Asset ownership
- Aspirations and confidence to adapt

⁸ https://www.usaid.gov/sites/default/files/documents/1866/FFP%20Indicators%20List_Revised%2004.13.2015.pdf

⁹ https://www.usaid.gov/sites/default/files/documents/1866/Part%20I_Baseline%20and%20Final%20Evaluation_04.13.2015.pdf

Transformative capacity:

- Access to formal safety nets
- Availability of communication networks
- Access to markets
- Access to infrastructure
- Access to basic services
- Access to communal natural resources
- Access to livestock services
- Bridging social capital
- Linking social capital

The resilience indicators have to be contextualized for the country context through a rapid assessment to be carried out by the incumbent. The qualitative assessment must be carried out by a technical specialist with substantial knowledge on resilience. USAID has a resilience module that the incumbent will use as the basis for contextualization.

The incumbent must also accommodate data collection for a limited number of project-specific indicators in each country that will be identified by each FFP awardee. The incumbent must work closely with awardees to develop questionnaires and tabulation instructions for any additional project-specific indicators not specified in the FFP Indicators Handbook, and it will ensure that rigorous practices are used to collect, tabulate, and analyze the indicator data.

Sample size estimation for the PBS:

The incumbent will be responsible for estimating the base sample size at both the awardee and country overall levels. FFP requires that the incumbent use the equation for proportions presented in the FANTA Sampling Guide and Addendum to estimate sample size¹⁰. When estimating the sample size, the incumbent will use the following parameters:

- 95 percent confidence level for one tailed test;
- 80 percent power;
- 8 percentage point reduction in the prevalence of stunting; and
- Design effect of 2.

b) Performance evaluations

Through Evelyn, the incumbent will design, plan, and implement approximately five independent, rigorous performance evaluations of FFP development and humanitarian response projects. The projected number of performance evaluations for the option year, if exercised, is eight. These evaluations will use a mixed method approach; collect and synthesize lessons learned, perceptions of stakeholders and best practices; analyze and present findings in reports and summary briefs for specific audiences (both internal and external to USAID); present findings and recommendations in workshops and brownbag sessions; and make the reports accessible to a broad set of stakeholders in accordance with USAID policies. The following table provides information on the performance evaluations to be conducted during the span of Evelyn.

¹⁰ The FANTA Sampling Guide and Addendum can be found at <http://www.fantaproject.org/publications/sampling.shtml>.

Table 2: Planned performance evaluations during Base Year and Option Year 1

Year	Performance evaluation countries	Number of countries	Number of evaluations
Base Year	Niger and Uganda	2	5
Option year 1	Guatemala, Madagascar, Malawi, and Zimbabwe	4	8

The list of countries is subject to change by FFP

The performance evaluations will include:

- A statistical comparison of PBS endline survey data with the baseline survey data by stratum so that the evaluation can assess the performance for each award (project) independently. The incumbent will provide both descriptive and inferential statistical analyses of the PBS data collected at the baseline and endline surveys (refer to Section C.3(a)). The team responsible for the qualitative component of the performance evaluation will be required to coordinate with the endline survey team to ensure that the analyses of the PBS data and statistical comparison with the baseline data meet the needs of the evaluation team.
- Primary data collection for the qualitative assessment on the effectiveness of project management, systems and processes established by the project, including the sustainability strategy and its implementation, performance monitoring, strategies to improve gender equality both at the participant and project management level, environmental considerations, conflict sensitivity, protection and adherence to the humanitarian charter, and minimum standards in humanitarian response. The qualitative evaluation must also capture lessons learned and best practices. The incumbent's sector specialist members of the evaluation team will be responsible for collecting, analyzing and reporting on the qualitative data.
- A robust analysis of results across several dimensions in order to provide useful feedback to FFP on performance issues or capacity gaps at the IP level; new questions around technical or process approaches that could be answered through the FFP learning agenda; recommended programmatic adaptations for future procurements; and general findings that will have applicability in other contexts. The incumbent will present this analysis in formats appropriate for specific audiences, including reports, briefs, presentations and workshops.

Performance evaluation is a critical tool to improve the effectiveness of FFP investments via a systematic, evidence-based approach to learning. Listed below are some examples of questions that FFP has included in prior performance evaluations. As appropriate, the incumbent will adapt these to the individual projects.

For development projects:

- 1) To what extent has the project achieved specific purposes and intermediate outcomes? Based on the theory of change of the project and the existing knowledge about the pathways for reducing chronic malnutrition and improving food security, what is the likelihood of the project achieving its purposes?
- 2) Which outcomes are likely to be sustained? What processes, systems and institutional arrangements are required to sustain the necessary and critical services required by the outcomes? How are the quality,

frequency, effectiveness, and sustainability of the services provided by the project perceived by the community? What key lessons learned and best practices should inform future projects in the country?

- 3) How effectively did the project take advantage of the other USG and non-USG investments in the target area to achieve sustained outcomes as identified in the theories of change? What are the results of enhanced linkages with other service providers?
- 4) How did the male and female beneficiaries perceive changes in decision making roles and opportunities; participation in community and social institutions; access to and control over household and community resources; and freedom of speech and movement since their participation in the project? What is the perception of the non-beneficiaries about the benefits of program participation with regards to gender related outcomes?
- 5) What are the unintended positive and/or negative consequences of the project, and how can future projects minimize potential unintended negative consequences? How can FFP and its partners design strategies to systematically capture positive consequences?

For humanitarian response projects:

- 1) To what extent have planned outputs been achieved in terms of quantity, quality, equity and timeliness? Have the targeted beneficiaries received the planned services/assistance? How effective was the targeting approach? Did the beneficiaries use the entitlement as intended?
- 2) How appropriate was the choice of modality considering emergency type, infrastructure, market functionality, and the context? How effective was the modality in reducing food insecurity? Was the food basket or the transfer to buy the required food basket adequate and acceptable (quantitatively and qualitatively) compared to the needs of both men and women?
- 3) What systems were developed and used for ensuring program quality, including setting appropriate technical standards, monitoring systems, and resource transfer systems; and how the project integrated cross cutting themes such as protection, gender, and conflict sensitivity?

c) Impact evaluations

The incumbent is expected to budget for and carry out up to one impact evaluation during the option year on the safety net component of the Haiti FFP development food assistance project. The evaluation seeks to identify and understand causal relationships between the intervention package and the outcomes (baseline data were collected both from the treatment and control areas). The impact evaluation will use a mixed method approach, and the incumbent will collect both endline survey data to compare with the baseline survey, as well as qualitative information to understand the target communities' perceptions on the reasons for changes (if any). Additionally, as the Haiti baseline study on the safety net component used a quasi-experimental design in order to attribute the impacts of interventions on target populations, the incumbent will analyze the results to assess the effects of the interventions using difference-in-differences as well as propensity score matching. As requested, the incumbent will present its findings in workshops, brownbag sessions, and webinars; develop summary briefs for specific audiences; and write an evaluation report that is clear and accessible to a broad set of stakeholders.

The incumbent must provide a robust analysis of results across several dimensions in order to:

- 1) Provide useful feedback to FFP on proposed adaptations to ongoing projects, if appropriate;
- 2) Apply findings in other contexts and any limitations; and

- 3) Recommend new technical guidance or policy changes and/or follow-up questions that should be added to the FFP learning agenda.

Such analysis will be packaged in formats appropriate for specific audiences internal and external to USAID, including reports, briefs, presentations and workshops.

d) Thematic study

The incumbent is expected to budget for and carry out up to one thematic study during the option year (if exercised). The thematic study will answer questions identified in the forthcoming FFP learning agenda. The primary objective of the thematic study is to learn from the implementation to inform future project design, policies, strategies, approaches and technical guidance for FFP and IPs.

The study will focus on one country, cross-countries, or cross-regions, and it will provide a rigorous review of implementation strategies and their effectiveness, as well as the role of context in the implementation of best practices. It will also explore cost-efficiencies in implementation modalities or methods, and/or capture lessons learned and promising practices across programs. Depending on the topic and evaluation questions, a thematic study could use a mixed methods approach, or either qualitative or quantitative methods.

e) Process evaluation

The incumbent is expected to budget for and carry out up to one process evaluation during the option year (if exercised). The primary objective of the process evaluation is to learn from existing projects about the quality and effectiveness of their service delivery processes and systems. In addition to conducting an assessment of the processes and systems, the process evaluation will help assess the theories of change and identify the challenges and or bottlenecks to produce outcomes. The technical nature of this work requires an in-depth knowledge of the approaches utilized by the project. As such, sector specialists will engage with the communities to collect primary data, and analyze and report on the findings.

Illustrative questions will include, but are not limited to:

- 1) What specific interventions were designed and are implemented by the project in order to solve the main problem? How are the interventions being delivered?
- 2) How does the project coordinate with other projects in the area to take advantage of complementary services, and are these methods effective?
- 3) How the project developed and implements monitoring system, commodity management system, cash or voucher delivery system, social accountability system, staff and partnership management?
- 4) The extent of gender integration into project design and implementation, the design and delivery of social and behavior change sessions and other processes identified by FFP and how effective are these processes?
- 5) What are the types of problems encountered in delivering project services? How is the project allocating resources to different strategic priorities? Are staff adequately trained and/or educated for the specific approaches (i.e. farmer field school, care group, and village savings and loan) used by the project? Do they have adequate knowledge and skills to deliver the services that they are intended to deliver? Do they have skills to facilitate the project processes from beginning to end? Are the processes designed to promote sustainability?

The process evaluation will primarily use qualitative methods and tools, but also take advantage of the quantitative and qualitative information collected by the project and other evaluations. Results, findings and implications must be captured and shared in reports, briefs, workshops and briefings, as appropriate.

f) Post-project evaluation

The incumbent is expected to budget for and carry out up to one post-project evaluation during the base year. The primary objective of the post-project evaluation - which is carried out two – three years following project expiration - is to gather evidence on the sustainability of outcomes and continuation of service provisions necessary to sustain them. The post project evaluation will be designed to learn which outcomes and services promoted by the project have been adopted by the communities and which activities are continuing (and why) and which are not (and why). This will help FFP and its implementing partners to design and implement sustainability strategies more effectively. FFP will advise the incumbent on the country and the project that will be subject to a post-project evaluation, and will work with the incumbent to design the study. The post project evaluation will likely use a mixed-method approach, but it is possible to apply qualitative methods only depending on the evaluation questions. Sector specialists will conduct the primary data collection and analysis for the qualitative component. Results, findings and implications must be captured and shared via reports, briefs, workshops and briefings, as appropriate.

g) Support to learning and utilization

In addition to utilization-focused work as described above, the incumbent is expected to contribute more broadly to the knowledge base of FFP and other stakeholders on the performance and/or effectiveness and/or impact of FFP investments, and the systems and processes established by FFP awardees. This could include a synthesis of results from multiple years or countries to develop and disseminate findings and recommendations applicable across country or programming contexts. This could include recommendations over promising or best practices, identification of capacity or knowledge gaps, or suggested improvements for technical or policy guidance, metrics or procurement evaluation criteria. The incumbent will act as an active participant in updates to the FFP learning agenda, participating in and leading consultation and thematic workshops as appropriate.

Utilization efforts will include multiple platforms, as appropriate, including participation in knowledge sharing events and sessions, workshops, webinars and brownbag sessions, input into training curricula, reports, briefs, and blog posts.

The incumbent will also be expected to actively engage in knowledge exchange and collaborative activity with FFP support mechanisms, offering a broad range of support including efforts to (1) broaden implementer-level food security and nutrition knowledge through the Technical and Operational Performance Support (TOPS) Program, a cross-organization collaboration and knowledge sharing mechanism, or its follow on; (2) enhance food security analysis and understanding of food security causality through the Famine Early Warning Systems Network (FEWSNET); (3) support internal FFP knowledge exchange and food security and nutrition learning; (4) support a food security and nutrition analytic agenda through large-scale research carried out by FANTA and other FFP partners; and (5) support food and nutrition security monitoring and evaluation.

C.4. DEMAND-DRIVEN APPROACH

Based on the annual request for applications (RFA), FFP's evaluation plan, FFP's learning agenda, discussions with the FFP M&E team and Learning Coordinator, incumbents can expect that over the life of the mechanism they will conduct up to 11 population-based surveys (one for the countries specified in Table 1, stratified by

project/award, *with the Ethiopia baseline survey doubling as the endline survey*); up to 13 performance evaluations¹¹ (one for each award/project); up to one impact evaluation; up to one thematic study; up to one process evaluation and up to one post-project evaluation. The specific deliverables are stated in F.6.

This is a demand-driven mechanism, and as such, the actual make-up and number of the activities to be implemented will vary. The incumbent will be required to plan, budget, and have the capacity of being able to provide for a different distribution of survey, evaluation and study activities than outlined in the above tables.

FFP will advise the incumbent on country investments subject to baseline surveys, performance evaluations, the impact evaluation, process evaluation, and thematic study under Evelyn. Work assignments for evaluation services will be issued based on a determination of which projects to evaluate, and which type of evaluation is most appropriate for each project. Work assignments for population-based surveys will be issued on the basis of FFP's decision to invest in a number of countries in a particular year and the number of awards per country as articulated in the RFAs and the project life cycle. Details on the Standard Operating Procedures for work assignments can be found in Section F.

C.5. INTEGRATION WITH FEED THE FUTURE, GLOBAL HEALTH PROGRAMS, AND PUBLIC INTERNATIONAL ORGANIZATIONS (PIO)

Through Feed the Future, USAID is pursuing a comprehensive approach to food security based on country, regional and community-led planning, and collaboration with development partners. FFP development food assistance projects are part of USAID's Feed the Future Initiative, and as such, the results from FFP development projects are reported under Feed the Future. It is possible that in a number of countries FFP and the Bureau of Food Security (BFS) may decide to conduct joint PBSs; therefore, close collaboration and coordination between the incumbent and BFS contractor will be needed to design, analyze and implement the surveys. In addition, FFP and BFS may decide to jointly carry out the evaluations.

FFP also closely collaborates with the Bureau of Global Health to share technical knowledge, capacity, guidance and materials. The incumbent is expected to be flexible to cooperate and coordinate with other USAID Bureaus and Offices should FFP decide to carry out joint evaluations and surveys.

World Food Program (WFP) is the largest humanitarian response partner of FFP. The thematic study and evaluations of FFP's humanitarian response will include projects implemented by WFP. A higher level of coordination is needed to evaluate WFP and other PIO implemented projects. The incumbent is expected to work with FFP and coordinate with its partners, including WFP and other PIOs.

C.6 KEY PERSONNEL/PERSONNEL RESPONSIBILITIES AND QUALIFICATIONS

C.6.a Key Personnel

The following key personnel are considered critical for implementing the full range of Evelyn's activities. The incumbent will provide CVs and/or biographical data sheets for each individual, not to exceed five pages per individual.

¹¹ The quantitative endline surveys for the performance evaluations are already counted under PBS

1) Chief of Party – This individual will be responsible for managing and coordinating Evelyn. S/he will be the principal interlocutor between the Team and USAID. S/he will also be responsible for ensuring that team members communicate with other implementers, as appropriate, to coordinate Evelyn’s activities with other relevant USAID programs. This position is full-time, and the incumbent must have:

- at least 10 years of project management experience, preferably in senior positions, particularly in managing evaluations and large-scale, mixed-methods surveys;
- a broad range of subject matter expertise and demonstrated experience in the area of food security; excellent organization and writing skills and a demonstrated ability to deliver a quality written product (e.g., evaluation report and PowerPoint presentations);
- excellent writing and organization skills and a demonstrated ability to deliver a high-quality written product;
- excellent oral communication, presentation, and inter-personal skills; and
- a Master’s degree in economics, agricultural economics, or development studies, management, project evaluation, or other relevant field of study.

2) Senior Survey Method Specialist – This individual will be responsible for designing, managing, and coordinating the population-based household surveys. This position is full-time, and the incumbent must have:

- at least eight years of experience in designing, managing, leading, and coordinating representative population-based household surveys in developing countries;
- extensive knowledge of and experience in sample design for complex surveys and complex survey data analysis;
- extensive experience with the design and development of quantitative survey instruments;
- excellent writing and organization skills and a demonstrated ability to deliver a high-quality written product;
- experience in analyzing population-based household socio-economic survey data collected from developing countries; and
- a Master’s degree in statistics, econometrics, bio-statistics, survey methodology, epidemiology or other relevant field of study.

3) Data Analyst – This individual will be responsible for analyzing the survey data, performing both descriptive and inferential analyses; statistically comparing endline data with the baseline survey data and test for differences; analyzing impact evaluation data using quasi experimental models including propensity score matching and difference-in-differences; developing regression models to understand plausible causality; and ensuring that the model specifications are based on sound econometric theory and practice. This position is full-time, and the incumbent must have:

- at least eight years of experience in analysis of complex multi stage survey data and have experience in analyzing population-based household socio-economic survey data collected from developing countries;
- extensive knowledge of and experience in sampling and sampling weights for complex surveys and complex survey data analysis;
- experience with and demonstrated ability to analyze poverty and food security survey data and estimate different measures of poverty and food security proxy indicators;
- experience with anthropometric software, e.g., WHO Anthro or EpiInfo to estimate stunting, wasting and underweight of children under age 5 years;
- experience with and demonstrated ability to specify and analyze econometric models to explore plausible causalities between food security, nutrition, poverty, and resilience indicators and their determinants;
- experience with and demonstrated ability to conduct multivariate analyses, factor analysis, principal component analysis, and cluster analysis, to answer complex questions;

- experience with and demonstrated ability to conduct impact evaluations using experimental and quasi experimental methods, including propensity score matching and difference-in-differences;
- experience with and demonstrated ability to interpret different econometric models, survey estimates and the analyses results;
- excellent writing and organization skills and a demonstrated ability to deliver a high-quality written product; and
- a Master's degree in statistics, econometrics, bio-statistics, survey methodology, epidemiology or other relevant field of study.

4) Senior Evaluation Specialist - This individual will be responsible for designing and managing the evaluations and supervising the evaluation team members; coordinating with the implementing partners, USAID Mission and other stakeholders; coordinating with the endline PBS team; analyzing the findings and drafting the report. This position is full-time, and the incumbent must have:

- at least ten years of experience in designing, leading and conducting performance/process or impact evaluations in developing countries;
- a Master's degree in a field relevant to evaluation (e.g., program evaluation, statistics, anthropology, economics, agricultural economics, applied research, organizational development, sociology, or organizational change);
- extensive experience in evaluation using mixed methods of investigation (qualitative and quantitative) in developing countries; and
- knowledge of the conceptual framework of food and nutrition security and experience in evaluating food security programming is highly desirable.

5) Qualitative Study Specialist – This individual will be responsible for designing, managing, conducting, and supervising qualitative studies; training qualitative study team members; analyzing and interpreting quantitative results for use in the qualitative study; and integrating qualitative findings with quantitative data. The incumbent must have:

- at least eight years of experience designing, conducting, and implementing qualitative studies in developing countries;
- extensive experience with a diverse range of qualitative inquiry and analysis;
- extensive experience designing and conducting qualitative studies as a part of mixed-method studies and integrating qualitative findings with quantitative survey data;
- strong working knowledge of software packages;
- excellent writing and organization skills and a demonstrated ability to deliver a high-quality written product; and
- familiarity with a broad range of subject matter in the areas of food security, agriculture development, nutrition, and health.

C.6.b Non-key Personnel

The following non-key personnel are considered critical for implementing the full range of program activities (but are not limited to):

1) Subject Matter Evaluation Specialists (i.e. Agronomist, Nutritionist, WASH Specialist, Food Security Specialist, Livelihoods Specialist, Gender Specialist, Value Chain Specialist) – The subject matter specialists will be a member of the evaluation team and responsible for evaluating specific sectors of the project interventions, developing interview questions, reviewing documents and secondary data, developing topical outlines, identifying methods and tools; interviewing beneficiaries, non-beneficiaries,

staff, PVOs and other stakeholders; analyzing findings and contributing to drafting the report. The incumbents must have:

- a post-graduate degree in the subject matter related to the technical sector of the project to be evaluated;
- at least eight years of evaluation experience of interventions similar to those implemented by the project;
- hands-on experience with implementation of interventions in developing countries similar to those implemented by the project; and
- experience with and demonstrated capacity to evaluate well established internationally acceptable approaches, like farmer field schools, mother's group approach, and village savings and loan groups.

2) Survey Coordinator – This individual will be responsible for planning, managing, and supervising the household survey data collection in country. S/he will coordinate with the different survey teams, and with the in-country survey team with the HQ based technical specialists. The incumbent must have:

- an undergraduate degree in a social science discipline;
- eight years of experience managing the logistics of large-scale survey field work in developing countries, preferably involving anthropometric data collection;
- experience hiring, training, and overseeing field supervisors and enumerators;
- experience coordinating field logistics, schedules, and equipment; and
- experience managing data quality control in the field.

3) Database Management Specialist – This individual will serve as the lead expert on database management for Evelyn and ensure that all results and analyses are properly documented and distributed to inform project development, and that the data sets are provided to USAID following Open Data requirements. This person will help the sub-incumbent or the in-country survey team to develop data entry templates, ensure that the data collected by tablets are backed up on a daily basis and are transferred to a database on a regular basis, and verify that the data on the tablets and on the database align perfectly when uploaded. If data is collected using paper and pencil, s/he will help develop a database using a database application, develop data entry templates, use appropriate skip rules and data entry masks to minimize data entry errors, ensure that a double entry system is used, and run data integrity tests. He/she should have a graduate degree in a relevant discipline, at least five years of relevant experience with information and data management systems, and a broad familiarity with subject matter related to food security and vulnerable populations.

4) Anthropometry Specialist – This individual will be responsible for developing/reviewing anthropometry guidance, and ensure that the standards are followed in guidance and training of enumerators, enumerator team leaders, and anthropometry assistants. S/he will provide training and demonstrate how to perform standardization tests. This individual will assume overall responsibility of the Anthropometric measurements and the quality of anthropometric data. The incumbent must have extensive experience with, and demonstrated ability to develop, anthropometric guidance, training, standardization of the data collection process and the measures, and develop anthropometric data quality protocols.

5) CAPI Expert – This person will be responsible for programming tablets using CSPro or other survey application to prepare the tablets for data collection. The survey instruments will be translated into the local language and the questionnaire on the tablet must appear in the local language. This person is responsible for programming all the skips, creating upper and lower bounds when applicable, and performing other checks to minimize data entry errors and improve data quality. The application on tablet must be flawless, smooth and bug free. The incumbent must be an expert in CAPI programming and have

extensive experience with, as well as demonstrated ability in, programming tablets for complex multi-sectoral household surveys.

6) Country Operations Manager(s) – This individual(s) will be responsible for overseeing the population based survey implementation, managing all activities related to data collection for the quantitative and qualitative components, monitoring the data collection and data quality, and ensuring all technical and administrative aspects of the baseline study in the assigned country. It is expected that this person(s) be a national from the country in which the survey will be carried out. The individual(s) must be in-country during the entire period of field teams’ training and data collection, and have fluency in the relevant national language.

7) Knowledge Management and Communications Manager – This individual will be responsible for ensuring that evaluation results are captured, packaged and shared in a variety of in-person, print and web-based formats. This person should have sufficient knowledge of food security and food assistance programming to be able to communicate key findings and implications in messaging tailored to specific stakeholder groups.

8) Communications Specialist/Editor – This individual (s) will serve as the lead on editing Evelyn-generated reports and writing briefs and other communication materials. S/he will be responsible for ensuring that reports are understandable and easy to read for target audiences including (but not limited to) USG staff, congressional leaders, the donor community, and the general public. S/he will work with the Senior Survey Method Specialist, Analyst and Evaluation Advisors to ensure reports are technically accurate. S/he will work with Knowledge Management and Communications Manager and FFP Senior Policy and Program Coordination Officer and the FFP M&E team members in identifying the target audience and developing different types of documents tailored for given audiences. This individual will also need to have experience with making sure that documents meet branding and 508 compliance rules. S/he should have a graduate degree in writing or a related discipline, at least five years of experience as a technical writer and editor, and a broad familiarity with subject matter related to food security, poverty reduction, nutrition, agriculture development, natural resources management, and vulnerable populations.

9) Survey Monitors – These individuals will oversee the data collection of the subcontractors, and ensure data quality, adherence to the data collection guidance, and quality of the anthropometric measurement. It is expected that these individuals are nationals from the country in which the survey will be conducted; they must be present during training and during data collection in the areas where the surveys are carried out. Fluency in the relevant national language is required.

C.7 GENDER

Women play a critical role in strategies promoted to improve food and nutrition security in FFP Focus countries, but yet their access to, and control over, income, self-employment, production and consumption is usually severely limited. Thus women are a main focus of FFP-promoted strategies, and FFP projects are designed to achieve gender equality, and the empowerment of women.

The incumbent’s work must be in compliance with USAID’s Gender Equality and Women’s Empowerment Policy. Addressing gender in all USAID activities is a mandatory requirement and a crosscutting theme built into all activities. The incumbent must address gender-related challenges in achieving the project objectives.

[END OF SECTION C]

Development Library, in accordance with all requirements and steps outlined in USAID Guidance, for release and dissemination, so that data can be shared internally within USAID and externally for public use.

The Contractor must provide deliverables in machine readable format using Microsoft Office and/or Adobe's Portable Document Format (PDF) via email. For those deliveries that cannot be emailed, paper copies or Compact Disc Read-Only Memory (CD-ROM) may be requested. The COR will determine methods of delivery not specified in the schedule.

(b) List of acronyms and deliverables:

The Contractor must provide the deliverables in accordance with the schedule below. All deliverables must be submitted electronically to the TO COR identified under Section G.2. The following schedule of milestones will be used by the COR to monitor timely progress under this Contract. The dates for all "TBD" items will be binding upon the Contractor once finalized by the TO COR.

(i) Acronyms

Abbreviation	Definition
BLS	Baseline Study
DA	Days after
DACA	Days after contract award
DAKOM	Days after kick-off meeting
DAPM	Days after planning meeting
ELS	Endline Study
NLT	Not Later Than
TBD	To be Determined

(ii) Deliverables

#	Title	Description of Deliverable	Due Date* (calendar days)	SOW Obj.
General*^				
1.1	Work plan	a) must specify details for critical tasks, anticipated outputs, date-bound timelines, resource needs, and responsible person(s) b) requires accompanying Gantt/flow chart of activities over the lifetime of the project c) field survey team(s), evaluation and study teams, including expected tasks and responsibilities of each team member, must also be described	provisional - 10 DACA final - 30 DACA	C.3, C.4
Population Based Surveys*^				
2.1	Pertinent permissions, approvals, insurance, etc.	Documented official approval from all relevant institutional review boards (including Contractor's own), and documented official approval from relevant host country institutions to conduct the survey, as well as a statement affirming adherence to all requirements specified in USAID's Scientific Research Policy.	30 DACA	C.3a, C.4
2.2	In-country	a) Conduct a three day in-country planning workshop in	a) 30 DACA	

#	Title	Description of Deliverable	Due Date* (calendar days)	SOW Obj.
	baseline planning workshop	English and appropriate local language for BLS stakeholders – Ethiopia and DRC planned for early March 2017. b) Take notes on workshop and record action items, including next steps, due dates, and responsible party(ies)—Contractor, USAID, Implementing Partners—for each step.	b) Notes and Action Plan NLT 10 days after workshop	
2.3	Population Based Survey protocol	30 page protocol that includes: indicators to be collected; local country partners; sample size, design and plan; survey design; questionnaire design; fieldwork, including training and field support/supervision; data management, including quality control; analysis and reporting; and budget.	BLS: provisional – 30 DACA ELS: 30 DAPM	
2.4	Quantitative survey instruments	a) English version of instrument adapted to each country context. b) Translation of instrument into local languages. c) Back-translate the instrument from the local language(s) to English with a second translator to ensure accurate translation. d) Pilot the survey instrument in-country, and revise as needed and submit for final approval	a) BLS: 30 DA baseline workshop, ELS: 30 DAPM b-c) Local language versions of the instr. Submitted 10 DA after Eng. version approved d) BLS: 45 DA baseline workshop ELS: 30 DA FFP approves the instrument	
2.5	Qualitative data collection methodology and sample site selection (if applicable)	a) Qualitative data collection methodology and timeline b) Site selection methodology and factors used to select sample communities c) List of sample communities d) Groups to be interviewed e) Criteria used to select respondents	BLS: 20 DA baseline workshop ELS: 30 DAPM	
2.6	Field procedure manuals	a) Enumerators b) Supervisors c) Editors (if survey switches from computer to paper-based)	BLS - 8 DA baseline workshop ELS - 15 DAPM	C.3a, C.4
2.7	Data treatment and analysis plan	Detailed data treatment and analysis plan approved by FFP	BLS - 20 DA baseline workshop ELS - 30 DAPM	
2.8	Training curriculum and pre-data collection activities	a) Develop training materials and conduct training for the household survey, and qualitative components (if applicable), including anthropometry training and standardization testing materials. b) Develop and submit field movement plan c) Develop anthropometry guide for training	BLS: 20 DACA ELS: 30 DACA	

#	Title	Description of Deliverable	Due Date* (calendar days)	SOW Obj.
2.9	Sampling frame, indicator estimates, data sets, data dictionary, and other data files	<p>a) Sampling frame</p> <p>b) Raw data set</p> <p>c) Edit rules for cleaning data</p> <p>d) Data dictionary/codebook</p> <p>e) SPSS syntax and output for all analyses and variable transformations into indicators</p> <p>f) Final data set including cleaned data, sampling weights at each stage, final sampling weights, and all derived indicators</p> <p>g) Second final data set in CSV format that has been anonymized to protect individual confidentiality for use as a public data file in the USAID Open Data warehouse.</p> <p>h) Programming specifications for data cleaning to be submitted and approved prior to commencement of programming.</p>	<p>a-f) BLS: Indicator estimates submitted to FFP and awardees NLT 8/31/2017.</p> <p>g-h) All other files with final PBS report.</p>	
2.10	Transcribed data for qualitative study (if applicable)	Transcribed data	All files at same time as the final baseline study report.	
2.11	<p>Draft baseline survey report</p> <p>Note: FFP does not require any independent ELS report except for Ethiopia. Data and analysis of the endline survey should be incorporated in the performance evaluation report.</p>	<p>a) English, 60 pages excluding appendices and attachments. The report must include descriptive analysis to report indicator estimates, and multivariate analysis to explore the plausible determinants for key outcome indicators to be agreed with FFP in advance, and a selected number of resilience indicators/ indices. The data presented in the table must be interpreted using other related indicators based on the conceptual model/framework, secondary data from other national or sub national studies and published and unpublished literature, and qualitative primary information (when available).</p> <p>b) Must follow the report outline.</p>	9/29/2017 DACA	
2.12	Ethiopia Endline Survey Report	<p>a) English, 60 pages excluding appendices and attachments. The report must include descriptive analysis to report indicator estimates, statistical comparison of baseline data for key outcome indicators and determine a population level change using test of differences. In addition multivariate analyses to be performed to explore the plausible determinants for key outcome indicators. The indicator to be agreed with FFP in advance, and a selected</p>	10/31/2017	

#	Title	Description of Deliverable	Due Date* (calendar days)	SOW Obj.
		number of resilience indicators/ indices. The data presented in the table must be interpreted using other related indicators based on the conceptual model/framework, secondary data from other national or sub national studies and published and unpublished literature, and qualitative primary information (when available).		
2.13	Final baseline study report	A revised version of the draft report that incorporates comments from FFP, Implementing Partners, the USAID Missions in the Evaluation country, and includes a three- to five-page executive summary of the purpose, background of the project, methods, findings, and, if applicable, recommendations. For Spanish or French Speaking countries, the report should be translated either in Spanish or French using professional translators.	2 weeks after receiving comments from FFP	
2.14	Baseline survey utilization workshops	a) Present and discuss baseline indicator estimates to USAID and implementing partners in-country b) Lead discussion on applicability to project design c) Document conclusions and Lessons Learned	TBD	
2.15	Briefings	a) Weekly phone briefings with FFP and other stakeholders. b) Monthly phone and final in-country briefings with FFP and USAID Missions in PBS countries. c) Notes on points and action items discussed during all the briefings recorded and emailed to FFP. d) Formal briefing for FFP in Washington, DC. The briefing must include the content, conclusions, lessons learned, recommendations and a summary of the key outcomes from the in-country utilization workshops.	TBD	C.3a, C.4
Performance evaluation*^				
3.1	Concept paper	5 page concept paper	TBD	
3.2	Inception report	10 page inception report	15 DA approval of concept paper	
3.3	Performance evaluation protocol	20 page protocol that describes: evaluation questions to be answered, indicators/variables to be measured, quantitative and qualitative analysis plan, sampling methods, qualitative data collection and analysis methods, data quality assessment methods, the process or format for recording and reporting results, and budget.	30 DAPM	C.3b, C.4
3.4	Pertinent permissions, approvals, insurance, etc.	Documented Official Approval from all relevant institutional review boards and from host country institutions to collect data, conduct the evaluation, and release data and reports, as required, as well as a statement affirming adherence to all requirements specified in	45 DAPM	

#	Title	Description of Deliverable	Due Date* (calendar days)	SOW Obj.
		USAID's Scientific Research Policy, if primary data is collected.		
3.5	Qualitative methods and tools	a) Topical Outline b) Key questions and data collection methods and tools	TBD	
3.6	Draft report	a) 60 page report, excluding annexes and attachments, which integrates the quantitative data from the PBS and includes a statistical comparison between baseline and endline data. b) Analytical methods to include appropriate tests of differences; econometric analysis to evaluate the theories of change and to explore the causal relation between the outcome and activities/variables based on the theoretical models; it is expected that the contractor will interpret the analytical findings.	TBD	
3.7	Final report	A revised version of the draft report that incorporates comments from FFP, Implementing Partners, the USAID Missions in the Evaluation country, and includes a three-to five-page executive summary of the purpose, background of the project, methods, findings, and, if applicable, recommendations.	TBD	
3.8	Utilization workshops	a) Arrange and lead a utilization workshop in each country. b) Share the findings from the performance evaluation, lessons learned, best practices, conclusions and recommendations, and engage participants to think through the implications of the evaluation findings in designing future projects.	TBD	C.3b, C.4
3.9	Briefings	Hold a formal briefing for FFP in Washington, DC, on the evaluation, conclusions, lessons learned, recommendations and a summary of the key outcomes from the in-country utilization workshops.	TBD	
Impact evaluation*^				
4.1	Impact evaluation concept paper	10 page concept paper	20 DAPM	
4.2	Inception report	10 page inception report	15 DA approval of concept paper	
4.3	Impact evaluation protocol	25 page protocol outlining evaluation/ research questions to be answered, indicators/variables to be measured, sampling methods, data collection and analysis methods, data quality assessment methods, the process or format for recording and reporting results, and budget.	45 DAPM	C.3c, C.4
4.4	Pertinent permissions, approvals,	Documented Official Approval from all relevant institutional review boards and from host country institutions to collect data, conduct the evaluation, and	90 DAPM	

#	Title	Description of Deliverable	Due Date* (calendar days)	SOW Obj.
	insurance, etc.	release data and reports, as required, as well as a statement affirming adherence to all requirements specified in USAID's Scientific Research Policy.		
4.5	Evaluation instruments	Designed based on the baseline instruments.	60 DAPM	
4.6	Data treatment and analysis plan	Detailed data treatment and analysis plan approved by FFP	60 DAPM	
4.7	Supervisor/enumerators' manuals	Update and adapt manuals used for baseline survey.	60 DAPM	
4.8	Draft report	a) 50 pages, excluding attachments and annexes b) data collection instruments, supervisor/enumerator manuals, data treatment and analysis plan, sampling strategy, will be provided as annexes in the reports.	TBD	
4.9	Final report	A revised version of the draft report that incorporates comments from FFP, Implementing Partners, the USAID Missions in the Evaluation country, and includes a three-to five-page executive summary of the purpose, background of the project, methods, findings, and, if applicable recommendations.	TBD	
4.10	Data sets	a) Quantitative datasets in CSV and other formats without personally identifiable information and with accompanying documentation as described in the Open Data policy. The data sets should include raw data and all intermediate and final indicator and analytical variables. b) Qualitative data sets in MS Word and other requested formats following existing USAID guidelines (if any) on qualitative data.	TBD	
4.11	Utilization workshop	a) Arrange and lead a utilization workshop in each country. b) Share the findings from the performance evaluation, lessons learned, best practices, conclusions and recommendations, and engage participants to think through the implications of the evaluation findings in designing future projects.	TBD	C.3c, C.4
4.12	Briefings	Hold a formal briefing for FFP in Washington, DC, on the evaluation, conclusions, lessons learned, recommendations and a summary of the key outcomes from the in-country utilization workshops.	TBD	
Thematic study*^				
5.1	Concept paper	10 page concept paper	30 DAPM	
5.2	Inception report	10 page inception report	15 DA approval of concept paper	
5.3	Study protocol	20 page protocol outlining questions to be explored and answered, indicators/variables to be measured, sampling	60 DAPM	

#	Title	Description of Deliverable	Due Date* (calendar days)	SOW Obj.
		methods, data collection and analysis methods, data quality assessment methods, the process or format for recording and reporting results, and budget.		C.3d, C.4
5.4	Pertinent permissions, approvals, insurance, etc.	Documented Official Approval from all relevant institutional review boards and from host country institutions to collect data, conduct the evaluation, and release data and reports, as required, as well as a statement affirming adherence to all requirements specified in USAID's Scientific Research Policy, if primary data are to be collected.	90 DAPM	
5.5	Questions, instruments, methods and tools	Quantitative data collection instruments (if applicable), qualitative questions/ topical outlines, methods and tools that will be reviewed and approved by FFP.	60 DAPM	
5.6	Supervisor and/or enumerator manuals	Supervisor and/or enumerator manuals (if applicable) that will be reviewed and approved by FFP	60 DAPM	
5.7	Draft report	a) 50 pages, excluding attachments and annexes b) data collection instruments, supervisor/enumerator manuals, data treatment and analysis plan, sampling strategy, will be provided as annexes in the reports.	TBD	
5.8	Final report	A revised version of the draft report that incorporates comments from FFP, Implementing Partners, the USAID Missions in the Evaluation country, and includes a three- to five-page executive summary of the purpose, background of the project, methods, findings, and, if applicable recommendations.	TBD	
5.9	Data sets	a) Quantitative data sets (if applicable) in CSV and other formats without personally identifiable information and with accompanying documentation as described in the Open Data policy. The data sets should include raw data and all intermediate and final indicator and analytical variables. b) Qualitative data sets in MS Word and other requested formats following existing USAID guidelines (if any) on qualitative data.	TBD	
5.10	Utilization workshop	a) Arrange and lead a utilization workshop in each country. b) Share the findings from the performance evaluation, lessons learned, best practices, conclusions and recommendations, and engage participants to think through the implications of the evaluation findings in designing future projects.	TBD	
5.11	Briefings	Hold a formal briefing for FFP in Washington, DC, on the evaluation, conclusions, lessons learned, recommendations	TBD	

#	Title	Description of Deliverable	Due Date* (calendar days)	SOW Obj.
		and a summary of the key outcomes from the in-country utilization workshops.		
Process evaluation*^				
6.1	Concept paper	5 page concept paper	30 DAPM	C.3e, C.4
6.2	Inception report	10 page inception report	15 DA approval of concept paper	
6.3	Evaluation protocol	20 page protocol outlining questions to be explored and answered, indicators/variables to be measured, sampling methods, data collection and analysis methods, data quality assessment methods, the process or format for recording and reporting results, and budget.	60 DAPM	
6.4	Pertinent permissions, approvals, insurance, etc.	Documented Official Approval from all relevant institutional review boards and from host country institutions to collect data, conduct the evaluation, and release data and reports, as required, as well as a statement affirming adherence to all requirements specified in USAID's Scientific Research Policy, if primary data is collected.	90 DAPM	
6.5	Questions, methods and tools	Key questions, methods, tools and topical outlines that will be reviewed and approved by FFP.	60 DAPM	
6.6	Draft report	a) 50 pages, excluding attachments and annexes b) Key questions, methods, tools and topical outlines will be provided as annexes in the reports.	TBD	
6.7	Final report	A revised version of the draft report that incorporates comments from FFP, Implementing Partners, the USAID Missions in the Evaluation country, and includes a three- to five-page executive summary of the purpose, background of the project, methods, findings, and, if applicable recommendations.	TBD	
6.8	Data sets	Qualitative data sets in MS Word and other requested formats following existing USAID guidelines (if any) on qualitative data.	TBD	
6.9	Utilization workshop	a) Arrange and lead a utilization workshop in each country. b) Share the findings from the performance evaluation, lessons learned, best practices, conclusions and recommendations, and engage participants to think through the implications of the evaluation findings in revising project interventions and processes.	TBD	
6.10	Briefings	Hold a formal briefing for FFP in Washington, DC, on the evaluation, conclusions, lessons learned, recommendations and a summary of the key outcomes from the in-country utilization workshops.	TBD	
Post project evaluation*^				
7.1	Concept paper	5 page concept paper	30 DAPM	C.3f,

#	Title	Description of Deliverable	Due Date* (calendar days)	SOW Obj.
7.2	Inception report	10 page inception report	15 DA approval of concept paper	C.4
7.3	Evaluation protocol	20 page protocol outlining questions to be explored and answered, indicators/variables to be measured, sampling methods, data collection and analysis methods, data quality assessment methods, the process or format for recording and reporting results, and budget.	60 DAPM	
7.4	Pertinent permissions, approvals, insurance, etc.	Documented Official Approval from all relevant institutional review boards and from host country institutions to collect data, conduct the evaluation, and release data and reports, as required, as well as a statement affirming adherence to all requirements specified in USAID's Scientific Research Policy, if primary data is collected.	90 DAPM	
7.5	Instruments, key questions, methods and tools	Data collection instruments (if applicable), qualitative key questions (if applicable), methods and tools that will be reviewed and approved by FFP.	60 DAPM	
7.6	Enumerators manuals/study guides	Supervisor and/or enumerator manuals (if applicable), and qualitative study guide.	90 DAPM	
7.7	Draft report	a) 50 pages, excluding attachments and annexes b) Key questions, methods, tools and topical outlines will be provided as annexes in the reports.	TBD	
7.8	Final report	A revised version of the draft report that incorporates comments from FFP, Implementing Partners, the USAID Missions in the Evaluation country, and includes a three- to five-page executive summary of the purpose, background of the project, methods, findings, and, if applicable, recommendations.	TBD	
7.9	Data sets	a) Quantitative data sets (if applicable) in CSV and other formats without personally identifiable information and with accompanying documentation as described in the Open Data policy. The data sets should include raw data and all intermediate and final indicator and analytical variables. b) Qualitative data sets in MS Word and other requested formats following existing USAID guidelines (if any) on qualitative data.	TBD		C.3f, C.4
7.10	Presentation and briefing meetings	a) One presentation in the country of evaluation for the USAID Mission, FFP, implementing partners, and other stakeholders b) One briefing in the FFP regional office c) Two PowerPoint presentations in Washington, DC, on the contents of the evaluation report.	TBD	
Knowledge Management & Learning services*^				

#	Title	Description of Deliverable	Due Date* (calendar days)	SOW Obj.
8.1	Global report for PBS	40 page report summarizing the findings from all FFP population based surveys (up to, and including, the latest round of the surveys).	TBD - final year	C.3g, C.4
8.2	Analytical report	Up to two 30-page annual global analytical reports summarizing findings from performance evaluations, including a synthesis of lessons learned, best practices, and any overarching trends/patterns observed.	TBD	
8.3	Production of briefs	Up to 14 5-page summary and key findings briefs on key issues (promising practices, lessons learned, capacity gaps, etc.) emerging from evaluations' findings and thematic studies.	TBD	
8.4	Workshop and webinars for Learning Agenda	a) One DC-based workshop and one webinar for overseas staff to review lessons learned and lead a participatory discussion around updates to the FFP learning agenda b) One Africa-based workshop and one webinar for overseas staff to review lessons learned and lead a participatory discussion around updates to the FFP learning agenda.	FY17 - TBD FY18 - TBD	

*Prior to commencing pre-data collection activities, including training of enumerators, supervisors, and anthropometrists, all instruments must be approved by FFP.

^ Contractor must allocate sufficient time to allow for up to two rounds of review of draft reports by FFP, USAID Mission(s), FANTA, and FFP awardees, prior to issuing the final report.

All deliverables must comply with the Contractor's Branding and Marking Strategy, which must be developed in accordance with ADS 320.

F.4 LOGISTICS

The Contractor will be responsible for making all arrangements for translations/interpretations. The Contractor will be responsible for all logistical arrangements (hotel, transportation, etc.) for the duration of the contract. The Contractor will be responsible for all administrative support and logistics required to fulfill the requirements of this contract. These will include all travel arrangements, appointment scheduling, secretarial services, report preparations services, printing, and duplicating.

F.5 IMPLEMENTATION

The Contractor must provide contract management necessary to fulfill all the requirements of this contract. This includes cost and quality control under this contract.

F.6 PLACE OF PERFORMANCE

The place of performance under this Task Order is worldwide.

ANNEX 2
Population-Based Survey Protocol



USAID
FROM THE AMERICAN PEOPLE

Ethiopia Joint Baseline/End-line PBS Protocol Evaluation and Learning (EVELYN) Mechanism Office of Food for Peace (FFP)

Contract #: AID-OAA-I-15-00-24

Order #: AID-OAA-TO-17-00005

FINAL – November 15, 2017

This publication was produced for review by the U.S. Agency for International Development. It was prepared by the EVELYN contract team.

Abbreviations

ANC	Antenatal care
BL	Baseline
CAPI	Computer-assisted personal interview
CRS	Catholic Relief Services
CSA	Ethiopia Central Statistics Agency
DFAP	Development Food Assistance Project
DFSA	Development Food Security Activity
DTAP	Data treatment and analysis plan
EL	End-line
EVELYN	Evaluation and Learning Mechanism
FANTA	Food and Nutrition Technical Assistance Project III
FFP	Office of Food for Peace
FH	Food for the Hungry
FIES	Food insecurity experience scale
GHT	Gendered household type
HDDS	Household dietary diversity score
ICF	ICF International
IFSS	Internet file streaming system
IP	Implementing partner
MAD	Minimum acceptable diet
MCHN	Maternal and child health and nutrition
ME&A	Mendez, England and Associates
ORT	Oral rehydration therapy
PBS	Population-based survey
PPS	Probability proportional to size
REST	Ethiopia Relief Society of Tigray
USAID	U.S. Agency for International Development
WASH	Water, sanitation and hygiene
WV	World Vision

Table of Contents

1. BACKGROUND AND PURPOSE	1
2. PBS DESIGN.....	3
2.1 Indicators to be Measured	3
2.2 Sampling Plan	5
2.2.1 Sampling Frames	5
2.2.2 Sample Size.....	6
2.2.3 Sample Selection	8
2.3 Questionnaire	10
3. FIELD PROCEDURES	11
3.1 Data Collection Mode.....	11
3.2 Field Manuals	11
3.3 Training.....	11
3.4 Data Collection	13
3.5 Quality Control	14
4. DATA PROCESSING AND ANALYSIS.....	15
4.1 Data Transmissions	15
4.2 Data Analysis.....	15
5. TIMELINE	16

Annex 1 – Indicators for Prior DFAPs

Annex 2 – Training Agendas

I. BACKGROUND AND PURPOSE

In Fiscal Year 2016, the U.S. Agency for International Development (USAID) Office of Food for Peace (FFP) awarded funding for four multi-year development food security activities (DFSAs) in Ethiopia. The goal of the 2016-2020 DfSA awards is to enhance resilience to shocks and livelihoods; and improve food security and nutrition for rural households vulnerable to food insecurity.

Under the Evaluation and Learning Mechanism umbrella contract (EVELYN), FFP contracted Mendez England & Associates (ME&A) and its subcontractors ICF International (ICF) and TANGO International (TANGO) to conduct population-based surveys (PBSs) and a resilience assessment for the DFSAs in Ethiopia, respectively. In addition to a baseline (BL) study, the EVELYN team will conduct an end-line (EL) PBS in the target areas for the development food assistance projects (DFAPs) that expired in December 2016. The project areas for the DFSAs and prior DFAPs overlap to a large extent. For this reason, EVELYN will administer a joint baseline BL/EL PBS using a common questionnaire in the overlap and non-overlap areas encompassed by the DFSAs and prior DFAPs. The common questionnaire will be driven by the indicators required for the BL PBS for the DFSAs, many of which (but not all) overlap with those required for the prior DFAPs.

The purpose of the BL PBS for the DFSAs is to assess the current status of key indicators, to have a better understanding of the prevailing conditions and perceptions of the populations in the DfSA implementation areas, and serve as a point of comparison for future EL PBSs. Results will also be used to further refine program targeting and, where possible, to understand the relationship between variables to inform program design. The results of the EL PBS will be used for the final evaluation of the prior DFAPs to evaluate change over time in some of the indicators that were measured in the prior BL study. The fieldwork for the joint BL/EL PBS will be conducted in July-August 2017.

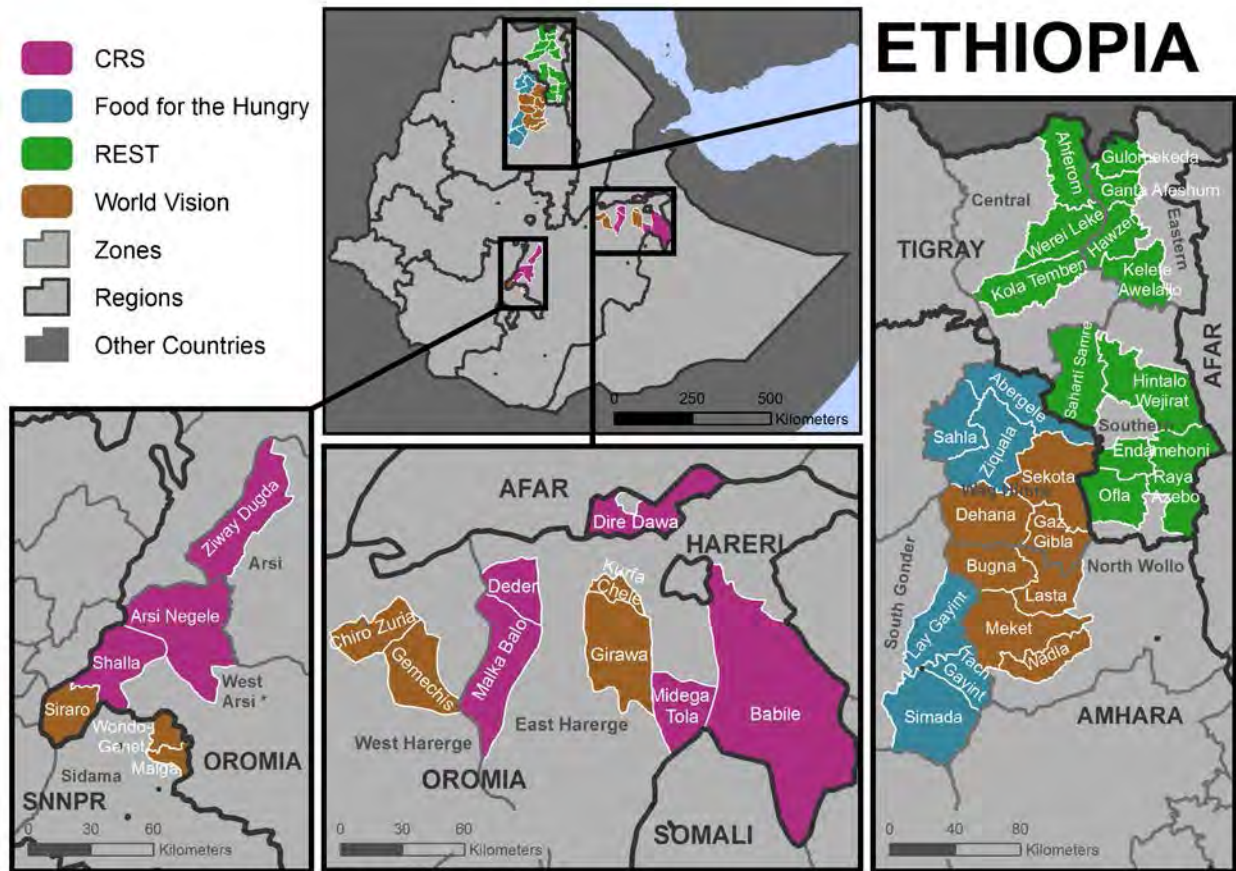
Implementing Partners for the DFSAs

Four implementing partners (IPs): Catholic Relief Services (CRS), Food for the Hungry (FH), Ethiopia/Relief Society of Tigray (REST), and World Vision (WV), are implementing the new FFP-funded DFSAs in Ethiopia:

- (1) CRS and its partners implement the Ethiopian Livelihoods & Resilience Project (ELRP) in the Oromia Region and Dire Dawa Administrative Unit.
- (2) FH and its partners implement the Targeted Response for Agriculture, Income and Nutrition (TRAIN) Project in the Amhara Region.
- (3) REST and its partners implement its Title II Development Food Assistance Project in the Tigray Region.
- (4) WV and its partners implement the Strengthen PSNP 4 Institutions and Resilience Project in the Oromia and Amhara Regions.

Figure I provides a map of the DfSA project areas.

Figure 1. DFSA Project Areas



*West Arsi Zone in Oromia missing World Vision Woreda Heban Arsi

Implementing Partners for the Prior DFAPs

The four prior DFAPs were implemented by prime contractors CRS, FH, REST, and Save the Children United States (SCUS) and their partners. Table 1 describes the regions and zones where the prior DFAPs were implemented. The CSUS Project areas were not included as part of the joint BL/EL PBS.

Table 1. Prior DFAP Project Areas

Implementing Partner	Region/Administrative Area	Zone
CRS	Oromia, Dire Dawa	East Harerghe, East Shoa, Dire Dawa
FH	Amhara	North Wollo, South Gondar, Waghimira
REST	Tigray	Central Zone, Eastern Zone, South Eastern Zone, Southern Zone
CSUS	Oromia, Somali	Borena, Gode, Liben

2. PBS DESIGN

The BL component of the joint BL/EL PBS serves as the first phase of a pre-post survey cycle for the DFSA awards, and the EL component of the joint BL/EL PBS serves as the second phase of a pre-post survey cycle for the prior DFAP awards. The BL survey for the prior DFAPs was conducted in June and July of 2012. The pre-post design (using the 2012 BL survey and the 2017 EL component of the joint BL/EL PBS) allows for the determination of statistically significant change in indicators between the BL and EL for the prior DFAPs; however, it does not allow statements about attribution or causation relating to project impact to be made.

2.1 Indicators to be Measured

EVELYN will collect data to measure 38 FFP standard indicators and 5 resilience-related indicators (see Table 2). The 38 FFP indicators are related to food security; poverty; water, sanitation and hygiene practices; agricultural practices, women’s and children’s health and nutritional status (including anthropometry) and gender. A definition and full description of each of the 38 FFP project indicators is available in the 2015 *FFP Indicator Handbook*.¹

FFP resilience indicators measure household well-being, exposure to shocks, resilience capacities (absorptive, adaptive, and transformative), and households’ likely response to shocks. Definitions for resilience indicators are provided in the Ethiopia PBS Data Treatment and Analysis Plan (DTAP).

All indicators will be measured for the joint BL/EL PBS, however, all of these indicators were not measured at baseline for the prior DFAPs and there were some indicators measured at baseline for the prior DFAPs that were not included in the joint BL/EL PBS. A complete list of the indicators measured at baseline for the prior DFAPs is included in Annex I. Although all indicators listed in Table 2 will be measured and reported on separately for the BL study of the DFSAs and the EL evaluation of the prior DFAPs, change over time can only be measured for those indicators that were measured in both the prior BL PBS and the joint BL/EL PBS. These indicators are shown in red font in Table 2.

Table 2. Ethiopia Joint BL/EL PBS Indicators

Indicator	Disaggregation Level
FOOD SECURITY	
1. Average Household Dietary Diversity Score (HDDS)	None
2. Prevalence of moderate to severe or severe food insecurity*	GHT**
POVERTY	
3. Daily per capita expenditures (as a proxy for income) in USG-assisted areas	GHT
4. Prevalence of poverty: Percent of people living on less than \$1.90 per day	GHT
5. Depth of poverty: Mean percent shortfall relative to the \$1.90 poverty line	GHT
WATER, SANITATION, AND HYGIENE	
6. Percentage of households using a basic drinking water source	Distance from source
7. Percent of households in target areas practicing correct use of recommended household water treatment technologies	Technology type

¹ Food and Nutrition Technical Assistance III Project (FANTA III). 2015. *FFP Indicators Handbook Part I: Indicators for Baseline and Final Evaluation Surveys*. Washington, DC. Available at http://pdf.usaid.gov/pdf_docs/PBAAE201.pdf. A newer version of the FFP Indicators Handbook is pending release in 2017.

Indicator	Disaggregation Level
8. Percentage of households that can obtain drinking water in less than 30 minutes (round trip)	None
9. Percentage of households using a basic sanitation facility	None
10. Percentage of households in target areas practicing open defecation	Location
11. Percentage of households with soap and water at a handwashing station commonly used by family members	Location
AGRICULTURE	
12. Percentage of farmers who used financial services (savings, agricultural credit, and/or agricultural insurance) in the past 12 months	Sex
13. Percentage of farmers who practiced the value chain activities promoted by the project in the past 12 months	Sex
14. Percentage of farmers who used at least [a project-defined minimum] sustainable agriculture (crop, livestock and NRM) practices and/or technologies in the past 12 months	
15. Percentage of farmers who used at least [a project-defined minimum] sustainable crop practices and/or technologies in the past 12 months	Sex
16. Percentage of farmers who used at least [a project-defined minimum] sustainable livestock practices and/or technologies in the past 12 months	Sex
17. Percentage of farmers who used at least [a project-defined minimum] sustainable natural resource management practices and/or technologies in the past 12 months	Sex
18. Percentage of farmers who used improved storage practices in the past 12 months	Sex
WOMEN'S HEALTH AND NUTRITION	
19. Prevalence of underweight women	None
20. Prevalence of women of reproductive age consuming a minimum dietary diversity	None
21. Contraceptive Prevalence Rate	Modern, traditional
22. Percent of births receiving at least four antenatal care (ANC) visits during pregnancy	None
23. Prevalence of women of reproductive age who consume targeted nutrient-rich value chain and non-value chain commodities	Value chain and non-value chain commodity
CHILDREN'S HEALTH AND NUTRITION	
24. Prevalence of underweight children under five years of age	Sex
25. Prevalence of stunted children under five years of age	Sex
26. Percentage of children under age five who had diarrhea in the prior two weeks	Sex
27. Percentage of children under five years old with diarrhea treated with Oral Rehydration Therapy (ORT)	Sex
28. Prevalence of exclusive breast-feeding of children under six months of age	Sex
29. Prevalence of children 6-23 months receiving a minimum acceptable diet (MAD)	Sex
30. Prevalence of children 6- 23 months who consume targeted nutrient-rich value chain and non-value chain commodities	Sex, value chain and non-value chain commodity
GENDER	
31. Percentage of men and women who earned cash in the past 12 months	Sex
32. Percentage of men/women in union and earning cash who make decisions alone about the use of self-earned cash	Sex
33. Percentage of men/women in union and earning cash who make decisions jointly with spouse/partner about the use of self-earned cash	Sex
34. Percentage of men and women with children under two who have knowledge of maternal and child health and nutrition (MCHN) practices	Sex
35. Percentage of men/women in union with children under two who make maternal health and nutrition decisions alone	Sex
36. Percentage of men/women in union with children under two who make maternal health and nutrition decisions jointly with spouse/partner	Sex
37. Percentage of men/women in union with children under two who make child health and nutrition decisions alone	Sex
38. Percentage of men/women in union with children under two who make child health and	Sex

Indicator	Disaggregation Level
nutrition decisions jointly with spouse/partner	
RESILIENCE	
39. Shock exposure index	None
40. Cumulative impact of shock exposure index	None
41. Absorptive capacity index	None
42. Adaptive capacity index	None
43. Transformative capacity index	None

*Food insecurity is measured using the Food Insecurity Experience Scale (FIES) based on a 12 month and 30 day recall

**GHT= Gendered household type

Indicators in **red font** are those that were measured in the baseline survey for the prior DFAPs.

2.2 Sampling Plan

2.2.1 Sampling Frames

The target population for the joint BL/EL PBS consists of two components: 1) all households in the areas where the prior DFAPs were implemented and 2) all households in the areas where the DFSAs will be implemented. These target populations overlap since the DFSAs will be implemented in some of the same areas where the prior DFAPs were implemented. The sampling frames for the BL PBS and EL PBS were constructed taking into account these overlapping geographies and using 2007 census level data representing the joint BL/EL target areas.² Table 3 provides 2007 census estimates of the number of households included in the BL and EL sampling frames.

The census administration levels are as follows:

- Region
- Zone
- Woreda (District)
- Kebele
- Enumeration area

Table 3. Woredas, Kebeles and Households Included in the BL and EL Sampling Frames

	Woredas	Kebeles	Households
CRS	14	258	226,211
BL and EL	2	54	46,661
BL only	7	129	109,834
EL only	5	75	69,716
FH	6	119	138,303
BL and EL	3	79	113,740
BL only	3	40	24,562
REST	16	288	384,732
BL and EL	8	163	194,467
BL only	4	61	98,339

² The data were obtained from the Ethiopia Central Statistics Agency (CSA).

EL only	4	64	91,926
WV	13	369	374,506
BL and EL	6	135	126,484
BL only	7	234	248,021

2.2.2 Sample Size

The sample size for the joint BL/EL PBS was derived by: 1) calculating the sample size needed for the BL survey for the DFSAs, 2) identifying the sample size needed for the EL survey for the prior DFAPs, and 3) deriving a joint sample size based on these sample sizes and the overlap between the DFSA and prior DFAP project areas.

1) BL Sample Size for the DFSAs

The sample size calculation for the BL project areas for the DFSAs is based on adequately powering a statistical test of differences in the prevalence of stunting because stunting is a key measure of food insecurity. The following criteria were used for deriving the sample size:

- Design effect of 2.0
- Confidence level of 95 percent
- Power level of 80 percent
- Expected reduction in stunting over the life of the project of 8.0 percentage points
- Use of the Stukel/Deitchler inflation and deflation factors (see Addendum to the FANTA Sampling Guide³) to determine the number of households needed for the required sample of children under five years of age
- 5 percent inflation of the household sample size to adjust for estimated household non-response

The formula used for deriving the sample size is based on a statistical test of the difference of proportions (or prevalence) for an indicator (e.g., from baseline to final evaluation), controlling for inferential error, as described in Appendix I of the Addendum to the FANTA Sampling Guide. Table 4 provides the target sample size using preliminary estimates from the 2016 Ethiopia Demographic and Health Survey (DHS) for the prevalence of stunting in rural households, proportion of children aged 0–59 months in rural households, and average rural household size. Based on these sample size calculations, a total of 174 clusters (with 30 households per cluster) and 6,960 households should be sampled (58 clusters and 1,740 households for each of the four DFSAs).⁴

Table 4. BL PBS Sample Size for each Project and Overall

Indicator	Prevalence of Stunting (P ₁)*	Number of Children per Household*	Number of Children Needed	Household Sample Size Needed**	Households Needed with 5% Nonresponse Adjustment	Clusters per Project	Overall Sample Size of Households Needed
-----------	---	-----------------------------------	---------------------------	--------------------------------	--	----------------------	--

³ Magnani, Robert. *Sampling Guide (1999) and Addendum (2012)*. Washington, D.C.: FHI 360/FANTA. Available at <http://www.fantaproject.org/monitoring-and-evaluation/sampling>.

⁴ To accommodate the selection of 30 households per cluster, 58 clusters of 30 households yielded a sample of 1,740 households, 20 households more than the 1,720 households needed after the nonresponse adjustment.

Prevalence of stunting	0.42	0.72	908	1,634	1,720	58	6,960
*Source: 2016 Preliminary DHS estimates for rural households (where estimated household size is given as 5.0 and estimated proportion of population under five years of age is given as 0.144)							
**Includes Stukel/Deitchler inflation and deflation factor adjustments							
Assumptions for all calculations: one-sided test, alpha=0.05, beta=0.80, households per cluster=30							

2) EL Sample Size for the DFAPs

The sample size for the EL survey was based on the same sample size derived from the BL survey in the prior DFAP project areas. The BL sample size for the prior DFAPs was 1,540 households in each of the four project areas.⁵

3) Sample Size for the Joint BL/EL PBS

The joint BL/EL sample size was derived by first identifying the number of households in each of 3 areas: 1) the overlapping area between the prior DFAPs and the DFSAs, 2) those in the prior DFAP area only (old), and 3) those in the DFSA area only (new). Then, the sample size was proportionately allocated among these three groups relevant to the particular survey in question (BL versus EL), and based on the proportion of households in each group. This allocation was done separately for the prior DFAPs with an EL sample size of 1,540 by allocating to “old” and “overlap” kebeles /woredas, and the DFSAs with BL sample size of 1,740 by allocating to “new” and “overlap” kebeles/woredas.⁶ The overall joint BL/EL sample size requirement was then calculated based on the sample size requirement for the prior DFAPs only, the sample size requirement for the DFSAs only and the maximum of the sample size requirement for the overlapping prior DFAP and DFSA areas (see Table 5).⁷

Table 5. Sample Size Requirements for Old, New and Combined DFSA Project Areas

Project*	Sample Size Requirement for prior DFAPs (EL)	Sample Size Requirement for DFSAs (BL)	Sample Size Requirement for Joint BL/EL
CRS	1,540	1,740	2,670
Overlap (BL and EL)	787	610	787
New (BL only)	NA	1,130	1,130
Old (EL only)	753	NA	753
FH	1,540	1,740	1,740
Overlap (BL and EL)	713	1,403	1,403
New (BL only)	NA	337	337
REST	1,540	1,740	2,163
Overlap (BL and EL)	1,117	1,172	1,172
New (BL only)	NA	568	568

⁵ A description of the sampling for the baseline study for the prior DFSAs can be found in the “Development Food Aid Program in Ethiopia Baseline Survey” Report, October 2012. Available at <https://dec.usaid.gov>

⁶ The EL PBS for the CSUS Project will not be conducted; therefore, there will only be 3 (not 4) EL PBSs required.

⁷ The prior FH DFAP had 9 woredas; these appear under FH (overlap - 3 woredas) and WV (overlap - 6 woredas); this is because the WV DFSA took over 6 of the 9 FH woredas. Therefore, the EL for FH (prior DFAP project) consists of areas defined by FH (overlap) and WV/FH (overlap). The sample size for the EL for FH is indicated in red font in Table 4.

Old (EL only)	423	NA	423
WV/FH	NA	1,740	1,853
Overlap (BL and EL)	827	714	827
New (BL only)	NA	1,026	1,026
TOTAL	4,620	6,960	8,426

**New” represents the DFSA only areas and “Old” represents the prior DFAP only areas

2.2.3 Sample Selection

The sample for each project was selected using stratified multi-stage cluster sampling with three stages of sampling: (1) selection of clusters, (2) selection of households, and (3) selection of individuals.

First stage sampling of clusters: For the Ethiopia PBS, sampling of clusters involved two phases: (1) selection of kebeles and (2) selection of one Gott (sub-kebele) or one group of merged Gotts within each selected kebele.⁸ A cluster corresponds to the second phase selection of either a Gott (sub-kebele) or two or more merged Gotts in a selected kebele. This two phase approach was used to reduce the size of the cluster because kebeles are too large.

First Phase Selection of Kebeles: Within each project, the sampled kebeles were proportionately allocated at the woreda level based on the distribution of households across all woredas. Kebeles were then selected from the sampling frame for each project using probability proportional to size sampling (PPS). The total number of kebeles sampled for each project for the joint BL/EL PBS was based on the joint sample size requirement for each project as a proportion of the overall joint sample size requirement (see Table 6).

Second Phase Selection of Gotts: During the listing exercise the locations of Gotts and number of households for each Gott were determined for each kebele. The number of Gotts vary from kebele to kebele and from region to region. In cases where many small Gotts were found within a kebele, adjacent Gotts were grouped to form larger areas of relatively equal size. Once the list of Gotts and merged Gotts (if applicable) was completed, one Gott or one group of merged Gotts of roughly equal size was randomly selected.

Table 6. Sample of Kebeles and Households by Project Area

Implementing Partner	Combined BL/EL sample size requirements	Number of sampled kebeles/Gotts	Number of sampled households*
CRS	2,670	89	2,670
FH	1,740	58	1,740
REST	2,163	73	2,190
WV	1,853	62	1,860

⁸ For program and policy implementation purposes, kebeles are subdivided into Gotts (sub-kebeles), having a clear physical demarcation and having a certain number of households. The Gotts have known names and identifiable boundaries known not only to the Gott leader, but also to any common community member in the Gott. The unit for the second phase of the first stage of sampling was defined as a Gott and not a census enumeration area because it was not possible to obtain information on census enumeration areas from the CSA.

TOTAL	8,426	282	8,460
-------	-------	-----	-------

*The difference between columns 2 and 4 is that column 4 is rounded up to the nearest divisor of 30 – to accommodate for the fact that 30 households per cluster were sampled.

Second stage sampling of households: At the second stage of sampling, 30 households were randomly selected per cluster using systematic sampling. Before the selection of households can take place, a listing exercise was conducted to identify and count each household in the cluster. GPS coordinates were taken for each cluster and the name of the head of household was recorded for each household.

For the purposes of the household survey a household is defined as follows:

A person or group of people who live together and share meals (“eating from the same pot”).

This is not the same as a family. A family includes people who are related, but a household includes any people who live together, whether or not they are related. For example, three unrelated men who live and cook meals together would not be considered one family, but they would be considered one household.

For men with more than one wife (polygamous situations), households will be treated in accordance with the below definition:

If the wives live in the same homestead (dwelling structures and adjoining land occupied by family members) and also share the same eating arrangements, they will be treated as the same household. But if the wives live independently and do not share the same eating arrangements they will be treated as separate households.

Third stage sampling of individuals within sampled households: The PBS is broken into several modules with different individuals eligible to be interviewed, depending on the target groups relevant to the various FFP indicators. These target groups include:

- Household head or responsible adults
- Person(s) responsible for the preparation of food in the household
- Women of reproductive age
- Children under five years of age
- Farmers
- Cash-earning adults
- Parents of children under two years of age

The household roster will be completed at the beginning of the interview, thus identifying all members of the selected household. The protocol for the selection of individuals within households is as follows:

- For the children’s module, data and anthropometry measures will be collected for *all* eligible children under five.
- For the woman’s module, women between the ages of 15-49 will be selected. Data and anthropometry measures will be collected for *all* eligible women.
- For the agricultural module, all farmers within the household who have decision-making power over all plots of land and/or livestock that are part of the “farm” will be selected.

- For the gender modules, male or female cash earners or parents of children under two years of age will be interviewed.

2.3 Questionnaire

The joint BL/EL questionnaire was developed through a series of consultations with FFP, the Food and Nutrition Technical Assistance III Project (FANTA), and the IPs before, during, and after the BL planning workshop in April 2017. All questionnaire modules follow FFP and Feed the Future guidelines, as described in the *FFP Indicators Handbook* (April 2015) and *Feed the Future Indicator Handbook* (September, 2016).⁹

The questionnaire consists of separate modules covering the following topics:

- Module A: Household identification and informed consent
- Module B: Household roster
- Module C: Household food security (HDDS and FIES)
- Module D: Children’s nutrition and health
- Module E: Women’s nutrition and health
- Module F: Water, sanitation, and hygiene
- Module G: Agriculture
- Module H: Poverty
- Module J: Gender – Cash
- Module K: Gender – MCHN
- Module R: Resilience
- ANTHROPOMETRY

Questions for Modules A through G, J and K were adapted using questions from the FFP Standard Indicators Handbook and the DHS questionnaire. Questions for Module H were adapted from the World Bank’s Living Standards Measurement Study (LSMS). Questions for Module R were developed by TANGO. The total time for completing the survey is expected to be approximately 2-3 hours.

The protocol for the selection of proxy respondents for these modules is as follows:

- For the modules requiring data about the household (Modules A, B, F, H, and R), the head of household or any responsible adult will be interviewed.
- For the food security module (Module C), the person(s) responsible for the preparation of meals in the household or another family member who was present and ate meals in the household in the past 24 hours will be interviewed.
- For the children’s module (Module D), the mother or caregiver for children under five years of age will be interviewed. There should be no substitute respondents for mothers or caregivers.
- For the women’s module (Module E), if an eligible woman between the ages of 15-49 is not available after three visits, no alternative respondents should be interviewed.

⁹ https://feedthefuture.gov/sites/default/files/resource/files/Feed_the_Future_Indicator_Handbook_Sept2016.pdf

- For the agricultural module (Module G), all farmers within the household will be interviewed. If a farmer has migrated for an extended period to work outside of the household, the spouse and/or another responsible adult who can answer the agricultural questions will be interviewed.
- For the gender modules (Modules J and K), if male or female cash earners or parents of children under two years of age are not available, no other individuals should be interviewed to take their place.

3. FIELD PROCEDURES

3.1 Data Collection Mode

The data for the joint BL/EL PBS will be collected with tablets using Computer-Assisted Personal Interviewing (CAPI). Tablets will be loaded with a CSPro data entry application developed at ICF for FFP surveys and tailored to fit the Ethiopia questionnaire. All data will be entered directly into the tablets and edited while interviewing in the field.

3.2 Field Manuals

Prior to the start of training and fieldwork, the EVELYN team will develop training manuals based on those developed for prior baseline surveys and using FFP, FTF, and DHS guidelines. The manuals will be used for household survey training and fielding purposes and will provide guidance to field staff on the survey protocol and procedures. The EVELYN team will customize the field manuals to align with the final questionnaire and DRC-specific field protocols. The following manuals will be provided:

- Supervisor Manual - The supervisors' manual will describe the study design and objectives, supervisors' roles and responsibilities, rules and regulations, ethics, fieldwork preparations, and quality control requirements and procedures.
- Supervisor CAPI Manual - The supervisors' CAPI manual will describes all procedure needed by supervisors to assign, monitor and transmit the CAPI interviews.
- Interviewer Manual - The interviewers' manual will include guidelines for implementation of the survey and fieldwork procedures, including interviewing techniques and procedures for completing the questionnaires.
- Interviewer CAPI Manual – The Interviewers' CAPI manual will provide detailed instructions for navigating the questionnaires on the tablet, making changes to the questionnaire and for submissions to the supervisor.
- Interviewer Question by Question Manual - This manual will include detailed explanations and instructions for completing each question from the questionnaire.
- Anthropometry and Standardization Manual - The anthropometry training manual will include detailed instructions for all anthropometry specialists on proper procedures for taking accurate anthropometry measures (height/length and weight), along with procedures to conduct anthropometry standardization testing.

3.3 Training

Using the manuals described above, the EVELYN team will work together with Kimetrica, the local data collection sub-contractor, to conduct in-depth trainings for supervisors, interviewers, and anthropometry specialists. Prior to the start of training, the field team (EVELYN survey coordinator, local survey monitors, the Kimetrica's country operations manager, and the lead anthropometry specialist) will develop a detailed training curriculum and timeline for supervisors and interviewers' trainings; and the anthropometry training and standardization testing, including local sites where the anthropometry standardization testing activities will take place. These training curriculums are provided in Annex 2. The organization and flow of the training will be adapted to fit the situation and logistics in Ethiopia. The training curriculum and timeline and all training manuals will be submitted to FFP for approval prior to the start of trainings.

Prior to the start of training, a paper- and CAPI-based pretest of the questionnaire will be conducted. The paper-based pretest will test the soundness of the questionnaire and identify potential problem areas, such as issues with skip patterns, wording, sequencing of questions, instructions to interviewers, and the clarity of the questionnaire for coding. The CAPI-based pretest will be conducted to test the programming of the questionnaire flow and skips, and use of the tablets in the field, including data transmissions. All proposed changes to the questionnaire will be reviewed by the EVELYN team and submitted to FFP for approval. The revised questionnaire will be used for interviewer and supervisor trainings.

Interviewer training will involve review of the questionnaire, module by module, along with practical sessions on handling and entering data into the tablets using the CAPI template, transferring data from interviewers' tablets to supervisors' tablets, and transferring edited data from supervisors' tablets to the central office. Interviewers will participate in role playing and mock interviews and the questionnaires will be further checked for content, consistency and flow, as well as validity and reliability.

Supervisor training will cover the topics of supervisors' roles and responsibilities; rules, behaviors, and ethics; household and respondent selection; use of the field control sheet, maps, and GPS; and data collection. It will include a detailed review of the CAPI survey procedures for receiving and transmitting completed interviews.

The anthropometry training will include instruction on taking accurate measurements, types of possible measurement errors, and reading and recording measurements followed by some practical sessions. Anthropometry training also include a training session for all interviewers as anthropometry assistants, which require them to hold children two to five years of age to ensure that their feet and knees are in the correct position for standing measurement, and to hold children younger than two years of age to ensure that their heads are correctly positioned for recumbent length measurement.

Upon completion of the trainings, all survey staff will participate in a pilot study in pre-selected non-sampled kebeles near the project areas. The pilot test will provide the survey team practice on:

- Locating of selected villages and selected households by supervisors
- GPS data collection at the household level
- CAPI data entry and respondent selection routines by interviewers
- CAPI data editing, survey management by supervisor
- CAPI data transmission to control room by interviewers
- Appropriate interviewing behavior

- Team dynamics
- Distribution of work assignments and coordination by supervisors
- Completion of field control sheets by supervisors

Each interviewer will complete at least two full-interviews during the pilot test. Supervisors will observe the interviewers in their teams during the pilot test and take notes on their performance. Kimetrica’s survey management team, the EVELYN survey coordinator and the local survey monitors, the EVELYN anthropometry trainer and the local anthropometry counterpart will also participate in the pilot test. Together with the supervisors, they will debrief the team members the day after the pilot test is completed. They will provide feedback and clarify/troubleshoot any issues encountered during the pilot study. Based on the discussion at the debrief session, EVELYN will make final modifications to field procedures and manuals, if required. Table 7 summarizes the sequence of field preparation activities. The EVELYN survey coordinator will oversee all activities.

Table 7: Field Preparation Activities

Duration	Activities	Participants
7 days	Pretest Training	Experienced interviewers
4 days	Questionnaire pretest (paper and CAPI)	Experienced interviewers
21 days	Interviewer training	Interviewers, and supervisors
5 days	Anthropometry training	Anthropometry specialists, interviewers, supervisors
5 days	Anthropometry standardization testing	Anthropometry specialists
3 days	Supervisor/field procedure training	Supervisors and field editors
4 days	Pilot test/Field testing of the questionnaire and debrief	Interviewers, anthropometry specialists, field editors, and supervisors

Prior to the start of data collection, the field team will ensure that all required permissions and ethical review approvals have been obtained. They will develop a detailed field movement plan that will describe the location and timing for each field team throughout the data collection period. The field movement plan will be submitted to FFP for approval prior to the start of data collection activities.

3.4 Data Collection

Data collection will start immediately after the pilot study. To collect data from the sampled 8,460 households, there will be 40 teams, each consisting of six field team members (one supervisor, four interviewers, and an anthropometry specialist). Accordingly, Kimetrica will hire a total of 160 interviewers, 40 anthropometry specialists, and 40 supervisors. In addition, Kimetrica will engage ten field coordinators and three IT Specialists, making the total number of field personnel for the survey to be 253. Table 8 shows the distribution of the survey personnel by region. Kimetrica may rearrange the regional distribution of the field personnel after the kebeles are selected, to bring equity in workload distribution.

Table 8: Main Fieldwork Team Composition

Field personnel	Tigray	Amhara	Oromiya/Dire Dawa	Total
Interviewers	40	52	68	160

Supervisors	10	13	17	40
Anthropometry specialists	10	13	17	40
Field Coordinators	2	4	4	10
IT specialists	1	1	1	3
Total	63	83	107	253

Given 282 clusters to cover and 40 teams to undertake the work, each team will, on average, collect data from seven clusters. As can be seen from the description below, a total of roughly 50 days will be required to complete the data collection from the 8,460 households:

- 26 days required to conduct interviews. Assuming that an interviewer conducts two interviews a day, a team with four interviewers will complete eight interviews a day and therefore will require a total of 26 days to finish the seven clusters.
- 16 days for travel (two days for the back-and-forth travel to the assignment location, 14 days travel to and from the seven clusters, including meeting up with kebele admins, one day per cluster).
- 8 days required to cover transportation and implementation delays, as the team will be working during the main rainy season of the country.

3.5 Quality Control

Working in close partnership with Kimetrica, the EVELYN team will ensure high-quality PBS data through a strong focus on training field staff and monitoring data collection. The EVELYN team will be using CAPI data collection, which allows for real-time editing of data, frequent uploading of collected data, continuous data quality review, and correction of field staff behavior as data collection proceeds. During critical periods, including training, anthropometry standardization testing, questionnaire pretests, piloting, and at the beginning of fieldwork, the EVELYN survey coordinator will be in-country to coordinate and oversee these activities. When the EVELYN survey coordinator leaves the country, the local survey monitors will oversee fieldwork activities and closely update the EVELYN survey coordinator on fieldwork progress or any issues encountered during data collection. Table 9 provides survey procedures and safeguards for field supervision.

Table 9: Procedures and Safeguards for Fieldwork Oversight

Goal	Procedure or Safeguard
Proper fieldwork oversight	<ul style="list-style-type: none"> • Maximum ratio of one supervisor for every four interviewers and one anthropometry specialist. The subcontractor (Kimetrica) will provide one field coordinator to oversee every four-or-five survey teams
Proper sample selection	<ul style="list-style-type: none"> • Adherence to household and respondent selection methods per EVELYN protocol
Assurance of questionnaire accuracy	<ul style="list-style-type: none"> • Complete review of data immediately after the interview is conducted • In the event of errors or omissions, required corrections be made before the interviewer can proceed to the next household
Prevention of fraud in interviewing	<ul style="list-style-type: none"> • Spot-checks with households on the day of the interview to ensure honesty on the part of the interviewer. Proper spot-checks involve verifying demographic information of the respondents and critical information on some households to make sure that interviewers are providing data that is accurate and truthful • 15 percent of completed interviews should be randomly selected for spot-checks

Goal	Procedure or Safeguard
	<ul style="list-style-type: none"> In the event of fabrication or falsification of data collected, the interviewer will be fired from the project immediately
Completion of interviews	<ul style="list-style-type: none"> Interviewers will make up to three visits to the household to interview a respondent, and will appropriately plan one or two visits with the respondents to successfully complete the interview Ensure that each household survey is appropriately completed. All interview items should be 100 percent complete

4. DATA PROCESSING AND ANALYSIS

4.1 Data Transmissions

For transmission of data from the field, Kimetrica will use Internet File Streaming System (IFSS), a cloud-based electronic file delivery web service. The primary objective of the service is to deliver files from one user to another in a way that is fast and secure. The EVELYN CSPro programmer assigned to the project will work in-country to set up and test the cloud-based data transmission system, and to provide technical support during the first week of data collection to ensure that tablets and the IFSS transmission system are operating smoothly. Kimetrica will upload data to the IFSS regularly. Data transmission for the household surveys will begin during the second week of fieldwork, when interviewers complete interviews in their first assigned clusters. Currently planned dates for data transmission are presented in Table 10.

Table 10. Data Transmission Timeline

Activities	Dates
Data transmission begins	July 10
Data transmission for half of households completed	August 4
Data transmission for all households completed	August 24

For the final dataset, the CSPro programmer will develop a program to run quality control checks and convert the raw data exported from the CSPro application into the data format needed for analysis using Stata, SPSS or SAS.

4.2 Data Analysis

EVELYN will generate estimates for all indicators, along with additional analyses to explore relationships and plausible determinants for key outcome indicators and a select number of resilience indicators. For indicators that were collected at baseline in the prior DFAP project areas, a statistical comparison of BL (2012) and EL (2017) estimates will be conducted to determine population-level change over time.

Sample weights will be computed and used in the data analyses. This will involve computing an overall sampling weight for each indicator by taking the inverse of the product of the probabilities of selection from each stage of sampling (village selection; household selection; and, when relevant, individual selection). Weights will be calculated separately for each project and will be adjusted to compensate for household- and individual-level non-response, where appropriate. Separate weights will be calculated for:

- Households (used for indicators derived from Modules C, F, H, and R)

- Children under five years of age (Module D and Children’s Anthropometry)
- Women 15-49 years of age (Module E)
- Non-pregnant women 15-49 years (Women’s anthropometry)
- Farmers (Module G)
- Cash-earning adults (Module J)
- Parents of children under two years of age (Module K)

All descriptive and bivariate analyses to be conducted will be discussed with FFP and clearly defined in the Data Treatment and Analysis Plan (DTAP) while recognizing that after the analysis begins, there may be other interesting analyses to pursue. The DTAP will be prepared following completion of the PBS data collection protocol and will be submitted to FFP for approval prior to the start of data analysis.

Final data files and documentation will be delivered to FFP following the completion of the data analysis and vetting of the PBS results with all stakeholders. All personal identifying information will be removed from the datasets prior to delivery to FFP in order to protect the confidentiality of survey respondents. The final data files will include:

- Sampling frames for each DFSA
- Raw datasets generated from the CSPro data entry application
- Edit rules and programming specifications for data cleaning
- Data dictionary/code book for each final dataset
- Syntax for all analyses and variable transformations
- Final analytic datasets, including sampling weights and all derived indicators, in STATA format and comparable datasets in CSV format that have been anonymized to protect individual confidentiality, for use as a public data files in the USAID Open Data warehouse.

5. TIMELINE

Table II provides the timeline for critical activities for the joint BL/EL PBS.

Table II. Ethiopia Joint BL/EL PBS Critical Activities Timeline

Activity	Date
Baseline Planning Workshop	April 3 – 6, 2017
Research protocol submitted to the ethics committee	May 4, 2017
Listing exercise	May 16 – June 11, 2017
Pretest training (Paper and CAPI)	May 24 – 30, 2017
Questionnaire pretest and debriefing (Paper and CAPI)	May 31 – June 5, 2017
Questionnaire Finalized for Main Training	June 6 – 12, 2017
Main Training (interviewer and supervisor)	June 13 – 28, 2017
Anthropometry training and standardization testing	June 19 – 28, 2017
Field pilot practice	June 29 – July 1, 2017
Pilot debriefing/questionnaire revisions if needed	July 2 – 3, 2017
Household survey fieldwork starts	July 4, 2017

Activity	Date
Household survey fieldwork ends	August 17, 2017
Final dataset available	Sept. 14, 2017
Preliminary indicator estimates	Sept. 29, 2017

ANNEX I – INDICATORS MEASURED IN PRIOR BASELINE STUDY

The table below summarizes the modules included in the questionnaire for the baseline study of the prior DFAPs. The modules in red font include indicators that are also collected in the joint BL/EL survey.

ETHIOPIA BASELINE SURVEY FOR PRIOR DFAPs – QUESTIONNAIRE MODULES	
A	Identification
B	Household roster
C	Food access
	C1. HDDS
	C2. HHS
	C3. Household Food Insecurity Coping Strategy
	C4. Number of Months with Adequate Food Provisioning
D	Women's Dietary Diversity (WDDS)
E	Hygiene (hand washing)
	E1. Hand washing in HH with 0-23 months old children
	E2. Hand washing at household level
F	Improved sanitation facilities
G	Improved drinking water source
H	Household economy
	H1. Staple crop productivity
	H2. Asset inventory (livestock, prod assets, HH goods, consumer durables)
	H3. Household consumption expenditure
	H4. Household access to PSNP (productive safety net program)
I	Gender and social perspectives
	I1. Women's decision making on household economic matter
	I2. Gender based domestic violence: wife beating
	I3. Gender preference on sending boys and girls to school
	I4. Female circumcision
	I5. Women's decision making on seeking health services
	I6. Women's report on self-efficacy
J	Persons living with disability benefitting from the program
K	Social services (primary school, health center, source of water)
L	Nutritional status of children
M	Exclusive breastfeeding
N	MAD
O	Diarrhea
P	Access to antenatal care

ANNEX 2 – TRAINING AGENDAS

Training Agenda for Questionnaire Pretesting

Date	Time	Discussion Topic
(Day 1) May 24	09:00-11:00	Introduction of the trainees and resource persons Background of FFP Population-Based Survey Detailed explanation of the objectives of the survey Personal qualities and performance standards in interviewing Role of pretest interviewers Dos and don'ts of interviewing
	11:00-11:15	Tea-break
	11:15-13:00	Discussion on field procedures Discussion on survey methodology including sample design Familiarization with questionnaire (Module-by-Module explanation of questionnaires)
	13:00-14:00	Lunch-break
	14:00-15:30	Familiarization with questionnaire (contd.) (Module-by-Module explanation of questionnaires)
	15:30-15:40	Tea-break
	15:40-17:00	Discussion on Module-A (Identification and Consent)
(Day 2) May 25	Session I 09:00-11:00	Discussion on Module- B (Household roster)
	11:00-11:15	Tea-break
	Session II 11:15-13:00	Discussion on Module-C, F (Food Access and Water, Sanitation & Hygiene)
	13:00-14:00	Lunch-break
	Session III 14:00-15:30	Discussion on Module-G (Agriculture)
	15:30-15:40	Tea-break
	Session IV 15:40-17:00	Discussion on Module-D1, D2 (Children's Nutritional Status & Feeding Practices, Children's Diarrhea and Oral Rehydration Therapy)
(Day 3) May 26	Session I 09:00-11:00	Review of previous day's discussion
	11:00-11:15	Tea-break
	Session II 11:15-13:00	Discussion on Module-E, J, K (Women' nutritional status and dietary diversity, Gender-Cash, Gender-MCHN)
	13:00-14:00	Lunch-break
	Session III 14:00-15:30	Discussion on Module-H1, H2, H3 (Food Consumption over past 7 days, Non-food Consumption over past 7 days, Nonfood expenditures over past 30 days)
	15:30-15:40	Tea-break
	Session IV 15:40-17:00	Discussion on Module-H5, H6, H7 (Nonfood expenditures over past 12 months, Housing expenditures, Durable goods expenditures)
(Day 4) May 27	Session I 09:00-11:00	Review of previous day's discussion
	11:00-11:15	Tea-break
	Session II 11:15-13:00	Discussion on Module-R (Resilience)
	13:00-14:00	Lunch

ANNEX 2 – TRAINING AGENDAS

Date	Time	Discussion Topic
	Session III 14:00-15:30	Discussion on entire questionnaire Role Play (Mock Interview)
	15:30-15:40	Tea-break
	Session IV 15:40-17:00	Role Play (Mock Interview)
(Day 5) May 29	Session I 09:00-11:00	Introduction to Tablet Demonstration on Interviewer's Menu and Data Entry Program Distribution of Tablets. Enter Own's Mock Interview Questionnaires from role play. Check skip patterns, value labels and QSF, understanding of warnings and error messages
	11:00-11:15	Tea Break
	Session II 11:15-13:00	Role Play (Mock Interview)
	13:00-14:00	Lunch
	Session III 14:00-15:30	Role Play (Mock Interview)
	15:30-15:40	Tea Break
	Session IV 15:40-17:00	Discussion on Problems and Solutions on use of tablets
(Day 6) May 30	Session I 09:00-11:00	Role Play (mock interview)
	11:00-11:15	Tea Break
	Session II 11:15-13:00	Role Play (mock interview)
	13:00-14:00	Lunch
	Session III 14:00-15:30	Discussion on Problems and Solutions on entering data
	15:30-15:40	Tea Break
	Session IV 15:40-17:00	Discussion on planning of questionnaire pretest
Day 7 to Day 11 May 31 to June 4	Field testing of questionnaire with movement: Three teams will be deployed Interviewers will conduct interviews on both paper questionnaires and tablets.	
(Day 12) Questionnaire Pretest Debrief June 5	Session I 09:00-11:00	Review of field testing result
	11:00-11:15	Tea break
	Session II 11:15-13:00	Review of field testing result
	13:00-14:00	Lunch
	Session III 14:00-15:30	Review of field testing result
	15:30-15:40	Tea break
	Session IV 15:40-17:00	Review of field testing result

ANNEX 2 – TRAINING AGENDAS

Training Agenda for Interviewer (Main) Training

Date	Time	Discussion Topic	Note
(Day 1) June 13	09:00-11:00	Introduction of the trainees and resource persons Background of FFP Population-Based Survey Detailed explanation of the objectives of the survey Personal qualities and performance standards in interviewing Role of pretest interviewers Dos and don'ts of interviewing	
	11:00-11:15	Tea-break	
	11:15-13:00	Discussion on field procedures Discussion on survey methodology including sample design Familiarization with questionnaire (Module-by-Module explanation of questionnaires)	
	13:00-14:00	Lunch-break	
	14:00-15:30	Familiarization with questionnaire (contd.) (Module-by-Module explanation of questionnaires)	
	15:30-15:40	Tea-break	
	15:40-17:00	Discussion on Module-A (Identification and Consent)	
(Day 2) June 14	Session I 09:00-11:00	Review of previous day's sessions Discussion on Module- B (Household roster)	
	11:00-11:15	Tea-break	
	Session II 11:15-13:00	Discussion on Module- B (Household roster)	
	13:00-14:00	Lunch-break	
	Session III 14:00-15:30	Practice and role play: Module A and B	
	15:30-15:40	Tea-break	
	Session IV 15:40-17:00	Practice and role play: Module A, B Debrief	
(Day 3) June 15	Session I 09:00-11:00	Review of previous day's sessions Discussion Module C, F	
	11:00-11:15	Tea-break	
	Session II 11:15-13:00	Discussion on Module C, F	
	13:00-14:00	Lunch-break	
	Session III 14:00-15:30	Practice and role play: Module C, F	
	15:30-15:40	Tea-break	
	Session IV 15:40-17:00	Practice and role play: Module C, F Debrief	
(Day 4) June 16	Session I 09:00-11:00	Review of previous day's sessions Discussion of Module D1, D2, E	
	11:00-11:15	Tea-break	
	Session II 11:15-13:00	Discussion of D1, D2, E	
	13:00-14:00	Lunch	

ANNEX 2 – TRAINING AGENDAS

Date	Time	Discussion Topic	Note
	Session III 14:00-15:30	Practice and role play: Module D1, D2, E	
	15:30-15:40	Tea-break	
	Session IV 15:40-17:00	Practice and role play: Module D1, D2, E Debrief	
(Day 5) June 17	Session I 09:00-11:00	Review of previous day's sessions Discussion of Module G	
	11:00-11:15	Tea Break	
	Session II 11:15-13:00	Discussion of Module G Discussion of Module J, K	
	13:00-14:00	Lunch	
	Session III 14:00-15:30	Discussion of Module J, K Practice and role play: Module G, J, K	
	15:30-15:40	Tea Break	
	Session IV 15:40-17:00	Practice and role play: Module G, J, K Debrief	
(Day 6) June 19	Session I 09:00-11:00	Review of previous day's sessions Discussion of Module H	
	11:00-11:15	Tea Break	
	Session II 11:15-13:00	Discussion of Module H	
	13:00-14:00	Lunch	
	Session III 14:00-15:30	Practice and Role Play: Module H	
	15:30-15:40	Tea Break	
	Session IV 15:40-17:00	Practice and Role Play: Module H Debrief	
(Day 7) June 20	Session I 09:00-11:00	Review of previous day's sessions Discussion: Module R	
	11:00-11:15	Tea Break	
	Session II 11:15-13:00	Discussion: Module R	
	13:00-14:00	Lunch	
	Session III 14:00-15:30	Practice and role play: Module R	
	15:30-15:40	Tea Break	
	Session IV 15:40-17:00	Practice and role play: Module R Debrief	
(Day 8) June 21	Session I 09:00-11:00	Review of previous day's sessions Mock interviews	
	11:00-11:15	Tea Break	
	Session II 11:15-13:00	Mock interviews	
	13:00-14:00	Lunch	
	Session III 14:00-15:30	Mock interviews	
	15:30-15:40	Tea break	
	Session IV 15:40-17:00	Mock interviews	
(Day 9) June 22	Session I 09:00-11:00	Review of previous day's sessions Mock interviews	

ANNEX 2 – TRAINING AGENDAS

Date	Time	Discussion Topic	Note
	11:00-11:15	Tea Break	
	Session II 11:15-13:00	Mock interviews	
	13:00-14:00	Lunch	
	Session III 14:00-15:30	Mock interviews	
	15:30-15:40	Tea break	
	Session IV 15:40-17:00	Mock interviews	
(Day 10) June 23	Session I 09:00–11:00	Introduction to Tablet Demonstration on Interviewer’s Menu and Data Entry Program	
	11:00-11:15	Tea Break	
	Session II 11:15-13:00	Distribution of Tablets. Enter Own’s Questionnaire from Paper based mock interviews in Group(2x2). Check skip patterns, value labels and QSF, understanding of warnings and error messages.	
	13:00-14:00	Lunch	
	Session III 14:00-15:30	Enter own’s data from paper based questionnaire from mock interviews	
	15:30-15:40	Tea Break	
	Session IV 15:40-17:00	Continue entering data. Discussion on Problems and Solutions on entering data.	
(Day 11) June 24	Session I 09:00–11:00	Review of previous day’s sessions Mock interviews with CAPI	Supervisor Training (Day 1)
	11:00-11:15	Tea Break	
	Session II 11:15-13:00	Mock interviews with CAPI	
	13:00-14:00	Lunch	
	Session III 14:00-15:30	Mock interviews with CAPI Transferring data to supervisor’s tablets	
	15:30-15:40	Tea Break	
	Session IV 15:40-17:00	Discussion on error after reviewing data. Discussion on CAPI part done so far. (Q/A session).	
(Day 12) June 26	Session I 09:00–11:00	Review of previous day’s sessions Mock interviews with CAPI	Supervisor Training (Day 2)
	11:00-11:15	Tea Break	
	Session II 11:15-13:00	Mock interviews with CAPI	
	13:00-14:00	Lunch	
	Session III 14:00-15:30	Mock interviews with CAPI Transferring data to supervisor’s tablets	
	15:30-15:40	Tea Break	
	Session IV 15:40-17:00	Discussion on error after reviewing data. Discussion on CAPI part done so far. (Q/A session).	
(Day 13) June 27	Session I 09:00–11:00	Review of previous day’s sessions Mock interviews with CAPI	Supervisor Training (Day 3)
	11:00-11:15	Tea Break	
	Session II 11:15-13:00	Mock interviews with CAPI	
	13:00-14:00	Lunch	
	Session III	Discussion on error after reviewing data. Discussion on	

ANNEX 2 – TRAINING AGENDAS

Date	Time	Discussion Topic	Note
	14:00-15:30	CAPI part done so far. (Q/A session).	
	15:30-15:40	Tea Break	
	Session IV 15:40-17:00	Discussion on planning of pilot test	
Day 14 to Day 17 (June 28- July 1)	Pilot Test		
Day 18 (July 2)	Pilot Debriefing		

ANNEX 2 – TRAINING AGENDAS

SUPERVISOR TRAINING AGENDA

SUPERVISOR / FIELD PROCEDURE TRAINING	
Day 1 June 24	Review of terminology, team members' roles, supervisors' responsibilities, rules/behavior/ethics, training and fieldwork schedules.
	Review of field procedures including: <ul style="list-style-type: none"> a) Sampling, household selection, callbacks, recording HH location and details b) GPS data collection c) Organizing and supervising fieldwork d) Maintaining fieldwork control sheets e) Monitoring interviewer performance
	LUNCH BREAK
	Review of field procedure (cont'd)
Day 2 June 26	Review of the questionnaire with Tablet
	LUNCH BREAK
Day 3 June 27	Review of the questionnaire with Tablet
	LUNCH BREAK
	Introduction and planning of field piloting
	Fieldwork prep for pilot continued

ANNEX 2 – TRAINING AGENDAS

Anthropometry training and standardization schedule

June 16-29, 2017	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
FIRST WEEK						
					Meeting with Kimetrica to define schedule and logistics	Equipment check up
9am to 1 pm	Take the equipment to the main training center and prepare the anthropometrist's kit.	At main training center: Introduction to Anthropometry	At main training center: Introduction to standing height and weight of children 2-5 yrs old, Recumbent length and weight of children <2 yrs old	At facility for children: Hands on practice, every procedure with special focus on the 2-5 yrs age category	At facility for children: Hands on practice, every procedure with special focus on the < 2yrs age category	At facility for children: Hands on practice, every procedure
2pm to 4pm		At main training center: Height and weight of adults (mothers). Training and practice on each other	To be used as needed	To be used as needed	To be used as needed	To be used as needed
SECOND WEEK						
9am to 12 noon		At main training center. Introduction to standardization testing of mothers.	At facility for children: Standing height and weight standardization test of children 2-5 yrs old	At facility for children: Length standardization test of children <2 yrs old	At facility for children: Re-standardization test	At facility for children: Standing height and weight of children 2-5 yrs old, training and practice (ASSISTANT)
2pm to 4pm		To be used as needed	To be used as needed	To be used as needed	At main training center: Introduction to anthropometry and practice (ASSISTANT)	At facility for children: Recumbent length and weight training of children <2 yrs old (ASSISTANT)

NOTES:

1. Interactive Training

Training will be interactive and participatory with practice, testing and discussions.

2. Flexibility

The above schedule **WILL** change according to the needs as the training progresses, which is an expected phenomenon of training sessions.

ANNEX 3
Population-Based Household
Survey Questionnaire

Module A. Identification and Informed Consent (Head of HH or Responsible Adult)

IDENTIFICATION (1)

A01 CLUSTER CODE

--	--	--

A02 HOUSEHOLD NUMBER (HH)

--	--	--

A03 REGION

--	--	--

OROMIA 1201

DIRE DAWA 1202

AMHARA 1203

TIGRAY 1204

INTERVIEWER VISITS

	FIRST VISIT	SECOND VISIT	THIRD VISIT	FINAL VISIT				
A05 DATE	_____	_____	_____	A09 DAY <table border="1" style="display: inline-table; text-align: center;"><tr><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td></tr></table>				
A06 ENUMERATOR	_____	_____	_____	A10 MONTH <table border="1" style="display: inline-table; text-align: center;"><tr><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td></tr></table>				
A07 DAY OF VISIT	_____	_____	_____	A11 YEAR <table border="1" style="display: inline-table; text-align: center;"><tr><td style="width: 20px; height: 20px;">2</td><td style="width: 20px; height: 20px;">0</td><td style="width: 20px; height: 20px;">1</td><td style="width: 20px; height: 20px;">7</td></tr></table>	2	0	1	7
2	0	1	7					
A08 RESULT USE CODES BELOW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A12 INT. NUMBER <table border="1" style="display: inline-table; text-align: center;"><tr><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td></tr></table>				
NEXT VISIT: DATE	_____	_____		A13 TOTAL NUMBER OF VISITS <table border="1" style="display: inline-table; text-align: center;"><tr><td style="width: 20px; height: 20px;"> </td></tr></table>				
	_____	_____						
A14 FINAL OUTCOME OF INTERVIEW (CIRCLE ONE)				A17 TOTAL PERSONS IN THE HOUSEHOLD <table border="1" style="display: inline-table; text-align: center;"><tr><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td></tr></table>				
1 COMPLETED	3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME			A18 LINE NO. OF RESPONDENT TO HOUSEHOLD ROSTER <table border="1" style="display: inline-table; text-align: center;"><tr><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td></tr></table>				
2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT	4 POSTPONED/PARTIALLY COMPLETED			A19 TOTAL CHILDREN UNDER FIVE <table border="1" style="display: inline-table; text-align: center;"><tr><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td></tr></table>				
5 REFUSED				A20 TOTAL ELIG. WOMEN 15-49 YRS <table border="1" style="display: inline-table; text-align: center;"><tr><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td></tr></table>				
9 OTHER _____ (SPECIFY)				A21 TOTAL NO. OF FARMERS <table border="1" style="display: inline-table; text-align: center;"><tr><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td></tr></table>				
A15 HEAD OF HOUSEHOLD NAME & LINE NUMBER (B01)	_____ <table border="1" style="display: inline-table; text-align: center;"><tr><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td></tr></table>							
A22 SUPERVISOR								
NAME _____								
CODE <table border="1" style="display: inline-table; text-align: center;"><tr><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td><td style="width: 20px; height: 20px;"> </td></tr></table>								

INFORMED CONSENT

A00: START TIME

		:		
HOUR			MINUTE	

IT IS NECESSARY TO INTRODUCE THE HOUSEHOLD TO THE SURVEY AND OBTAIN THE CONSENT OF ALL RESPONDENTS. FIRST IDENTIFY THE HEAD OF HOUSEHOLD AND CONDUCT THE INFORMED CONSENT WITH HIM/HER. THEN BEGIN THE INTERVIEW. AS YOU IDENTIFY NEW RESPONDENTS FOR SUBSEQUENT MODULES, RETURN TO THIS PAGE AND OBTAIN THEIR CONSENT BEFORE INTERVIEWING THEM.

Hello. My name is _____. I am working with Kimetrica. WE ARE CONDUCTING A SURVEY TO LEARN ABOUT AGRICULTURE, FOOD SECURITY, FOOD CONSUMPTION, NUTRITION AND WELFARE OF HOUSEHOLDS IN ETHIOPIA. YOUR HOUSEHOLD HAS BEEN CHOSEN FOR THE SURVEY. I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT YOUR HOUSEHOLD. THESE QUESTIONS CAN TAKE TWO TO THREE HOURS TO COMPLETE. WE CAN COME BACK TOMORROW IF WE DO NOT HAVE ENOUGH TIME TO GO THROUGH ALL QUESTIONS TODAY. ALL THE ANSWERS PROVIDED BY YOU WILL BE CONFIDENTIAL AND WILL ONLY BE SHARED FOR PROFESSIONAL AND LEARNING PURPOSES. YOUR IDENTITY SHALL NOT BE DISCLOSED ON ANY PUBLICALLY AVAILABLE DATA OR REPORTS. The data collected in this baseline survey may be used as part of a study in the future. If your household is selected for the study then a second survey will be conducted, and if you agree, the data from this study will be used for comparison. You don't have to agree to participate in either study, but we hope you will agree to answer the questions for this study since your views are important. IF I ASK YOU ANY QUESTION YOU DON'T WANT TO ANSWER, JUST LET ME KNOW AND I WILL GO ON TO THE NEXT QUESTION OR YOU CAN STOP THE INTERVIEW AT ANY TIME. IN CASE YOU NEED MORE INFORMATION ABOUT THE SURVEY, YOU MAY CONTACT THE PERSON LISTED ON THIS CARD.

Do you have any questions about the study or about your participation?
 You or other respondents can ask any questions you may have about the study at any time.

AS APPLICABLE, CHECK AND SIGN THE CONSENT BOX BELOW.

- Who is the main male adult (15 years or older) decision-maker in the household?
 [NAME], do you agree to participate in the survey?
 NAME: _____ RESPONDENT AGREED ____ RESPONDENT DID NOT AGREE ____
- Who is the main female adult (15 years or older) decision-maker in the household?
 [NAME], do you agree to participate in the survey?
 NAME: _____ RESPONDENT AGREED ____ RESPONDENT DID NOT AGREE ____
- PRIMARY CAREGIVERS FOR CHILDREN UNDER FIVE YEARS OF AGE
 [NAME], do you agree to participate in the survey and allow your child to be weighed and measured?
 NAME: _____ RESPONDENT AGREED ____ RESPONDENT DID NOT AGREE ____
 NAME: _____ RESPONDENT AGREED ____ RESPONDENT DID NOT AGREE ____
 NAME: _____ RESPONDENT AGREED ____ RESPONDENT DID NOT AGREE ____
 NO CHILDREN UNDER FIVE IN THE HOUSEHOLD _____

ADDITIONAL ELIGIBLE HOUSEHOLD MEMBERS

	RESPONDENT AGREED	RESPONDENT DID NOT AGREE
4. NAME _____ Do you agree to participate in the survey?	____	____
5. NAME _____ Do you agree to participate in the survey?	____	____
6. NAME _____ Do you agree to participate in the survey?	____	____

My signature affirms that I have read the verbal informed consent statement to the respondent(s), and I have answered any questions asked about the study.

INTERVIEWER'S NAME AND CODE _____	DAY	MONTH	YEAR
SIGNATURE AND DATE _____			2 0 1 7
INTERVIEWER'S NAME AND CODE _____	DAY	MONTH	YEAR
SIGNATURE AND DATE _____			2 0 1 7
INTERVIEWER'S NAME AND CODE _____	DAY	MONTH	YEAR
SIGNATURE AND DATE _____			2 0 1 7

A26: END TIME

		:		
HOUR			MINUTE	

MODULE B. HOUSEHOLD ROSTER (HEAD OF HH OR RESPONSIBLE ADULT)					B00: START TIME								HOUR		MINUTE		IF AGE 15 OR OLDER				IF AGE 0-17 YEARS				IF AGE 5 YEARS OR OLDER		IF AGE 5-24 YEARS	
LINE NO.	USUAL RESIDENTS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	AGE	ELIGIBILITY										MARITAL STATUS	SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS				EVER ATTENDED SCHOOL		CURRENT/RECENT SCHOOL ATTENDANCE						
					MODULE C. H1	MODULE D	PRIMARY CAREGIVER B08	MODULE E	MODULE F. H2-H7. R	MODULE J	MODULE J	MODULE K	MODULE G	B16		B17	B18	B19	B20	B21	B22	B23						
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23						
	Please tell me the name and sex of each person who lives here, starting with the head of the household. For our purposes today, members of a household are adults or children that live together and eat from the "same pot". It should include anyone who has lived in your house for at least 6 of the last 12 months, but it does not include anyone who lives here but eats separately. AFTER LISTING NAMES, RELATIONSHIP, SEX, AGE, CASTE FOR EACH PERSON ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK QUESTIONS B06 TO B23 FOR EACH PERSON	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	How old is (NAME)? IF 95 OR MORE, RECORD '95'. '98' = DON'T KNOW. USE ONLY FOR PERSONS WHO ARE ≥ 50. USE '00' IF CHILD IS LESS THAN 1 YEAR	Is (NAME) responsible for food preparation in the household?	IS THIS PERSON UNDER 5 YEARS OF AGE?	Who is the primary caregiver of (NAME)? *SEE DEFINITION BELOW ENTER LINE NUMBER OF PRIMARY CAREGIVER	IS THIS A WOMAN 15-49 YEARS OF AGE?	IS THIS PERSON THE HEAD OF THE HH OR A RESPONSIBLE ADULT IF HEAD OF HIS ABSENT?	Has (NAME) done any work in the last 12 months?	During the last 12 months, was (NAME) usually paid in cash or kind for this work or was (NAME) not paid at all?	Is (NAME) the parent of a child under 2 years of age who is living in this household?	Is (NAME) a farmer?	What is (NAME)'s current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER-MARRIED AND NEVER LIVED TOGETHER	Is (NAME)'s natural mother alive?	Does (NAME)'s natural mother usually live in this household? IF "YES": What is her name? RECORD MOTHER'S LINE NUMBER. IF "NO", RECORD '00'.	Is (NAME)'s natural father alive?	Does (NAME)'s natural father usually live in this household? IF YES: What is his name? RECORD FATHER'S LINE NUMBER. IF NO, RECORD '00'.	Has (NAME) ever attended school?	What is the highest grade (NAME) has completed? SEE CODES BELOW.	Did (NAME) attend school at any time during the 2016/17 school year?	During this school year, what grade is (NAME) attending? SEE CODES BELOW.						
01		0 1	M F 1 2	IN YEARS [][]	Y N 1 2	Y N 1 2	[][]	Y N 1 2	Y N 1 2	Y N 1 2 ↓ GO TO 13	[][]	Y N 1 2	Y N 1 2	[][]	Y N DK 1 2 ↓ GO TO 18	[][]	Y N DK 1 2 ↓ GO TO 20	[][]	Y N 1 2 ↓ NEXT LINE	LEVEL GRADE [][]	Y N 1 2 ↓ NEXT LINE	LEVEL GRADE [][]						
02		[][]	1 2	[][]	1 2	1 2	[][]	1 2	1 2	1 2 ↓ GO TO 13	[][]	1 2	1 2	[][]	1 2 ↓ GO TO 18	[][]	1 2 ↓ GO TO 20	[][]	1 2 ↓ NEXT LINE	[][]	1 2 ↓ NEXT LINE	[][]						
03		[][]	1 2	[][]	1 2	1 2	[][]	1 2	1 2	1 2 ↓ GO TO 13	[][]	1 2	1 2	[][]	1 2 ↓ GO TO 18	[][]	1 2 ↓ GO TO 20	[][]	1 2 ↓ NEXT LINE	[][]	1 2 ↓ NEXT LINE	[][]						
04		[][]	1 2	[][]	1 2	1 2	[][]	1 2	1 2	1 2 ↓ GO TO 13	[][]	1 2	1 2	[][]	1 2 ↓ GO TO 18	[][]	1 2 ↓ GO TO 20	[][]	1 2 ↓ NEXT LINE	[][]	1 2 ↓ NEXT LINE	[][]						
05		[][]	1 2	[][]	1 2	1 2	[][]	1 2	1 2	1 2 ↓ GO TO 13	[][]	1 2	1 2	[][]	1 2 ↓ GO TO 18	[][]	1 2 ↓ GO TO 20	[][]	1 2 ↓ NEXT LINE	[][]	1 2 ↓ NEXT LINE	[][]						
06		[][]	1 2	[][]	1 2	1 2	[][]	1 2	1 2	1 2 ↓ GO TO 13	[][]	1 2	1 2	[][]	1 2 ↓ GO TO 18	[][]	1 2 ↓ GO TO 20	[][]	1 2 ↓ NEXT LINE	[][]	1 2 ↓ NEXT LINE	[][]						
07		[][]	1 2	[][]	1 2	1 2	[][]	1 2	1 2	1 2 ↓ GO TO 13	[][]	1 2	1 2	[][]	1 2 ↓ GO TO 18	[][]	1 2 ↓ GO TO 20	[][]	1 2 ↓ NEXT LINE	[][]	1 2 ↓ NEXT LINE	[][]						
08		[][]	1 2	[][]	1 2	1 2	[][]	1 2	1 2	1 2 ↓ GO TO 13	[][]	1 2	1 2	[][]	1 2 ↓ GO TO 18	[][]	1 2 ↓ GO TO 20	[][]	1 2 ↓ NEXT LINE	[][]	1 2 ↓ NEXT LINE	[][]						
09		[][]	1 2	[][]	1 2	1 2	[][]	1 2	1 2	1 2 ↓ GO TO 13	[][]	1 2	1 2	[][]	1 2 ↓ GO TO 18	[][]	1 2 ↓ GO TO 20	[][]	1 2 ↓ NEXT LINE	[][]	1 2 ↓ NEXT LINE	[][]						
CODES FOR B03: RELATIONSHIP TO HEAD OF HOUSEHOLD					DEFINITIONS										CODES FOR Qs. B21 AND B23: EDUCATION													
01 = HEAD 02 = WIFE OR HUSBAND 03 = SON OR DAUGHTER 04 = SON-IN-LAW OR DAUGHTER-IN-LAW 05 = GRANDCHILD 06 = PARENT 07 = PARENT-IN-LAW 08 = BROTHER OR SISTER 09 = OTHER RELATIVE 10 = ADOPTED/FOSTER/STEPCHILD 11 = NOT RELATED 98 = DON'T KNOW					*The primary caregiver is the person who knows the most about how and what the child is fed. Usually, but not always, this will be the child's mother. **Work includes jobs in the formal and/or informal sector, full time, part time, or seasonal work that is done within and/or outside the home. It includes, but is not limited to agricultural daily wage labor, off-farm daily wage labor, income generation activities, sale of goods produced or processed outside the home or at the home, homestead garden or farm (e.g., vegetables, eggs, fish, livestock, artisanal goods), or petty trading. For this indicator, work does not include participating in cash for work, food for work, or conditional transfers and/or productive safety net programs. It does not include either caring for own children, cooking, cleaning or doing other routine chores for own household (e.g., fetching water, collecting firewood) or being involved in agricultural production solely for household consumption. ***Farmers, including herders and fishers, are: 1) men and women who have access to a plot of land (even if very small) over which they make decisions about what will be grown, how it will be grown, and how to dispose of the harvest, AND/OR 2) men and women who have animals and/or aquaculture products over which they have decision-making power. Farmers produce food, feed, and fiber, where "food" includes agronomic crops (crops grown in large scale, such as grains), horticulture crops (vegetables, fruit, nuts, berries, and herbs), animal and aquaculture products, as well as natural products (e.g., non-timber forest products, wild fisheries). These farmers may engage in processing and marketing of food, feed, and fiber and may reside in settled communities, mobile pastoralist communities, or refugee/internally displaced person camps. An adult member of the household who does farm work but does not have decision-making responsibility over the plot OR animals would not be considered a "farmer." For instance, a woman working on her husband's land who does not control a plot of her own would not be interviewed.										LEVEL 0 = PRESCHOOL 1 = PRIMARY 2 = SECONDARY 3 = TECHNICAL/VOACATIONAL 4 = HIGHER 8 = DON'T KNOW GRADE 00 = LESS THAN 1 YEAR COMPLETED (USE '00' FOR B21 ONLY. THIS CODE IS NOT ALLOWED FOR B23.) 98 = DON'T KNOW													

LINE NO.	USUAL RESIDENTS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	AGE	IF AGE 15 OR OLDER										IF AGE 15 OR OLDER	IF AGE 0-17 YEARS				IF AGE 5 YEARS OR OLDER		IF AGE 5-24 YEARS							
					ELIGIBILITY											MARITAL STATUS	SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS				EVER ATTENDED SCHOOL		CURRENT/RECENT SCHOOL ATTENDANCE						
					MODULE C. H1	MODULE D	PRIMARY CAREGIVER	MODULE E	MODULE F. H2-H7, R	MODULE J	MODULE J	MODULE K	MODULE G	B15			B16	B17	B18	B19	B20	B21	B22	B23					
B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22	B23							
	Please tell me the name and sex of each person who lives here, starting with the head of the household. For our purposes today, members of a household are adults or children that live together and eat from the "same pot". It should include anyone who has lived in your house for at least 6 of the last 12 months, but it does not include anyone who lives here but eats separately. AFTER LISTING NAMES, RELATIONSHIP, SEX, AGE, CASTE FOR EACH PERSON ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK QUESTIONS B06 TO B23 FOR EACH PERSON	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	How old is (NAME)? IF 95 OR MORE, RECORD '95'. '98'=DON'T KNOW. USE ONLY FOR PERSONS WHO ARE ≥ 50. USE '00' IF CHILD IS LESS THAN 1 YEAR	Is (NAME) responsible for food preparation in the household?	IS THIS PERSON UNDER 5 YEARS OF AGE?	Who is the primary caregiver of (NAME)? *SEE DEFINITION BELOW ENTER LINE NUMBER OF PRIMARY CAREGIVER	IS THIS A WOMAN 15-49 YEARS OF AGE?	IS THIS PERSON THE HEAD OF THE HH OR A RESPONSIBLE ADULT IF HEAD OF HH IS ABSENT?	Has (NAME) done any work in the last 12 months?	During the last 12 months, was (NAME) usually paid in cash or kind for this work or was (NAME) not paid at all?	Is (NAME) the parent of a child under 2 years of age who is living in this household?	is (NAME) a farmer?	What is (NAME)'s current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER-MARRIED AND NEVER LIVED TOGETHER	Is (NAME)'s natural mother alive? IF "YES": What is her name? RECORD MOTHER'S LINE NUMBER. IF "NO", RECORD '00'.	Does (NAME)'s natural mother usually live in this household?	Is (NAME)'s natural father alive? IF YES: What is his name? RECORD FATHER'S LINE NUMBER. IF NO, RECORD '00'.	Does (NAME)'s natural father usually live in this household?	Has (NAME) ever attended school?	What is the highest grade (NAME) has completed? SEE CODES BELOW.	Did (NAME) attend school at any time during the 2016/17 school year?	During this school year, what grade is (NAME) attending? SEE CODES BELOW.							
10			M F 1 2	IN YEARS 1 2	Y N 1 2	Y N 1 2		Y N 1 2	Y N 1 2	Y N 1 2 ↓ GO TO 13		Y N 1 2	Y N 1 2		Y N DK 1 2 8 ↓ GO TO 18		Y N DK 1 2 8 ↓ GO TO 20		Y N 1 2 ↓ NEXT LINE	LEVEL GRADE 1 2	Y N 1 2 ↓ NEXT LINE	LEVEL GRADE 1 2							
11			1 2		1 2	1 2		1 2	1 2	1 2 ↓ GO TO 13		1 2	1 2		1 2 8 ↓ GO TO 18		1 2 8 ↓ GO TO 20		1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE							
12			1 2		1 2	1 2		1 2	1 2	1 2 ↓ GO TO 13		1 2	1 2		1 2 8 ↓ GO TO 18		1 2 8 ↓ GO TO 20		1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE							
13			1 2		1 2	1 2		1 2	1 2	1 2 ↓ GO TO 13		1 2	1 2		1 2 8 ↓ GO TO 18		1 2 8 ↓ GO TO 20		1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE							
14			1 2		1 2	1 2		1 2	1 2	1 2 ↓ GO TO 13		1 2	1 2		1 2 8 ↓ GO TO 18		1 2 8 ↓ GO TO 20		1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE							
15			1 2		1 2	1 2		1 2	1 2	1 2 ↓ GO TO 13		1 2	1 2		1 2 8 ↓ GO TO 18		1 2 8 ↓ GO TO 20		1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE							
16			1 2		1 2	1 2		1 2	1 2	1 2 ↓ GO TO 13		1 2	1 2		1 2 8 ↓ GO TO 18		1 2 8 ↓ GO TO 20		1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE							
17			1 2		1 2	1 2		1 2	1 2	1 2 ↓ GO TO 13		1 2	1 2		1 2 8 ↓ GO TO 18		1 2 8 ↓ GO TO 20		1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE							
18			1 2		1 2	1 2		1 2	1 2	1 2 ↓ GO TO 13		1 2	1 2		1 2 8 ↓ GO TO 18		1 2 8 ↓ GO TO 20		1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE	1 2 ↓ NEXT LINE							
2A) Just to make sure that I have a complete listing: are there any other persons such as small children or infants that we have not listed?					YES →	ADD TO TABLE											DEFINITIONS												
2B) Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually live here?					YES →	ADD TO TABLE											**Work includes jobs in the formal and/or informal sector, full time, part time, or seasonal work that is done within and/or outside the home. It includes, but is not limited to agricultural daily wage labor, off-farm daily wage labor, income generation activities, sale of goods produced or processed outside the home or at the home, homestead garden or farm (e.g., vegetables, eggs, fish, livestock, artisanal goods), or petty trading. It can also include participating in cash for work, food for work, or conditional cash transfers and/or productive safety net programs. For this indicator, work does not include caring for own children, cooking, cleaning or doing other routine chores for own household (e.g., fetching water, collecting firewood) or being involved in agricultural production solely for household consumption.												
2C) Does anyone else live here even if they are not at home now? INCLUDE CHILDREN IN SCHOOL OR HOUSEHOLD MEMBERS AT WORK OR MIGRATED.					YES →	ADD TO TABLE											***Farmers, including herders and fishers, are: 1) men and women who have access to a plot of land (even if very small) over which they make decisions about what will be grown, how it will be grown, and how to dispose of the harvest; AND/OR 2) men and women who have animals and/or aquaculture products over which they have decision-making power. Farmers produce food, feed, and fiber, where "food" includes agronomic crops/crops grown in large scale, such as grains, horticulture crops (vegetables, fruit, nuts, berries, and herbs), animal and aquaculture products, as well as natural products (e.g., non-timber forest products, wild fisheries). These farmers may engage in processing and marketing of food, feed, and fiber and may reside in settled communities, mobile pastoralist communities, or refugees/internally displaced person camps. An adult member of the household who does farm work but does not have decision-making responsibility over the plot OR animals would not be considered a "farmer." For instance, a woman working on her husband's land who does not control a plot of her own would not be interviewed.												
CODES FOR B03: RELATIONSHIP TO HEAD OF HOUSEHOLD															CODES FOR Qs. B21 AND B23: EDUCATION														
01 = HEAD OF HOUSEHOLD 02 = WIFE OR HUSBAND 03 = SON OR DAUGHTER 04 = SON-IN-LAW OR DAUGHTER-IN-LAW 05 = GRANDCHILD 06 = PARENT					07 = PARENT-IN-LAW 08 = BROTHER OR SISTER 09 = OTHER RELATIVE 10 = ADOPTED/FOSTER/STEPCHILD 11 = NOT RELATED 98 = DONT KNOW															LEVEL 0 = PRESCHOOL 1 = PRIMARY 2 = SECONDARY 3 = TECHNICAL/VOACATIONAL 4 = HIGHER 8 = DONT KNOW									
															GRADE 00 = LESS THAN 1 YEAR COMPLETED (USE '00' FOR B21 ONLY. THIS CODE IS NOT ALLOWED FOR B23.) 98 = DONT KNOW														
															B24: END TIME														
															HOUR 1 2 MINUTE 1 2 → GO TO MODULE C														

**Module C. Food Access
(Person responsible for food preparation)**

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	
C00	INSERT TIME MODULE STARTED	HOUR <input type="text"/> <input type="text"/>	MINUTE <input type="text"/> <input type="text"/>
C01	CLUSTER CODE AND HOUSEHOLD NUMBER	CLUSTER <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	HH <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
C02A	PERSON IN CHARGE OF FOOD PREPARATION FROM THE HOUSEHOLD ROSTER (B06) = 1)	LINE NUMBER (B01) <input type="text"/> <input type="text"/>	
C02B	OBTAIN CONSENT. DOES [NAME] AGREE TO PARTICIPATE IN THE SURVEY?	YES	1
		NO	2
		NOT AVAILABLE	3
			<input type="checkbox"/> → C24
HDDS QUESTIONS			
	<p>Now I would like to ask you about the types of foods that you or anyone else in your household ate yesterday during the day and at night.</p> <p>READ THE LIST OF FOODS. RECORD "YES" IF ANYONE IN THE HOUSEHOLD ATE THE FOOD IN QUESTION.</p> <p>RECORD "NO" IF NO ONE IN THE HOUSEHOLD ATE THE FOOD.</p> <p>THE FOODS LISTED SHOULD BE THOSE PREPARED IN THE HOUSEHOLD AND EATEN IN THE HOUSEHOLD OR TAKEN ELSEWHERE TO EAT. DO NOT INCLUDE FOODS CONSUMED OUTSIDE THE HOME THAT WERE PREPARED ELSEWHERE</p>		
C03	Was yesterday an unusual or special day (Festival, Funeral, fasting etc.) or were most household members absent?	YES	1
		NO	2
			→ C16
C04	Maize, bread, rice, millet, barley, bulgar wheat, porridge, buckwheat, noodles, teff, nifro, or other foods made from cereals/grains?	YES	1
		NO	2
C05	Cassava, potatoes, sweet potatoes, yams, taro, false banana/enset,-or any other foods made from roots?	YES	1
		NO	2
C06	Any vegetables (leaves)? Such as spinach, lettuce, beetroot, kale, moringa, carrots, pumpkin leaves, okra, pumpkin, squash, gourds (including bitter & bottle), mushrooms, raddish, tomato, cucumber, cabbage, cauliflower, green leafy vegetables, skus, broad beans, brinjals, green peas	YES	1
		NO	2
C07	Any fruits? Including apples, oranges, banana, guava, papaya, mangoes, pineapple, berries, watermelon, avocado, cactus	YES	1
		NO	2
C08	Any meat?-Lamb, camel, goat, rabbit, chicken, kok, jigra (guinea fowl), or other birds, beef, liver, kidney, heart, or other organ meats or blood?	YES	1
		NO	2
C09	Any eggs? (chicken, ostrich, guinea fowl/jigra)	YES	1
		NO	2
C10	Any fresh or dried fish?	YES	1
		NO	2
C11	Any foods made from beans, peas, lentils, cowpeas, pigeon peas, groundnuts, peanuts, soyabeans, chickpeas, haricot beans?	YES	1
		NO	2
C12	Any cheese, yogurt, milk, sour milk, skimmed milk, or other dairy products?	YES	1
		NO	2
C13	Any foods made with oil, animal fat or butter?	YES	1
		NO	2
C14	Any sugar or honey, granulated sugar, sugar cane, sweet reed/tinksh/ageda?	YES	1
		NO	2
C15	Any other foods, such as condiments, salt, pepper, chili, giner, garlic, cardimon, cumin, cinnamon, spices, coffee, or tea?	YES	1
		NO	2

**Module C. Food Access
(Person responsible for food preparation)**

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	
FOOD INSECURITY EXPERIENCE SCALE (FIES)			
	Now, I would like to ask you some questions about your food consumption in the past 30 days or 12 months.		
C16	During the past 30 days, was there a time when you or others in your household were worried you would not have enough food to eat because of a lack of money or other resources?	YES 1 NO 2	→ C17
C16A	During the past 12 months, was there a time when you or others in your household were worried you would not have enough food to eat because of a lack of money or other resources?	YES 1 NO 2	
C17	During the past 30 days, was there a time when you or others in your household were unable to eat healthy and nutritious food because of a lack of money or other resources?	YES 1 NO 2	→ C18
C17A	During the past 12 months, was there a time when you or others in your household were unable to eat healthy and nutritious food because of a lack of money or other resources?	YES 1 NO 2	
C18	During the past 30 days, was there a time when you or others in your household ate only a few kinds of foods because of a lack of money or other resources?	YES 1 NO 2	→ C19
C18A	During the past 12 months, was there a time when you or others in your household ate only a few kinds of foods because of a lack of money or other resources?	YES 1 NO 2	
C19	During the past 30 days, was there a time when you or others in your household had to skip a meal because there was not enough money or other resources to get food?	YES 1 NO 2	→ C20
C19A	During the past 12 months, was there a time when you or others in your household had to skip a meal because there was not enough money or other resources to get food?	YES 1 NO 2	
C20	During the past 30 days, was there a time when you or others in your household ate less than you thought you should because of a lack of money or other resources?	YES 1 NO 2	→ C21
C20A	During the past 12 months, was there a time when you or others in your household ate less than you thought you should because of a lack of money or other resources?	YES 1 NO 2	
C21	During the past 30 days, was there a time when your household did not have food because of a lack of money or other resources?	YES 1 NO 2	→ C22
C21A	During the past 12 months, was there a time when your household did not have food because of a lack of money or other resources?	YES 1 NO 2	
C22	During the past 30 days, was there a time when you or others in your household were hungry but did not eat because there was not enough money or other resources for food?	YES 1 NO 2	→ C23
C22A	During the past 12 months, was there a time when you or others in your household were hungry but did not eat because there was not enough money or other resources for food?	YES 1 NO 2	
C23	During the past 30 days, was there a time when you or others in your household went without eating for a whole day because of a lack of money or other resources?	YES 1 NO 2	→ C24
C23A	During the past 12 months, was there a time when you or others in your household went without eating for a whole day because of a lack of money or other resources?	YES 1 NO 2	
C24	INSERT TIME MODULE ENDED	HOUR <input type="text"/> <input type="text"/> MINUTE <input type="text"/> <input type="text"/>	→ GO TO MODULE F

Module F. Water, Sanitation and Hygiene (Head of HH or Responsible Adult)			
NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
F00	INSERT TIME MODULE STARTED	HOUR <input type="text"/> <input type="text"/> MINUTE <input type="text"/> <input type="text"/>	
F01	CLUSTER CODE AND HOUSEHOLD NUMBER	CLUSTER <input type="text"/> <input type="text"/> <input type="text"/> HH <input type="text"/> <input type="text"/> <input type="text"/>	
F02A	HEAD OF THE HOUSEHOLD OR RESPONSIBLE ADULT (B10 = 1) FROM HOUSEHOLD ROSTER	LINE NUMBER (B01) <input type="text"/> <input type="text"/>	
F02B	OBTAIN CONSENT. DOES [NAME] AGREE TO PARTICIPATE IN THE SURVEY?	YES 1 NO 2 NOT AVAILABLE 3	<input type="checkbox"/> → F17
DRINKING WATER			
F04	What is currently the main source of drinking water for members of your household? COPY FROM DHS NUMBERING FROM DHS	PIPED WATER PIPED INTO DWELLING 11 PIPED TO YARD/PLOT 12 PIPED TO NEIGHBOR 13 PUBLIC TAP/STANDPIPE 14 TUBEWELL OR BOREHOLE 21 DUG WELL PROTECTED WELL 31 UNPROTECTED WELL 32 WATER FROM SPRING PROTECTED SPRING 41 UNPROTECTED SPRING 42 RAINWATER 51 TANKER TRUCK 61 CART WITH SMALL TANK 62 SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/IRRIGATION CHANNEL) 81 BOTTLED WATER 91 OTHER 96 _____ (SPECIFY)	<input type="checkbox"/> → F07 <input type="checkbox"/> → F07
F05	Where is that water source located?	IN OWN DWELLING 1 IN OWN YARD/PLOT 2 ELSEWHERE 3	<input type="checkbox"/> → F07
F06	How long does it take to go there, get water, and come back?	MINUTES <input type="text"/> <input type="text"/> <input type="text"/> DON'T KNOW 998	
F07	Is water available from this source all year round?	YES 1 NO 2 DON'T KNOW 8	
F08	In the last two weeks, was water unavailable from this source for a day or longer?	YES 1 NO 2 DON'T KNOW 8	
F09	Do you do anything to the water to make it safer to drink?	YES 1 NO 2 DON'T KNOW 8	<input type="checkbox"/> → F11
F10	What do you usually do to make the water safer to drink? Anything else? REFER TO THE MANUAL FOR INSTRUCTIONS ON OBSERVATIONS NEEDED TO VERIFY EACH METHOD. RECORD ALL RESPONSES AFTER VERIFICATION.	CHLORINATION (chemical disinfection) A FLOCCULENT/DISINFECTANT (physio-chemical disinfection) B FILTRATION (physical removal) C SOLAR DISINFECTION (UV/heat disinfection) D BOILING (disinfection via heat) E OTHER X _____ (SPECIFY) DON'T KNOW Z	

Module F. Water, Sanitation and Hygiene (Head of HH or Responsible Adult)			
NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
SANITATION			
F11	What kind of toilet facility do members of your household usually use ? IF RESPONDENT CANNOT GIVE CLEAR RESPONSE, THEN OBSERVE THE TOILET AND RECORD THE CORRECT RESPONSE.	FLUSH OR POUR FLUSH TOILET FLUSH TO PIPED SEWER SYTEM 11 FLUSH TO SEPTIC TANK 12 FLUSH TO PIT LATRINE 13 FLUSH TO SOMEWHERE ELSE 14 FLUSH, DON'T KNOW WHERE 15 PIT LATRINE VENTILATED IMPROVED PIT LATRIN. 21 PIT LATRINE WITH SLAB 22 PIT LATRINE WITHOUT SLAB/OPEN PI 23 COMPOSTING TOILET 31 BUCKET TOILET 41 HANGING TOILET/HANGING LATRINE 42 NO FACILITY/BUSH/FIELD 51 OTHER 96 _____ (SPECIFY)	→ F14
F12	Does your household share the toilet facility with other households?	YES 1 NO 2	→ F14
F13	How many households share that toilet facility?	NUMBER OF HOUSEHOLDS IF LESS THAN 10 <input type="text" value="0"/> <input type="text"/> 10 OR MORE HOUSEHOLDS 95 DON'T KNOW 98	
HANDWASHING			
F14	Please show me where members of your household most often wash their hands.	OBSERVED 1 NOT OBSERVED, NOT IN DWELLING/YARD/PLOT 2 NOT OBSERVED, NO PERMISSION TO SEE 3 NOT OBSERVED, OTHER REASON 4 (SKIP TO F17) ←	
F15	<u>OBSERVATION ONLY:</u> OBSERVE PRESENCE OF WATER AT THE PLACE FOR HANDWASHING.	WATER IS AVAILABLE 1 WATER IS NOT AVAILABLE 2	
F16	<u>OBSERVATION ONLY:</u> OBSERVE PRESENCE OF SOAP, DETERGENT, OR OTHER CLEANSING AGENT AT THE PLACE FOR HANDWASHING.	SOAP OR DETERGENT (BAR, LIQUID, POWDER, PASTE) 1 ASH, MUD, SAND 2 NONE 3	
F17	INSERT TIME MODULE FINISHED	HOUR <input type="text"/> <input type="text"/> MINUTE <input type="text"/> <input type="text"/> →	GO TO MODULE G

NO.	QUESTIONS AND FILTERS	FIRST FARMER	SECOND FARMER	THIRD FARMER
		NAME _____	NAME _____	NAME _____
G08	Did you save any cash in the [PAST 12 MONTHS]? PROBES: village savings and credit group, MFI, cooperatives, bank, mobile banking, etc.	YES 1 NO 2	YES 1 NO 2	YES 1 NO 2
G09	Some people insure their agricultural production against negative unexpected circumstances, such as drought, floods, and pests by paying for this service. Did you buy agricultural insurance in the [PAST 12 MONTHS] ?	YES 1 NO 2	YES 1 NO 2	YES 1 NO 2
VALUE CHAIN ACTIVITIES				
	Now I want to ask you about farming and livestock practices about which you make decisions. This includes practices about crops, animals and aquaculture products.			
G10A	Do you plant any crops or raise/buy livestock with the specific intention to sell or resell to earn income?	YES 1 NO 2 (SKIP TO G11) ←	YES 1 NO 2 (SKIP TO G11) ←	YES 1 NO 2 (SKIP TO G11) ←
G10B	Which of the following activities related to farming and animal husbandry have you practiced or received services for during [PAST 12 MONTHS]? READ EACH ACTIVITY. RECORD RESPONSES IN THE CELL BELOW THE RESPONSE LIST FOR EACH FARMER. DO NOT CIRCLE THE CODE IF NONE OF THESE ACTIVITIES WERE PRACTICED, THEN CIRCLE Y.	Purchase inputs through agro-dealers, cooperatives, community associations or government A Use of mobile financial services..... B Use of financial services other than mobile..... C Use of training and extension services..... D Contract farming..... E Use of feed lots or pen feeding..... F Drying, processing and packaging for selling/storage..... G Trading or marketing produce through agrodealers/vets, community associations/cooperatives... H Use of formal marketing systems for livestock and/or vegetables and/or fruits and/or spices, honey organic coffee, etc..... I DID NOT PRACTICE ANY OF THESE ACTIVITIES IN PAST 12 MONTHS..... Y		
	CIRCLE ALL ACTIVITIES STATED.	A B C D E F G H I Y	A B C D E F G H I Y	A B C D E F G H I Y
AGRICULTURAL PRACTICES FOR CROPS				
G11	REFER TO G04 TO DETERMINE WHETHER THE RESPONDENT HAS ACCESS TO A PLOT OF LAND OVER WHICH HE/SHE MAKES DECISIONS	IF YES, THEN CONTINUE IF NO, SKIP TO G14	IF YES, THEN CONTINUE IF NO, SKIP TO G14	IF YES, THEN CONTINUE IF NO, SKIP TO G14
G12	In the past 12 months, did you plant any crops in the plot(s) over which you make decisions?	YES 1 NO 2 (SKIP TO G14) ← DON'T KNOW 8	YES 1 NO 2 (SKIP TO G14) ← DON'T KNOW 8	YES 1 NO 2 (SKIP TO G14) ← DON'T KNOW 8
G13A	What crops did you plant during the [PAST 12 MONTHS] in the plot(s) over which you make decisions? REGISTER ALL CROPS NAMED BY THE RESPONDENT.	TEFF A MAIZE..... B WHEAT..... C MILLET..... D BARLEY..... E SORGHUM..... F SOYBEAN..... H LEGUMES (BEAN/LENTIL) I OILSEED (SUNFLOWER, MUSTARD, SESAME)..... J FRUITS..... K POTATO..... L CHAT M COFFEE N GROUNDNUTS O SPICES P VEGETABLES..... Q OTHER 1 _____ W (SPECIFY) OTHER 2 _____ X (SPECIFY)	TEFF A MAIZE..... B WHEAT..... C MILLET..... D BARLEY..... E SORGHUM..... F SOYBEAN..... H LEGUMES (BEAN/LENTIL) I OILSEED (SUNFLOWER, MUSTARD, SESAME)..... J FRUITS..... K POTATO..... L CHAT M COFFEE N GROUNDNUTS O SPICES P VEGETABLES..... Q OTHER 1 _____ W OTHER 2 _____ X	TEFF A MAIZE..... B WHEAT..... C MILLET..... D BARLEY..... E SORGHUM..... F SOYBEAN..... H LEGUMES (BEAN/LENTIL) I OILSEED (SUNFLOWER, MUSTARD, SESAME)..... J FRUITS..... K POTATO..... L CHAT M COFFEE N GROUNDNUTS O SPICES P VEGETABLES..... Q OTHER 1 _____ W OTHER 2 _____ X

NO.	QUESTIONS AND FILTERS	FIRST FARMER	SECOND FARMER	THIRD FARMER
		NAME _____	NAME _____	NAME _____
G13B	<p>For the crops (including vegetables) that you planted, did you use any of these practices in the [PAST 12 MONTHS]?</p> <p>READ EACH PRACTICE. RECORD RESPONSES IN THE CELL BELOW THE RESPONSE LIST FOR EACH FARMER. DO NOT CIRCLE THE CODE IN THE RESPONSE LIST.</p> <p>IF NONE OF THESE PRACTICES WERE USED, THEN CIRCLE Y.</p>	Micro dosing..... A Manure B Compost..... C Planting basins..... D Mulching..... E Weed control..... F Dry planting..... G Ripping into residues..... H Clean ripping..... I Tied ridges..... J Pot-holing..... K Crop rotations..... L Intercropping/Agroforestry..... M Integrated Pest Management (IPM)..... N Early planting or planting with first rains..... O Use of improved crop varieties..... P Contour planting..... Q Terracing..... R Land leveling..... S Micro-irrigation technology (MIT)..... U Crop thinning V Row planting W Sequential or double cropping X Commercial fertilizer Z DID NOT USE ANY OF THESE PRACTICES IN PAST 12 MONTHS Y		
		CIRCLE ALL PRACTICES STATED.	A B C D E F G H I J K L M N O P Q R S T U V W X Z Y	A B C D E F G H I J K L M N O P Q R S T U V W X Z Y
AGRICULTURAL PRACTICES FOR LIVESTOCK				
G14	CHECK G05: DETERMINE WHETHER THE RESPONDENT HAS ANY ANIMALS OR AQUACULTURAL PRODUCTS OVER WHICH HE/SHE MAKES DECISIONS	IF YES, THEN CONTINUE IF NO, SKIP TO G18	IF YES, THEN CONTINUE IF NO, SKIP TO G18	IF YES, THEN CONTINUE IF NO, SKIP TO G18
G16	<p>Did you use any of the following practices when you cared for the livestock during the [PAST 12 MONTHS]?</p> <p>READ EACH PRACTICE. RECORD RESPONSES IN THE CELL BELOW THE RESPONSE LIST FOR EACH FARMER. DO NOT CIRCLE THE CODE IN THE RESPONSE LIST.</p> <p>IF NONE OF THESE PRACTICES WERE USED, THEN CIRCLE Y.</p>	Improved animal shelters A Vaccinations B Deworming C Castration D Dehorning E Homemade animal feeds made of locally available products F Animal feed supplied by stockfeed manufacturer G Artificial insemination H Pen feeding or improved feeding practice I Fodder production and/or veld reinforcement with legumes J Used the services of community animal health workers/paravets K Emergency feed reserve L Cut and carry system M Controlled grazing N Improved beekeeping O DID NOT PRACTICE ANY OF THESE ACTIVITIES IN PAST 12 MONTHS ... Y		
		CIRCLE ALL PRACTICES STATED.	A B C D E F G H I J K I M N O Y	A B C D E F G H I J K I M N O Y

NO.	QUESTIONS AND FILTERS	FIRST FARMER	SECOND FARMER	THIRD FARMER
		NAME _____	NAME _____	NAME _____
G18	<p>Did you use any of the following natural resources management practices or techniques that were not related directly to your on-farm production during the [PAST 12 MONTHS]?</p> <p>READ EACH PRACTICE. RECORD RESPONSES IN THE CELL BELOW THE RESPONSE LIST FOR EACH IF NONE OF THESE PRACTICES WERE USED, THEN CIRCLE Y.</p>	Management or protection of watersheds or water catchments A Agro-forestry B Management of forest plantation C Regeneration of natural landscapes D Sustainable harvesting of forest products E Rotational grazing or trans-humane system of livestock keeping F Hedge-row planting G Water resource management (irrigation, water harvesting, etc.) H		
		DID NOT PRACTICE ANY OF THESE ACTIVITIES FOR THE PAST 12 MONTHS Y		
	CIRCLE ALL PRACTICES STATED.	A B C D E F G H Y	A B C D E F G H Y	A B C D E F G H Y
IMPROVED STORAGE PRACTICES				
G19	CHECK G04 : DETERMINE WHETHER THE RESPONDENT HAS ACCESS TO A PLOT OF LAND OVER WHICH HE/SHE MAKES DECISIONS.	IF YES, THEN CONTINUE IF NO, SKIP TO G22	IF YES, THEN CONTINUE IF NO, SKIP TO G22	IF YES, THEN CONTINUE IF NO, SKIP TO G22
G20	During [THE LAST 12 MONTHS], did you store any crops from the plot(s) over which you make decisions?	YES 1 NO 2 (SKIP TO G22) ← 8 DON'T KNOW 8	YES 1 NO 2 (SKIP TO G22) ← 8 DON'T KNOW 8	YES 1 NO 2 (SKIP TO G22) ← 8 DON'T KNOW 8
G21	<p>Did you use any of the following improved methods to store the crops?</p> <p>MULTIPLE RESPONSES POSSIBLE. READ EACH METHOD AND CIRCLE ALL THAT APPLY.</p> <p>IF NONE OF THESE METHODS WERE USED, THEN CIRCLE Y.</p>	Hermetic storage... A Improved granary ... B Warehousing or cereal banks C Use of traps for mice..... D Grain bags with bio-pesticides E Diffused light storage (potatoes, onions, etc.) G Did not use any of these methods ... Y	Hermetic storage..... A Improved granary B Warehousing or cereal banks C Use of traps for mice.... D Grain bags with bio-pesticides E Diffused light storage (potatoes, onions, etc.) G Did not use any of these methods Y	Hermetic stc A Improved grani: B Warehousing or cereal bar C Use of traps for mice... D Grain bags with bio-pestic E Diffused light storage (potatoes, onions, etc.) G Did not use any of these metho Y
G22	THERE ARE NO MORE QUESTIONS FOR THIS FARMER.	GO TO G02A FOR ANOTHER FARMER. IF THERE ARE NO MORE FARMERS, GO TO G23.	GO TO G02A FOR ANOTHER FARMER. IF THERE ARE NO MORE FARMERS, GO TO G23.	GO TO G02A FOR ANOTHER FARMER. IF THERE ARE NO MORE FARMERS, GO TO G23.
G23	INSERT TIME MODULE ENDED	HOUR <input type="text"/> <input type="text"/>	MINUTE <input type="text"/> <input type="text"/> →	GO TO MODULE D1

Module D1. Children's Nutritional Status and Feeding Practices (Primary Caregivers)

D00	INSERT TIME MODULE STARTED	HOUR	<input type="text"/>	MINUTE	<input type="text"/>
D01	CLUSTER CODE AND HOUSEHOLD NUMBER	CLUSTER	<input type="text"/>	HH	<input type="text"/>
NO.	QUESTIONS AND FILTERS	FIRST ELIGIBLE CHILD FROM ROSTER	SECOND ELIGIBLE CHILD FROM ROSTER	THIRD ELIGIBLE CHILD FROM ROSTER	
		NAME	NAME	NAME	
D02	CHILD UNDER 5 YEARS OLD (B07= 1) FROM THE HOUSEHOLD ROSTER	LINE NO. CHILD (B01)	<input type="text"/>	LINE NO. CHILD (B01)	<input type="text"/>
D03A	CAREGIVER'S LINE NUMBER FROM THE HOUSEHOLD ROSTER (B08)	LINE NO. CAREGIVER	<input type="text"/>	LINE NO. CAREGIVER	<input type="text"/>
D03B	OBTAIN CONSENT. DOES [NAME] AGREE TO PARTICIPATE IN THE SURVEY?	YES 1 NO 2 (SKIP TO D65) ← NOT AVAILABLE . . . 3	YES 1 NO 2 (SKIP TO D65) ← NOT AVAILABLE . . . 3	YES 1 NO 2 (SKIP TO D65) ← NOT AVAILABLE . . . 3	
D04	What is [CHILD NAME]'s sex?	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	
D05	I would like to ask you some questions about [CHILD'S NAME]. Does [CHILD'S NAME] have a health/vaccination card or other document with the birth date recorded? IF A DOCUMENT WITH THE BIRTHDATE IS SHOWN RECORD THE DAY, MONTH AND YEAR AS DOCUMENTED. RECORD AGE IN YEARS IN D06 IF A DOCUMENT WITH THE BIRTHDATE IS NOT SHOWN THEN ASK: In what month and year was [CHILD'S NAME] born? What is [HIS/HER] birthday? RECORD BIRTH DAY, MONTH AND YEAR IF THE CAREGIVER DOES NOT KNOW THE EXACT DAY OF BIRTH, ENTER "98", INDICATING "DON'T KNOW" FOR DAY. YOU DO NOT NEED TO PROBE FURTHER FOR DAY OF BIRTH. NOTE THAT YOU ARE NOT ALLOWED TO ENTER "DON'T KNOW" FOR MONTH OR YEAR OF BIRTH.	DAY <input type="text"/> MONTH <input type="text"/> YEAR <input type="text"/>	DAY <input type="text"/> MONTH <input type="text"/> YEAR <input type="text"/>	DAY <input type="text"/> MONTH <input type="text"/> YEAR <input type="text"/>	
D06	How old was [CHILD'S NAME] at [HIS/HER] last birthday? RECORD AGE IN COMPLETED YEARS	YEARS	<input type="text"/>	YEARS	<input type="text"/>
D07	How many months old is [CHILD'S NAME]? RECORD AGE IN COMPLETED MONTHS	MONTHS	<input type="text"/>	MONTHS	<input type="text"/>
D08	CHECK D05, D06, AND D07 TO VERIFY CONSISTENCY. A) IS THE YEAR RECORDED IN D05 CONSISTENT WITH THE AGE IN YEARS RECORDED IN D06? B) ARE YEAR AND MONTH OF BIRTH RECORDED IN D05 CONSISTENT WITH AGE IN MONTHS RECORDED IN D07? USE BIRTHDATE CONVERSION TABLE TO CHECK. IF THE ANSWER TO A OR B IS "NO" RESOLVE ANY INCONSISTENCIES.				

NO.	QUESTIONS AND FILTERS	FIRST ELIGIBLE CHILD FROM ROSTER	SECOND ELIGIBLE CHILD FROM ROSTER	THIRD ELIGIBLE CHILD FROM ROSTER
		NAME	NAME	NAME
EXCLUSIVE BREAST FEEDING AND MINIMUM ACCEPTABLE DIET				
D14	CHECK D07: IS THE CHILD UNDER 60 MONTHS (5 YEARS)?	YES 1 NO 2 (GO TO D02 FOR NEXT CHILD OR TO D66 IF NO MORE CHILDREN) DON'T KNOW 8	YES 1 NO 2 (GO TO D02 FOR NEXT CHILD OR TO D66 IF NO MORE CHILDREN) DON'T KNOW 8	YES 1 NO 2 (GO TO D02 ON NEW PAGE FOR NEXT CHILD OR TO D66 IF NO MORE CHILDREN) DON'T KNOW 8
D15	CHECK D07: IS THE CHILD UNDER 24 MONTHS (2 YEARS)?	YES 1 NO 2 (SKIP TO D54) DON'T KNOW 8	YES 1 NO 2 (SKIP TO D54) DON'T KNOW 8	YES 1 NO 2 (SKIP TO D54) DON'T KNOW 8
D16	Has [CHILD'S NAME] ever been breastfed?	YES 1 NO 2 (SKIP TO D18) DON'T KNOW 8	YES 1 NO 2 (SKIP TO D18) DON'T KNOW 8	YES 1 NO 2 (SKIP TO D18) DON'T KNOW 8
D17	Was [CHILD'S NAME] breastfed yesterday during the day or at night?	YES 1 (SKIP TO D19) NO 2 DON'T KNOW 8	YES 1 (SKIP TO D19) NO 2 DON'T KNOW 8	YES 1 (SKIP TO D19) NO 2 DON'T KNOW 8
D18	Sometimes babies are breastfed by another woman or given breast milk from another woman by spoon, cup, bottle, or some other way. This can happen if a mother cannot breastfeed her own baby for various reasons, such as the mother is sick or away, mastitis, etc. Did [CHILD'S NAME] consume breast milk in any of these ways yesterday during the day or at night?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D19	Now I would like to ask you about some medicines and vitamins that are sometimes given to infants. Was [CHILD'S NAME] given any vitamin drops or other medicines as drops yesterday during the day or at night?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D20	Was [CHILD'S NAME] given oral rehydration solution yesterday during the day or at night?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
	Next I would like to ask you about some liquids that [CHILD'S NAME] may have had yesterday during the day or at night. Did [CHILD'S NAME] have:			
D21	Plain water?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D22	Any kind of Infant formula like Plan, S-26, Nann, Bay Lac, Liptomin?	YES 1 NO 2 (SKIP TO D24) DON'T KNOW 8	YES 1 NO 2 (SKIP TO D24) DON'T KNOW 8	YES 1 NO 2 (SKIP TO D24) DON'T KNOW 8
D23	How many times yesterday during the day or at night did [CHILD'S NAME] consume any formula?	TIMES <input type="text"/> <input type="text"/>	TIMES <input type="text"/> <input type="text"/>	TIMES <input type="text"/> <input type="text"/>
D24	Did [CHILD'S NAME] have any milk such as cow/goat,tinned, or powdered milk?	YES 1 NO 2 (SKIP TO D26) DON'T KNOW 8	YES 1 NO 2 (SKIP TO D26) DON'T KNOW 8	YES 1 NO 2 (SKIP TO D26) DON'T KNOW 8
D25	How many times yesterday during the day or at night did [CHILD'S NAME] consume any milk?	TIMES <input type="text"/> <input type="text"/>	TIMES <input type="text"/> <input type="text"/>	TIMES <input type="text"/> <input type="text"/>
D26	Did [CHILD'S NAME] have any juice, juice drinks, or any soft drink ?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	FIRST ELIGIBLE CHILD FROM ROSTER	SECOND ELIGIBLE CHILD FROM ROSTER	THIRD ELIGIBLE CHILD FROM ROSTER
		NAME	NAME	NAME
D27	Clear broth?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D28	Yogurt?	YES 1 NO 2 (SKIP TO D30) → DON'T KNOW 8	YES 1 NO 2 (SKIP TO D30) ← DON'T KNOW 8	YES 1 NO 2 (SKIP TO D30) → DON'T KNOW 8
D29	How many times yesterday during the day or at night did [CHILD'S NAME] consume any yogurt?	TIMES <input type="text"/> <input type="text"/>	TIMES <input type="text"/> <input type="text"/>	TIMES <input type="text"/> <input type="text"/>
D30	Did [CHILD'S NAME] have any thin porridge? PROBES: gruel, Cerelac, Cerefam, Fafa, Mother Choice LIMIT TO PORRIDGE MIXED VERY THIN OR THICK DRINKS MADE FROM CEREAL. THICKER LESS LIQUID PORRIDGE IS INCLUDED UNDER ITEM D33.	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D31	Any other liquids? PROBES: fenugreek, sugar water, camomila water, tea, tea with milk?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D32	Now I would like to ask you about (other) liquids or foods that (NAME) ate yesterday during the day or at night. I am interested in whether your child had the item even if it was combined with other foods. For example, if (NAME) ate a millet porridge made with a mixed vegetable sauce, you should reply yes to any food I ask about that was an ingredient in the porridge or sauce. Please do not include any food used in a small amount for seasoning or condiments (like chillies, spices, herbs, or fish powder), I will ask you about those foods Yesterday, during the day and night, did [CHILD'S NAME] eat any (ASK QUESTIONS D33A-D48)?			
D33	Bread, biscuits, porridge, Enjera, noodles(Indomin), rice, or other foods made from grains such as Teff, corn, millet, sorghum, wheat, oats, barley?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D34	Pumpkin, carrots, squash, sweet potatoes or any other dark yellow or orange fleshed roots, tubers and vegetables?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D35	White potatoes, potato chips, white yams, cassava, bulla, kocho, manioc, or any other foods made from roots?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D36A	Any dark green leafy vegetables such as spinach, pumpkin leaves, kale, mustard leaves, moringa?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D36B	Any other vegetables, like green beans, tomatoes, cauliflower, cabbage, broccoli, eggplant, etc.?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D37A	Ripe mangoes, ripe papaya, or other fruits that are dark yellow or orange inside?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D37B	Any other fruits like bananas, apples, avocados, guava, pineapple, plum, orange, any berries, etc.?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D38A	Any liver, kidney, heart, or other organ from domesticated animals such as cow, pig, goa, chicken or duck?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D38B	Any meat from domesticated animals, such as beef, pork, lamb, goat, chicken, or duck?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	FIRST ELIGIBLE CHILD FROM ROSTER	SECOND ELIGIBLE CHILD FROM ROSTER	THIRD ELIGIBLE CHILD FROM ROSTER
		NAME	NAME	NAME
D39A	Any organs from wild animals, such as birds, wild pigeons, guinea fowl, deer, wild boar, wild goat?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D39B	Any flesh from wild animals, such as birds, wild pigeons, guinea fowl, deer, wild boar, wild goat?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D40	Eggs?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D41	Fresh or dried fish, shellfish?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D42	Any foods made from beans, peas, lentils, peanuts or other legumes?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D43	Any foods made from nuts and seeds such as pumpkin seeds?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D44	Cheese, yogurt, skim milk (arera), whey (aguat), cottage-cheese, or other milk products?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D45	Any oils, fats, butter, ghee, or foods made with any of these?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D46	Any sugary foods such as chocolates, sweets (halawa, mushebek), candies, doughnuts, cakes, honey?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
D47	Condiments for flavor, such as chilies, spices, herbs, or fennel grain, coriander, cumin, ginger, turmeric, garlic, cardamon?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
	CHECK QUESTIONS D33-D47:	IF "NO" TO ALL → D50 IF AT LEAST ONE "YES" OR "DK" TO ALL → D51	IF "NO" TO ALL → D50 IF AT LEAST ONE "YES" OR "DK" TO ALL → D51	IF "NO" TO ALL → D50 IF AT LEAST ONE "YES" OR "DK" TO ALL → D51
D50	Did [CHILD'S NAME] eat any solid, semi-solid, or soft foods yesterday during the day or at night? IF "YES" PROBE: What kind of solid, semi-solid, or soft foods did [CHILD'S NAME] eat?	YES 1 GO BACK TO D33-D47 AND RECORD FOODS EATEN. THEN CONTINUE WITH D51. NO 2 GO TO D52 ← DON'T KNOW 8	YES 1 GO BACK TO D33-D47 AND RECORD FOODS EATEN. THEN CONTINUE WITH D51. NO 2 GO TO D52 ← DON'T KNOW 8	YES 1 GO BACK TO D33-D47 AND RECORD FOODS EATEN. THEN CONTINUE WITH D51. NO 2 GO TO D52 ← DON'T KNOW 8
D51	How many times did [CHILD'S NAME] eat solid, semi-solid, or soft foods other than liquids yesterday during the day or at night?	TIMES <input type="text"/> DON'T KNOW 98	TIMES <input type="text"/> DON'T KNOW 98	TIMES <input type="text"/> DON'T KNOW 98
		GO TO D54 FIRST COLUMN	GO TO D54 SECOND COLUMN	GO TO D54 THIRD COLUMN

Module D2. Children's Diarrhea and Oral Rehydration Therapy (Primary Caregivers)

NO.	QUESTIONS AND FILTERS	FIRST ELIGIBLE CHILD FROM ROSTER NAME _____	SECOND ELIGIBLE CHILD FROM ROSTER NAME _____	THIRD ELIGIBLE CHILD FROM ROSTER NAME _____																																													
D54	<p>Has [CHILD'S NAME] had diarrhea in the last 2 weeks? (1)</p> <p>DIARRHEA IS DEFINED AS 3 OR MORE WATERY STOOLS IN A DAY.</p>	YES 1 NO 2 (GO TO D02 FOR NEXT CHILD OR TO D66 IF NO MORE CHILDREN) DON'T KNOW 8	YES 1 NO 2 (GO TO D02 FOR NEXT CHILD OR TO D66 IF NO MORE CHILDREN) DON'T KNOW 8	YES 1 NO 2 (GO TO D02 ON NEW PAGE FOR NEXT CHILD OR TO D66 IF NO MORE CHILDREN) DON'T KNOW 8																																													
D62	<p>Was he/she given any of the following to drink at any time since he/she started having the diarrhea:</p> <p>a) A fluid made from a special packet called Lemlem/ORS?</p> <p>b) A government-recommended homemade fluid?</p> <p>c) Zinc tablets or syrup</p>	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">YES</td> <td style="text-align: center;">NO</td> <td style="text-align: center;">DK</td> </tr> <tr> <td>FLUID FROM ORS PKT.....</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>HOMEMADE FLUID.....</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>ZINTABLETS OR SYRUP</td> <td>1</td> <td>2</td> <td>8</td> </tr> </table>	YES	NO	DK	FLUID FROM ORS PKT.....	1	2	8	HOMEMADE FLUID.....	1	2	8	ZINTABLETS OR SYRUP	1	2	8	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">YES</td> <td style="text-align: center;">NO</td> <td style="text-align: center;">DK</td> </tr> <tr> <td>FLUID FROM ORS PKT.....</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>HOMEMADE FLUID.....</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>ZINTABLETS OR SYRUP</td> <td>1</td> <td>2</td> <td>8</td> </tr> </table>	YES	NO	DK	FLUID FROM ORS PKT.....	1	2	8	HOMEMADE FLUID.....	1	2	8	ZINTABLETS OR SYRUP	1	2	8	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">YES</td> <td style="text-align: center;">NO</td> <td style="text-align: center;">DK</td> </tr> <tr> <td>FLUID FROM ORS PKT.....</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>HOMEMADE FLUID.....</td> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>ZINTABLETS OR SYRUP</td> <td>1</td> <td>2</td> <td>8</td> </tr> </table>	YES	NO	DK	FLUID FROM ORS PKT.....	1	2	8	HOMEMADE FLUID.....	1	2	8	ZINTABLETS OR SYRUP	1	2	8
YES	NO	DK																																															
FLUID FROM ORS PKT.....	1	2	8																																														
HOMEMADE FLUID.....	1	2	8																																														
ZINTABLETS OR SYRUP	1	2	8																																														
YES	NO	DK																																															
FLUID FROM ORS PKT.....	1	2	8																																														
HOMEMADE FLUID.....	1	2	8																																														
ZINTABLETS OR SYRUP	1	2	8																																														
YES	NO	DK																																															
FLUID FROM ORS PKT.....	1	2	8																																														
HOMEMADE FLUID.....	1	2	8																																														
ZINTABLETS OR SYRUP	1	2	8																																														
D63	<p>Was anything (else) given to treat the diarrhea?</p>	YES 1 NO 2 (GO TO D02 FOR NEXT CHILD OR TO D66 IF NO MORE CHILDREN) DON'T KNOW 8	YES 1 NO 2 (GO TO D02 FOR NEXT CHILD OR TO D66 IF NO MORE CHILDREN) DON'T KNOW 8	YES 1 NO 2 (GO TO D02 ON NEW PAGE FOR NEXT CHILD OR TO D66 IF NO MORE CHILDREN) DON'T KNOW 8																																													
D64	<p>What (else) was given to treat the diarrhea?</p> <p>RECORD ALL TREATMENTS GIVEN.</p> <p>UPDATED FROM DHS</p>	<p>PILL OR SYRUP</p> ANTIBIOTIC A ANTIMOTILITY B OTHER (NOT ANTIBIOTIC, ANTIMOTILITY, OR ZINC) C UNKNOWN PILL OR SYRUP D <p>INJECTION</p> ANTIBIOTIC E NON-ANTIBIOTIC F UNKNOWN INJECTION G (IV) INTRAVENOUS (DRIPS) H HOME REMEDY/ HERBAL MEDICINE . I OTHER _____ X (SPECIFY)	<p>PILL OR SYRUP</p> ANTIBIOTIC A ANTIMOTILITY B OTHER (NOT ANTIBIOTIC, ANTIMOTILITY, OR ZINC) C UNKNOWN PILL OR SYRUP D <p>INJECTION</p> ANTIBIOTIC E NON-ANTIBIOTIC F UNKNOWN INJECTION G (IV) INTRAVENOUS (DRIPS) H HOME REMEDY/ HERBAL MEDICINE . I OTHER _____ X (SPECIFY)	<p>PILL OR SYRUP</p> ANTIBIOTIC A ANTIMOTILITY B OTHER (NOT ANTIBIOTIC, ANTIMOTILITY, OR ZINC) C UNKNOWN PILL OR SYRUP D <p>INJECTION</p> ANTIBIOTIC E NON-ANTIBIOTIC F UNKNOWN INJECTION G (IV) INTRAVENOUS (DRIPS) H HOME REMEDY/ HERBAL MEDICINE . I OTHER _____ X (SPECIFY)																																													
D65	<p>THERE ARE NO MORE QUESTIONS FOR THIS CHILD.</p>	<p>GO TO D02 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO D66</p>	<p>GO TO D02 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO D66</p>	<p>GO TO D02 ON NEW PAGE FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO D66</p>																																													
D66	<p>INSERT TIME MODULE ENDED</p>	HOUR <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> MINUTE <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> <input style="width: 20px; height: 20px; border: 1px solid black;" type="text"/> → GO TO MODULE E																																															

(1) The term(s) used for diarrhea should encompass the expressions used for all forms of diarrhea, including bloody stools (consistent with dysentery), watery stools, etc.

Module E. Women's Nutrition, Breastfeeding and Antenatal Care (Women 15-49)

NO.	QUESTIONS AND FILTERS	WOMAN'S NAME	WOMAN'S NAME	WOMAN'S NAME
E00	INSERT TIME MODULE STARTED	HOUR <input type="text"/> <input type="text"/> MINUTE <input type="text"/> <input type="text"/>	HOUR <input type="text"/> <input type="text"/> MINUTE <input type="text"/> <input type="text"/>	HOUR <input type="text"/> <input type="text"/> MINUTE <input type="text"/> <input type="text"/>
E01	CLUSTER CODE AND HOUSEHOLD NUMBER	CLUSTER <input type="text"/> <input type="text"/> <input type="text"/> HH <input type="text"/> <input type="text"/> <input type="text"/>	CLUSTER <input type="text"/> <input type="text"/> <input type="text"/> HH <input type="text"/> <input type="text"/> <input type="text"/>	CLUSTER <input type="text"/> <input type="text"/> <input type="text"/> HH <input type="text"/> <input type="text"/> <input type="text"/>
E02A	LINE NUMBER OF WOMAN 15-49 YEARS OF AGE FROM ROSTER (B09=1)	LINE NUMBER (B01) <input type="text"/> <input type="text"/>	LINE NUMBER (B01) <input type="text"/> <input type="text"/>	LINE NUMBER (B01) <input type="text"/> <input type="text"/>
E02B	OBTAIN CONSENT. DOES [NAME] AGREE TO PARTICIPATE IN THE SURVEY?	YES 1 NO 2 SKIP TO E49A ← NOT AVAILABLE 8	YES 1 NO 2 SKIP TO E49A ← NOT AVAILABLE 8	YES 1 NO 2 SKIP TO E49A ← NOT AVAILABLE 8
E03	In what month and year were you born? IF DON'T KNOW MONTH RECORD "98" IF DON'T KNOW YEAR RECORD "9998"	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	MONTH <input type="text"/> <input type="text"/> YEAR <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
E04	Please tell me how old you are. What was your age at your last birthday? RECORD AGE IN COMPLETED YEARS AND SKIP TO E06. IF RESPONDENT CANNOT REMEMBER HOW OLD SHE IS, CIRCLE 98 AND ASK QUESTION E05.	AGE IN YEARS <input type="text"/> <input type="text"/> (SKIP TO E06) ← DON'T KNOW 98	AGE IN YEARS <input type="text"/> <input type="text"/> (SKIP TO E06) ← DON'T KNOW 98	AGE IN YEARS <input type="text"/> <input type="text"/> (SKIP TO E06) ← DON'T KNOW 98
E05	Are you between the ages of 15 and 49 years old?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E06	CHECK E03, E04 AND E05 (IF APPLICABLE): IS THE RESPONDENT BETWEEN THE AGES OF 15 AND 49 YEARS? IF ANSWER IS 'NO' AND ANOTHER WOMAN IS INCLUDED, THAN QUESTIONS E02-E05 MUST BE REPEATED FOR THE NEW WOMAN. IF THE INFORMATION IN E03, E04 AND E05 CONFLICTS, DETERMINE WHICH IS MOST ACCURATE.	IF YES, THEN CONTINUE. IF NO, THEN GO TO E49A	IF YES, THEN CONTINUE. IF NO, THEN GO TO E49A	IF YES, THEN CONTINUE. IF NO, THEN GO TO E49A
WOMAN'S DIETARY DIVERSITY				
Now I would like to ask you about liquids or foods that you ate yesterday during the day or at night. I am interested in whether you had the item even if it was combined with other foods. For example, if you ate a millet porridge made with a mixed vegetable sauce, you should reply yes to any food I ask about that was an ingredient in the porridge or sauce. Please do not include any food used in a small amount for seasoning or condiments (like chilies, spices, herbs, or fish powder), I will ask you about those foods separately. Yesterday during the day or night did you drink/eat any [ASK QUESTIONS E07 to E25]?				
E07	Bread, biscuits, porridge, Enjera, noodles (Indomin), rice, or other foods made from grains such as Teff, corn, millet, sorghum, wheat, oats, barley?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E08	Pumpkin, carrots, squash, sweet potatoes or or any other dark yellow or orange fleshed roots, tubers and vegetables?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E09	White potatoes, potato chips, white yams, cassava, bulla, kocho, manioc, or any other foods made from roots?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E10	Any dark green leafy vegetables such as spinach, pumpkin leaves, kale, mustard leaves, moringa?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E11	Any other vegetables, like green beans, tomatoes, cauliflower, cabbage, broccoli, eggplant, etc.?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E12	Ripe mangoes, ripe papaya, or other fruits that are dark yellow or orange inside?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E13	Any other fruits like bananas, apples, avocados, guava, pineapple, plum, orange, any berries, etc.?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E14	Any liver, kidney, heart, or other organ from domesticated animals such as cow, pig, goa, chicken or duck?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E15	Any meat from domesticated animals, such as beef, pork, lamb, goat, chicken, or duck?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E16	Any organs from wild animals, such as birds, wild pigeons, guinea fowl, deer, wild boar, wild goat?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E17	Any flesh from wild animals, such as birds, wild pigeons, guinea fowl, deer, wild boar, wild goat?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E18	Eggs?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8

Module E. Women's Nutrition, Breastfeeding and Antenatal Care (Women 15-49)

NO.	QUESTIONS AND FILTERS	WOMAN'S NAME _____	WOMAN'S NAME _____	WOMAN'S NAME _____
E19	Fresh or dried fish, shellfish?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E20	Any foods made from beans, peas, lentils, peanuts or other legumes?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E21	Any foods made from nuts and seeds such as pumpkin seeds?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E22	Milk, cheese, yogurt, skim milk (arera), whey (aguat), cottage-cheese, or other milk products?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E23	Any oils, fats, butter, ghee, or foods made with any of these?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E24	Any sugary foods such as chocolates, sweets (halawa, mushebek), candies, doughnuts, cakes, honey?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
E25	Condiments for flavor, such as chilies, spices, herbs, or fennel grain, corainder, cumin, ginger, turmeric, garlic, cardamon?	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8	YES 1 NO 2 DON'T KNOW 8
INITIATION OF BREASTFEEDING AND PRELACTAL FEEDS				
E28	Now I would like to ask you about pregnancies and births you may have had. Are you currently pregnant?	YES 1 (SKIP TO E30) ← NO 2 DON'T KNOW 8	YES 1 (SKIP TO E30) ← NO 2 DON'T KNOW 8	YES 1 (SKIP TO E30) ← NO 2 DON'T KNOW 8
E29	Have you ever been pregnant?	YES 1 NO 2 (SKIP TO E45) ←	YES 1 NO 2 (SKIP TO E45) ←	YES 1 NO 2 (SKIP TO E45) ←
E30	Have you ever given birth?	YES 1 NO 2 (SKIP TO E45) ←	YES 1 NO 2 (SKIP TO E45) ←	YES 1 NO 2 (SKIP TO E45) ←
E31	When was the last time you gave birth to a boy or girl who was born alive? IF THE RESPONDENT DOES NOT KNOW THE BIRTHDATE ASK: Do you have a health/vaccination card for that child with the birthdate recorded? IF THE HEALTH/VACCINATION CARD IS SHOWN, RECORD THE DATE OF BIRTH AS DOCUMENTED ON THE CARD	Date of Last Live Birth DAY..... [][] If day is not known, enter '98' above MONTH..... [][] YEAR..... [][][][]	Date of Last Live Birth DAY..... [][] If day is not known, enter '98' above MONTH..... [][] YEAR..... [][][][]	Date of Last Live Birth DAY..... [][] If day is not known, enter '98' above MONTH..... [][] YEAR..... [][][][]
	CHECK ANSWER TO QUESTION E31. DID THE RESPONDENT'S LAST LIVE BIRTH OCCUR WITHIN THE PAST 5 YEARS, THAT IS, SINCE [INSERT MONTH OF INTERVIEW] 2012?	IF YES, THEN CONTINUE. IF NO, THEN SKIP TO E45	IF YES, THEN CONTINUE. IF NO, THEN SKIP TO E45	IF YES, THEN CONTINUE. IF NO, THEN SKIP TO E45
E32	What is the name of your child who was born on (DATE INDICATED IN E31)? ADD LINE NUMBER (B01) FROM HH ROSTER. WRITE 00 IF CHILD NOT IN HH.	NAME _____ LINE NUMBER (B01) [][]	NAME _____ LINE NUMBER (B01) [][]	NAME _____ LINE NUMBER (B01) [][]

Module E. Women's Nutrition, Breastfeeding and Antenatal Care (Women 15-49)

NO.	QUESTIONS AND FILTERS	WOMAN'S NAME _____	WOMAN'S NAME _____	WOMAN'S NAME _____
ANTENATAL CARE				
E38	Did you see anyone for antenatal care during the pregnancy?	YES 1 NO 2 (SKIP TO E45) ←	YES 1 NO 2 (SKIP TO E45) ←	YES 1 NO 2 (SKIP TO E45) ←
E39	Whom did you see? Anyone else?	HEALTH PERSONNEL DOCTOR A NURSE B MIDWIFE C HEALTH OFFICIER D HEALTH EXTEN WORKER E OTHER PERSON TRADITIONAL BIRTH ATTENDANT F OTHER PERSON X (SPECIFY) _____	HEALTH PERSONNEL DOCTOR A NURSE B MIDWIFE C HEALTH OFFICIER D HEALTH EXTEN WORKER E OTHER PERSON TRADITIONAL BIRTH ATTENDANT F OTHER PERSON X (SPECIFY) _____	HEALTH PERSONNEL DOCTOR A NURSE B MIDWIFE C HEALTH OFFICIER D HEALTH EXTEN WORKER E OTHER PERSON TRADITIONAL BIRTH ATTENDANT F OTHER PERSON X (SPECIFY) _____
E40	Where did you receive antenatal care for this pregnancy? Anywhere else? PROBE TO IDENTIFY EACH TYPE OF FACILITY AND RECORD ALL MENTIONED.	HOME YOUR HOME A OTHER HOME B PUBLIC SECTOR GOVT HOSPITAL C GOVT HEALTH CENTER/STATIOI D GOVT HEALTH POST E OTHER PUBLIC F (SPECIFY) _____ NON-GOVT (NGO) SECTOR HEALTH FACILITY G OTHER NGO FACILITY H (SPECIFY) _____ PRIVATE MED. SECTOR PVT. HOSPITAL I PVT. CLINIC J OTHER PRIVATE MED. K (SPECIFY) _____ OTHER X (SPECIFY) _____	HOME YOUR HOME A OTHER HOME B PUBLIC SECTOR GOVT HOSPITAL C GOVT HEALTH CENTER/STATIOI D GOVT HEALTH POST E OTHER PUBLIC F (SPECIFY) _____ NON-GOVT (NGO) SECTOR HEALTH FACILITY G OTHER NGO FACILITY H (SPECIFY) _____ PRIVATE MED. SECTOR PVT. HOSPITAL I PVT. CLINIC J OTHER PRIVATE MED. K (SPECIFY) _____ OTHER X (SPECIFY) _____	HOME YOUR HOME A OTHER HOME B PUBLIC SECTOR GOVT HOSPITAL C GOVT HEALTH CENTER/STATIOI D GOVT HEALTH POST E OTHER PUBLIC F (SPECIFY) _____ NON-GOVT (NGO) SECTOR HEALTH FACILITY G OTHER NGO FACILITY H (SPECIFY) _____ PRIVATE MED. SECTOR PVT. HOSPITAL I PVT. CLINIC J OTHER PRIVATE MED. K (SPECIFY) _____ OTHER X (SPECIFY) _____
E41	How many months pregnant were you when you first received antenatal care during this pregnancy?	MONTHS <input type="text"/> <input type="text"/>	MONTHS <input type="text"/> <input type="text"/>	MONTHS <input type="text"/> <input type="text"/>
E42	How many times did you receive antenatal care during this pregnancy?	NUMBER OF TIMES <input type="text"/> <input type="text"/>	NUMBER OF TIMES <input type="text"/> <input type="text"/>	NUMBER OF TIMES <input type="text"/> <input type="text"/>
E45	CHECK ANSWER TO QUESTION E28. IS THE WOMAN CURRENTLY PREGNANT?	IF YES, THEN SKIP TO E49A IF NO, THEN CONTINUE.	IF YES, THEN SKIP TO E49A IF NO, THEN CONTINUE.	IF YES, THEN SKIP TO E49A IF NO, THEN CONTINUE.
E47	Are you or your partner currently doing something or using any method to delay or avoid getting pregnant?	YES 1 NO 2 (SKIP TO E49A) ←	YES 1 NO 2 (SKIP TO E49A) ←	YES 1 NO 2 (SKIP TO E49A) ←
E48	Which method are you using? RECORD ALL MENTIONED.	FEMALE STERILIZATION .....A MALE STERILIZATION .....B IUD .....C INJECTABLES .....D IMPLANTS .....E PILL .....F CONDOM .....G FEMALE CONDOM .....H EMERGENCY CONTRACEPTION .....I STANDARD DAYS METHOD .....J LACTATIONAL AMEN. METHOD .....K RHYTHM METHOD .....L WITHDRAWAL .....M OTHER MODERN METHOD .....N OTHER TRADITIONAL	FEMALE STERILIZATION .....A MALE STERILIZATION .....B IUD .....C INJECTABLES .....D IMPLANTS .....E PILL .....F CONDOM .....G FEMALE CONDOM .....H EMERGENCY CONTRACEPTION .....I STANDARD DAYS METHOD .....J LACTATIONAL AMEN. METHOD .....K RHYTHM METHOD .....L WITHDRAWAL .....M OTHER MODERN METHOD .....N OTHER TRADITIONAL	FEMALE STERILIZATION .....A MALE STERILIZATION .....B IUD .....C INJECTABLES .....D IMPLANTS .....E PILL .....F CONDOM .....G FEMALE CONDOM .....H EMERGENCY CONTRACEPTION .....I STANDARD DAYS METHOD .....J LACTATIONAL AMEN. METHOD .....K RHYTHM METHOD .....L WITHDRAWAL .....M OTHER MODERN METHOD .....N OTHER TRADITIONAL
E49A	THERE ARE NO MORE QUESTIONS FOR THIS WOMAN.	GO TO E02A FOR NEXT WOMAN OR, IF NO MORE WOMEN, GO TO E49B.	GO TO E02A FOR NEXT WOMAN OR, IF NO MORE WOMEN, GO TO E49B.	GO TO E02A FOR NEXT WOMAN OR, IF NO MORE WOMEN, GO TO E49B.
E49B	INSERT TIME MODULE ENDED HOUR <input type="text"/> <input type="text"/> MINUTE	—————→ GO TO ANTHROPOMETRY		

CLUSTER CODE

HH NUMBER

AN00: START TIME

HOUR:

MINUTE:

ANTHROPOMETRY - Children under 5 years of age

CHECK QUESTION D14 IN EACH COLUMN OF MODULE D. IF THE CHILD IS LESS THAN 5 YEARS OLD (D14= YES), THE CHILD SHOULD BE MEASURED. TRANSFER THE INFORMATION FOR EACH CHILD LESS THAN 5 YEARS OLD FROM MODULE D TO QUESTIONS D67 TO D72 BELOW.

CHILDREN LESS THAN 5 YEARS OF AGE						WEIGHT AND HEIGHT OF CHILDREN				
D67	D68	D69	D70	D71	D72	D73	D74	D75	D76	D77
LINE NO. FROM HH ROSTER (B01)	NAME	SEX 1. MALE 2. FEMALE	AGE IN MONTHS	CHILD'S BIRTH DATE (DDMMYY)	SOURCE BIRTH DATE	HEIGHT (CM) 9994 = NOT PRESENT 9995 = REFUSED	HEIGHT MEASURED: 1. LAYING DOWN 2. STANDING UP	WEIGHT (KG) 9994 = NOT PRESENT 9995 = REFUSED	RESULT 1. MEASURED 2. NOT PRESENT 3. REFUSED 6. OTHER (explain in comments #1)	EDEMA 1. YES 2. NO
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
D78: COMMENTS #1					SOURCE OF BIRTH DATE 1. BIRTH CERTIFICATE 4. HOME RECORD 2. BAPTISMAL/CHURCH RECORD 5. PARENT STATEMENT 3. HEALTH REGISTRATION CARD 6. OTHER _____					

EA CODE

HH NUMBER

ANTHROPOMETRY - Non-pregnant women 15-49 years of age**CHECK QUESTIONS E04, E05 AND E28 IN MODULE E. IF THE WOMAN IS 15-49 YEARS OLD AND NOT PREGNANT (E28 = NO OR DK), SHE SHOULD BE MEASURED. TRANSFER THE INFORMATION FOR EACH NON-PREGNANT WOMAN 15-49 YEARS FROM MODULE E TO QUESTIONS E50 TO E52 BELOW.**

SELECTED WOMAN'S (15-49) INFORMATION			WEIGHT AND HEIGHT OF SELECTED WOMAN (15-49)		
E50	E51	E52	E53	E54	E55
LINE NO. FROM HH ROSTER (B01)	NAME	AGE IN YEARS	HEIGHT (CM) 9994 = NOT PRESENT 9995 = REFUSED	WEIGHT (KG) 99994 = NOT PRESENT 99995 = REFUSED	RESULT 1. MEASURED 2. NOT PRESENT 3. REFUSED 6. OTHER (Explain in comment #2)
<input type="text"/>		<input type="text"/>	<input type="text"/> . <input type="text"/> CM	<input type="text"/> . <input type="text"/> KG	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/> . <input type="text"/> CM	<input type="text"/> . <input type="text"/> KG	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/> . <input type="text"/> CM	<input type="text"/> . <input type="text"/> KG	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/> . <input type="text"/> CM	<input type="text"/> . <input type="text"/> KG	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/> . <input type="text"/> CM	<input type="text"/> . <input type="text"/> KG	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/> . <input type="text"/> CM	<input type="text"/> . <input type="text"/> KG	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/> . <input type="text"/> CM	<input type="text"/> . <input type="text"/> KG	<input type="text"/>
<input type="text"/>		<input type="text"/>	<input type="text"/> . <input type="text"/> CM	<input type="text"/> . <input type="text"/> KG	<input type="text"/>
E56:COMMENTS #2					AN01: END TIME <input type="text"/> <input type="text"/> GO TO MODULE J MINUTE: <input type="text"/> <input type="text"/>
ANTHROPOMETRIST PRINT NAME:		SIGNATURE:		AN02 <input type="text"/> <input type="text"/> AN03 <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
				ID NO. DAY MONTH	YEAR
SUPERVISOR PRINT NAME:		SIGNATURE:		AN04 <input type="text"/> <input type="text"/> AN05 <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
				ID NO. DAY MONTH	YEAR

Module J. Gender - Cash (All Men and Women who Earned Cash)

NO.	QUESTIONS AND FILTERS	FIRST ELIGIBLE PERSON FROM ROSTER	SECOND ELIGIBLE PERSON FROM ROSTER	THIRD ELIGIBLE PERSON FROM ROSTER
J00	INSERT TIME MODULE STARTED	HOUR <input type="text"/> <input type="text"/>	MINUTE <input type="text"/> <input type="text"/>	
J01	CLUSTER CODE AND HOUSEHOLD NUMBER	CLUSTER <input type="text"/> <input type="text"/> <input type="text"/>	HH <input type="text"/> <input type="text"/> <input type="text"/>	
J02	MAN/WOMAN WHO EARNED CASH (B12 = 1 OR 2) FROM THE HOUSEHOLD ROSTER	LINE NO. (B01) <input type="text"/> <input type="text"/>	LINE NO. (B01) <input type="text"/> <input type="text"/>	LINE NO. (B01) <input type="text"/> <input type="text"/>
J03A	CHECK HOUSEHOLD ROSTER QUESTION B15 (MARITAL STATUS). IS RESPONDENT MARRIED OR LIVING TOGETHER (B15=1)?	YES 1 NO 2 GO TO J12 ←	YES 1 NO 2 GO TO J12 ←	YES 1 NO 2 GO TO J12 ←
J03B	OBTAIN CONSENT. DOES [NAME] AGREE TO PARTICIPATE IN THE SURVEY?	YES 1 NO 2 NOT AVAILABLE 3 GO TO J12 ←	YES 1 NO 2 NOT AVAILABLE 3 GO TO J12 ←	YES 1 NO 2 NOT AVAILABLE 3 GO TO J12 ←
J04	RESPONDENT'S SEX FROM HOUSEHOLD ROSTER (B04)	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2
J05	RESPONDENT'S AGE FROM HOUSEHOLD ROSTER (B05)	YEARS <input type="text"/> <input type="text"/>	YEARS <input type="text"/> <input type="text"/>	YEARS <input type="text"/> <input type="text"/>
J06	Have you done any work in the past 12 months? READ DEFINITION OF WORK FROM MODULE B.	YES 1 NO 2 GO TO J12 ↓	YES 1 NO 2 GO TO J12 ↓	YES 1 NO 2 GO TO J12 ↓
J07	During the past 12 months, were you usually paid in cash or kind for this work or were you not paid at all?	CASH ONLY 1 CASH AND KIND 2 IN KIND ONLY 3 NOT PAID 4 GO TO J12 ←	CASH ONLY 1 CASH AND KIND 2 IN KIND ONLY 3 NOT PAID 4 GO TO J12 ←	CASH ONLY 1 CASH AND KIND 2 IN KIND ONLY 3 NOT PAID 4 GO TO J12 ←
J08	When you were paid in cash for this work, was the payment usually made directly to you, to your spouse/partner or to someone else in your household? IF RESPONSE IS SOMEONE ELSE IN HH OR OTHER, THEN SPECIFY THE RELATIONSHIP TO THE RESPONDENT.	RESPONDENT 1 SPOUSE/PARTNER 2 SOMEONE ELSE IN HH 3 OTHER _____ (SPECIFY) 4 (SPECIFY)	RESPONDENT 1 SPOUSE/PARTNER 2 SOMEONE ELSE IN HH 3 OTHER _____ (SPECIFY) 4 (SPECIFY)	RESPONDENT 1 SPOUSE/PARTNER 2 SOMEONE ELSE IN HH 3 OTHER _____ (SPECIFY) 4 (SPECIFY)
J09A	Do you usually discuss with someone about how the cash you earn will be used?	YES 1 NO 2 (SKIP TO J10) ←	YES 1 NO 2 (SKIP TO J10) ←	YES 1 NO 2 (SKIP TO J10) ←
J09B	With whom do you usually talk about how the cash you earn will be used? CIRCLE ALL THAT APPLY. FOR RESPONSES B AND C, SPECIFY THE RELATIONSHIP TO THE RESPONDENT.	SPOUSE/PARTNER A SOMEONE ELSE IN HH B (SPECIFY RELATIONSHIP) OTHER _____ (SPECIFY) C	SPOUSE/PARTNER A SOMEONE ELSE IN HH B (SPECIFY RELATIONSHIP) OTHER _____ (SPECIFY) C	SPOUSE/PARTNER A SOMEONE ELSE IN HH B (SPECIFY RELATIONSHIP) OTHER _____ (SPECIFY) C
J10	Who usually decides how the cash you earn will be used? READ ALL RESPONSES AND SELECT ONLY ONE. FOR RESPONSES #4 AND #5, SPECIFY THE RELATIONSHIP TO THE RESPONDENT.	YOURSELF 1 SPOUSE/PARTNER 2 YOURSELF AND SPOUSE/PARTNER JOINTLY 3 YOURSELF AND OTHER JOINTLY 4 (SPECIFY) OTHER _____ (SPECIFY) 5	YOURSELF 1 SPOUSE/PARTNER 2 YOURSELF AND SPOUSE/PARTNER JOINTLY 3 YOURSELF AND OTHER JOINTLY 4 (SPECIFY) OTHER _____ (SPECIFY) 5	YOURSELF 1 SPOUSE/PARTNER 2 YOURSELF AND SPOUSE/PARTNER JOINTLY 3 YOURSELF AND OTHER JOINTLY 4 (SPECIFY) OTHER _____ (SPECIFY) 5
J11	Who usually makes decisions about making major household purchases? READ ALL RESPONSES AND SELECT ONLY ONE. FOR RESPONSES #4 AND #5, SPECIFY THE RELATIONSHIP TO THE RESPONDENT.	YOURSELF 1 SPOUSE/PARTNER 2 YOURSELF AND SPOUSE/PARTNER JOINTLY 3 YOURSELF AND OTHER JOINTLY 4 (SPECIFY) OTHER _____ (SPECIFY) 5	YOURSELF 1 SPOUSE/PARTNER 2 YOURSELF AND SPOUSE/PARTNER JOINTLY 3 YOURSELF AND OTHER JOINTLY 4 (SPECIFY) OTHER _____ (SPECIFY) 5	YOURSELF 1 SPOUSE/PARTNER 2 YOURSELF AND SPOUSE/PARTNER JOINTLY 3 YOURSELF AND OTHER JOINTLY 4 (SPECIFY) OTHER _____ (SPECIFY) 5
J12	THERE ARE NO MORE QUESTIONS FOR THIS CASH EARNER.	GO TO J02 FOR NEXT CASH EARNER, OR J13 IF NO MORE CASH EARNERS	GO TO J02 FOR NEXT CASH EARNER, OR J13 IF NO MORE CASH EARNERS	GO TO J02 FOR NEXT CASH EARNER, OR J13 IF NO MORE CASH EARNERS
J13	INSERT TIME MODULE ENDED	HOUR <input type="text"/> <input type="text"/>	MINUTE <input type="text"/> <input type="text"/>	→ GO TO MODULE K

Module K. Gender - MCHN (All Men and Women with Child Under 2 Years)

NO.	QUESTIONS AND FILTERS	FIRST ELIGIBLE PERSON FROM ROSTER	SECOND ELIGIBLE PERSON FROM ROSTER	THIRD ELIGIBLE PERSON FROM ROSTER
K14	<p><u>IF FEMALE RESPONDENT ASK:</u> Who usually makes decisions about your health and nutrition?</p> <p><u>IF MALE RESPONDENT ASK:</u> Who usually makes decisions about your spouse/partner's health and nutrition?</p> <p>READ ALL RESPONSES AND SELECT ONLY ONE.</p> <p>FOR RESPONSES #4 AND #5, SPECIFY THE RELATIONSHIP TO THE RESPONDENT.</p>	Yourself 1 Spouse/partner .. 2 Yourself and Spouse/partner Jointly 3 Yourself and other jointly .. 4 _____ (SPECIFY) Other 5 _____ (SPECIFY)	Yourself 1 Spouse/partner .. 2 Yourself and Spouse/partner Jointly 3 Yourself and other jointly .. 4 _____ (SPECIFY) Other 5 _____ (SPECIFY)	Yourself 1 Spouse/partner .. 2 Yourself and Spouse/partner Jointly 3 Yourself and other jointly .. 4 _____ (SPECIFY) Other 5 _____ (SPECIFY)
K15	<p>Who usually makes decisions about [NAME OF INDEX CHILD]'s health and nutrition?</p> <p>READ ALL RESPONSES AND SELECT ONLY ONE.</p> <p>FOR RESPONSES #4 AND #5, SPECIFY THE RELATIONSHIP TO THE RESPONDENT.</p>	Yourself 1 Spouse/partner .. 2 Yourself and Spouse/partner Jointly 3 Yourself and other jointly .. 4 _____ (SPECIFY) Other 5 _____ (SPECIFY)	Yourself 1 Spouse/partner .. 2 Yourself and Spouse/partner Jointly 3 Yourself and other jointly .. 4 _____ (SPECIFY) Other 5 _____ (SPECIFY)	Yourself 1 Spouse/partner .. 2 Yourself and Spouse/partner Jointly 3 Yourself and other jointly .. 4 _____ (SPECIFY) Other 5 _____ (SPECIFY)
K16	<p>Who usually makes decisions about making major household purchases?</p> <p>READ ALL RESPONSES AND SELECT ONLY ONE.</p> <p>FOR RESPONSES #4 AND #5, SPECIFY THE RELATIONSHIP TO THE RESPONDENT.</p>	Yourself 1 Spouse/partner .. 2 Yourself and Spouse/partner Jointly 3 Yourself and other jointly .. 4 _____ (SPECIFY) Other 5 _____ (SPECIFY)	Yourself 1 Spouse/partner .. 2 Yourself and Spouse/partner Jointly 3 Yourself and other jointly .. 4 _____ (SPECIFY) Other 5 _____ (SPECIFY)	Yourself 1 Spouse/partner .. 2 Yourself and Spouse/partner Jointly 3 Yourself and other jointly .. 4 _____ (SPECIFY) Other 5 _____ (SPECIFY)
K17	<p>THERE ARE NO MORE QUESTIONS FOR THIS RESPONDENT.</p>	<p>GO TO K02A FOR NEXT RESPONDENT, OR K18 IF NO MORE RESPONDENTS</p>	<p>GO TO K02A FOR NEXT RESPONDENT, OR K18 IF NO MORE RESPONDENTS</p>	<p>GO TO K02A FOR NEXT RESPONDENT, OR K18 IF NO MORE RESPONDENTS</p>
K18	<p>INSERT TIME MODULE ENDED</p>	<p>HOUR <input type="text"/> <input type="text"/></p>	<p>MINUTE <input type="text"/> <input type="text"/></p>	<p>→ GO TO MODULE R</p>

**RESPONSE CATEGORIES FOR
H1.03b/1.04b/1.06b/1.07b –
UNITS**

KILOGRAMME.....01	ESIR (SMALL) .....10	KUBAYA/CUP (SMALL) 19	MEDEB (SMALL) .....25	TASA/TANIKA/SHEMBER/SELEM ON (SMALL).....34
GRAM .....02	ESIR (MEDIUM) .....11	KUBAYA/CUP (MEDIUM) 20	MEDEB (MEDIUM).....26	TASA/TANIKA/SHEMBER/SELEM ON (MEDIUM).....35
LITER.....03	ESIR (LARGE).....12	KUBAYA/CUP (LARGE).....21	MEDEB (LARGE) .....27	TASA/TANIKA/SHEMBER/SELEM ON (LARGE).....36
CENTILITER.....04	FESTAL (SMALL) .....13	KUNNA/MISHE/KEFER/ENKIB (SMALL).....22	PIECE/NUMBER .....28	ZORBA/AKARA (SMALL).....37
JOG.....05	FESTAL (MEDIUM) .....14	(MEDIUM).....23	SAHIN (SMALL) .....29	ZORBA/AKARA (MEDIUM).....38
MELEKIYA.....06	FESTAL (LARGE).....15	KUNNA/MISHE/KEFER/ENKIB (LARGE) .....24	SAHIN (MEDIUM) .....30	ZORBA/AKARA (LARGE) .....39
BIRCHIKO (SMALL) .....07	KERCHAT/KEMBA (SMALL) ..16		SAHIN (LARGE).....31	OTHER.....40
BIRCHIKO (MEDIUM).....08	KERCHAT/KEMBA (MEDIUM) 17		SINI (SMALL).....32	
BIRCHIKO (LARGE) .....09	KERCHAT/KEMBA (LARGE) ..18		SINI (LARGE).....33	

NOTE: ANY UNIT LISTED MUST BE ABLE TO BE CONVERTED TO A STANDARDIZED UNIT. THIS CONVERSION WILL HAPPEN DURING DATA ANALYSIS; IT SHOULD NOT BE DONE IN THE FIELD BY THE INTERVIEWER.

MODULE H2. NON-FOOD EXPENDITURES OVER PAST 7 DAYS (Head of Household or Responsible Adult)

Respondent line number (B01)
from Module B, Question B10

--	--

“Now I would like to ask you about items that you or members of your household may have bought in the past week.”

<u>ONE WEEK RECALL</u>		Over the past <u>one week (7 days)</u> , did your household purchase or pay for any [ITEM]?	How much did you pay (how much did they cost) in total?
ITEM	ITEM CODE		
	H2.01	H2.02	H2.03 BIRR (99999)
Cigarettes	173	YES 1 NO 2 → NEXT ITEM	
Tobacco	174	YES 1 NO 2 → NEXT ITEM	
Batteries	175	YES 1 NO 2 → NEXT ITEM	
Candles (tua'af), incense	176	YES 1 NO 2 → NEXT ITEM	
Wood	177	YES 1 NO 2 → NEXT ITEM	
Petrol	178	YES 1 NO 2 → NEXT ITEM	
Diesel	179	YES 1 NO 2 → NEXT ITEM	
Kerosene	180	YES 1 NO 2 → NEXT ITEM	
Coal/ Charcoal	181	YES 1 NO 2 → NEXT ITEM	
Matches, lighters	182	YES 1 NO 2 → NEXT ITEM	
Newspapers or magazines	183	YES 1 NO 2 → NEXT ITEM	
Public transportation - buses, taxis, horse cart, donkey ride, Bajaj, camel rickshaws, train tickets, etc. (include any used for school under education costs; include any used for obtaining health care under health expenditures)	184	YES 1 NO 2 → NEXT ITEM	
Other (specify) _____	186	YES 1 NO 2 → NEXT ITEM	
Other (specify) _____	187	YES 1 NO 2 → GO TO MODULE H3	

MODULE H3. NON-FOOD EXPENDITURES OVER PAST ONE MONTH (Head of Household or Responsible Adult)

“Next I would like to ask you about items that you or members of your household may have bought over the past month.”

ONE MONTH RECALL			
ITEM	ITEM CODE	Over the past one month, did your household purchase or pay for any [ITEM]?	How much did you pay (how much did they cost) in total?
	H3.01	H3.02	H3.03 BIRR (99999)
Toilet soap	188	YES 1 NO 2 → NEXT ITEM	
Household cleaning articles (soap, bleach, washing powder, etc.)	189	YES 1 NO 2 → NEXT ITEM	
Toothpaste, tooth powder, toothbrush, etc.	190	YES 1 NO 2 → NEXT ITEM	
Other personal products (shampoo, combs, cosmetics, etc.)	191	YES 1 NO 2 → NEXT ITEM	
Personal services (haircuts, shaving, shoeshine, etc.)	192	YES 1 NO 2 → NEXT ITEM	
Light bulbs	193	YES 1 NO 2 → NEXT ITEM	
Postal expenses	194	YES 1 NO 2 → NEXT ITEM	
Music or video cassette or CD/DVD	195	YES 1 NO 2 → NEXT ITEM	
Telephone or mobile phone service	196	YES 1 NO 2 → NEXT ITEM	
Donation - to church, temple, charity, beggar, etc.	197	YES 1 NO 2 → NEXT ITEM	
Gifts	198	YES 1 NO 2 → NEXT ITEM	
Repair and other expenses for personal vehicle, bicycle, motor bicycle (registration, fines)	199	YES 1 NO 2 → NEXT ITEM	
Repairs to household and personal items (radios, , TV, Telephone, watches, etc., excluding battery purchases)	200	YES 1 NO 2 → NEXT ITEM	
Utilities: Electricity	201	YES 1 NO 2 → NEXT ITEM	
Utilities: Water	202	YES 1 NO 2 → NEXT ITEM	
Membership fees (for the use of natural resources; water, forest)	203	YES 1 NO 2 → NEXT ITEM	

MODULE H5. NON-FOOD EXPENDITURES OVER PAST 12 MONTHS (Head of Household or Responsible Adult)

“Now I would like to ask you about items that you or members of your household may have bought over the past one year.”

ONE YEAR (12 MONTH) RECALL			
ITEM	ITEM CODE	Over the past one year (twelve months), did your household purchase or pay for any [ITEM]?	How much did you pay (how much did they cost) in total?
	H5.01	H5.02	H5.03 BIRR (99999)
Ready-made clothing and apparel (excluding school related)	204	YES 1 NO .....2→ NEXT ITEM	
Cloth, wool, yarn, and thread for making clothes and sweaters	205	YES 1 NO .....2→ NEXT ITEM	
Tailoring expenses	206	YES 1 NO .....2→ NEXT ITEM	
Footwear (shoes, slippers, sandals, etc.)	207	YES 1 NO .....2→ NEXT ITEM	
Washing expenses	208	YES 1 NO .....2→ NEXT ITEM	
Crockery, cutlery and kitchen utensils (household use)	209	YES 1 NO .....2→ NEXT ITEM	
Stationery items (excluding school related)	210	YES 1 NO .....2→ NEXT ITEM	
Books (excluding school related)	211	YES 1 NO .....2→ NEXT ITEM	
Tickets for cinema / entertainment events	212	YES 1 NO .....2→ NEXT ITEM	
Pocket money to children	213	YES 1 NO .....2→ NEXT ITEM	
Excursion, holiday (including travel and lodging; excluding school or health related)	214	YES 1 NO .....2→ NEXT ITEM	
Carpet, rugs, drapes, curtains	215	YES 1 NO .....2→ NEXT ITEM	
Pillows, mattresses, blankets, towels, etc.	216	YES 1 NO .....2→ NEXT ITEM	
Jewelry, watches	217	YES 1 NO .....2→ NEXT ITEM	
Sports & hobby equipment, musical instruments, toys	218	YES 1 NO .....2→ NEXT ITEM	
Cement/ Sand	219	YES 1 NO .....2→ NEXT ITEM	
Building woods	220	YES 1 NO .....2→ NEXT ITEM	

ONE YEAR (12 MONTH) RECALL			
ITEM	ITEM CODE	Over the past one year (twelve months), did your household purchase or pay for any [ITEM]?	How much did you pay (how much did they cost) in total?
	H5.01	H5.02	H5.03 BIRR (99999)
Taxes, land taxes, housing and property taxes	221	YES 1 NO .....2→ NEXT ITEM	
Rentals (agricultural equipment like ploughs, tractors, combine harvesters, knapsack sprayers)	222	YES 1 NO 2→ NEXT ITEM	
Dowry/Tilosh	223	YES 1 NO .....2→ NEXT ITEM	
Marriages, births, and other ceremonies	224	YES 1 NO .....2→ NEXT ITEM	
Funeral and death related expenses	225	YES 1 NO .....2→ NEXT ITEM	
Expenditure on religious ceremonies	226	YES 1 NO .....2→ NEXT ITEM	
Torch	227	YES 1 NO 2→ NEXT ITEM	
Other social events (outside home)	228	YES 1 NO .....2→ NEXT ITEM	
HEALTH EXPENDITURES over last 12 months (include estimated value of any in-kind payments or borrowed amounts)			
Anything related to illnesses and injuries, including for medicine, tests, consultation, & in-patient fees	229	YES 1 NO2→ NEXT ITEM	
Medical care not related to an illness - preventative health care, pre-natal visits, check-ups, medical insurance etc.	230	YES 1 NO2→ NEXT ITEM	
Non-prescription medicines, for example, Paracetamol, etc.	231	YES 1 NO2→ NEXT ITEM	
Health service charge from a traditional healer	232	YES 1 NO2→ NEXT ITEM	
Transportation used to access health-related services or care that did not require an overnight stay in a health facility or at a traditional healer's dwelling	233	YES 1 NO2→ NEXT ITEM	
Hospitalizations or overnight stay in any hospital – total cost for treatment	234	YES 1 NO .....2→ NEXT ITEM	
Travel to and from the medical facility for any overnight stay(s) or hospitalization	235	YES 1 NO .....2→ NEXT ITEM	
Food costs during overnight stay(s) at the medical facility or hospitalization (if not already included above)	236	YES 1 NO .....2→ NEXT ITEM	
Over-night(s) stay at a traditional healer's or faith healer's dwelling – total costs for treatment	237	YES 1 NO .....2→ NEXT ITEM	
Travel costs to the traditional healer's or faith healer's dwelling for overnight stay(s)	238	YES 1 NO .....2→ NEXT ITEM	

ONE YEAR (12 MONTH) RECALL			
ITEM	ITEM CODE	Over the past one year (twelve months), did your household purchase or pay for any [ITEM]?	How much did you pay (how much did they cost) in total?
	H5.01	H5.02	H5.03 BIRR (99999)
Food costs during overnight stay(s) at the traditional healer's or faith healer's dwelling	239	YES 1 NO .....2→ NEXT ITEM	
EDUCATION EXPENDITURES over last 12 months (include estimated value of any in-kind payments or borrowed amounts)			
Tuition, including extra tuition fees	240	YES 1 NO .....2→ NEXT ITEM	
Expenditures on after school programs and tutoring	241	YES 1 NO .....2→ NEXT ITEM	
School books and stationery	242	YES 1 NO .....2→ NEXT ITEM	
School uniform	243	YES 1 NO .....2→ NEXT ITEM	
Boarding fees	244	YES 1 NO .....2→ NEXT ITEM	
Contribution to school building maintenance	245	YES 1 NO .....2→ NEXT ITEM	
Transport to and from school	246	YES 1 NO .....2→ NEXT ITEM	
Parent/Teacher Association and other related fees	247	YES 1 NO .....2→ NEXT ITEM	
Other: Specify_____	248	YES 1 NO .....2→ NEXT ITEM	
Other: Specify_____	249	YES 1 NO2→ NEXT ITEM	
Other: Specify_____	250	YES 1 NO2→ NEXT ITEM	

MODULE H6. HOUSING EXPENDITURES (Head of Household or Responsible Adult)

"Now I'd like to ask you some questions about your home."

QNO.	QUESTION	RESPONSE CATEGORIES									
H6.01	Do you own or are purchasing this house, is it provided to you by an employer, do you use it for free, or do you rent this house?	OWN 1 BEING PURCHASED 2 EMPLOYER PROVIDES 3 FREE 4 → H6.04 RENTED 5 → H6.05 DON'T KNOW 8									
H6.02	If you <u>sold this dwelling</u> today, how much would you receive for it in [BIRR]?	<table border="1" style="width: 100%; height: 30px;"> <tr> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> </tr> </table> DON'T KNOW 9999998									
H6.03	How old is this house, in years? USE '000' IF HOUSE IS LESS THAN ONE YEAR.	<table border="1" style="width: 100%; height: 30px;"> <tr> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> </tr> </table> DON'T KNOW 998] → SKIP TO H6.06									
H6.04	If you <u>rented this dwelling out</u> today, how much rent would you receive in [BIRR]?	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">H6.04A BIRR</th> <th style="width: 50%; text-align: center;">H6.04B UNIT</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;"> <table border="1" style="width: 100%; height: 30px;"> <tr> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> </tr> </table> DON'T KNOW 99998 → SKIP TO H6.09 </td> <td style="vertical-align: top;"> DAY 1 WEEK 2 MONTH 3 YEAR 4 DON'T KNOW 8] → SKIP TO H6.09 </td> </tr> </tbody> </table>	H6.04A BIRR	H6.04B UNIT	<table border="1" style="width: 100%; height: 30px;"> <tr> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> </tr> </table> DON'T KNOW 99998 → SKIP TO H6.09						DAY 1 WEEK 2 MONTH 3 YEAR 4 DON'T KNOW 8] → SKIP TO H6.09
H6.04A BIRR	H6.04B UNIT										
<table border="1" style="width: 100%; height: 30px;"> <tr> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> <td style="width: 20px;"></td> </tr> </table> DON'T KNOW 99998 → SKIP TO H6.09						DAY 1 WEEK 2 MONTH 3 YEAR 4 DON'T KNOW 8] → SKIP TO H6.09					

H6.05	How much do you pay to rent this dwelling in [BIRR]?	<table border="1"> <thead> <tr> <th>H6.05A BIRR</th> <th>H6.05B UNIT</th> </tr> </thead> <tbody> <tr> <td> <div style="border: 1px solid black; display: flex; justify-content: space-around; width: 100px; height: 30px; margin-bottom: 5px;"></div> DON'T KNOW.....99998 → SKIP TO H6.09 </td> <td> DAY 1 WEEK 2 MONTH..... 3 YEAR..... 4 DON'T KNOW....8 → SKIP TO H6.09 </td> </tr> </tbody> </table>	H6.05A BIRR	H6.05B UNIT	<div style="border: 1px solid black; display: flex; justify-content: space-around; width: 100px; height: 30px; margin-bottom: 5px;"></div> DON'T KNOW.....99998 → SKIP TO H6.09	DAY 1 WEEK 2 MONTH..... 3 YEAR..... 4 DON'T KNOW....8 → SKIP TO H6.09
H6.05A BIRR	H6.05B UNIT					
<div style="border: 1px solid black; display: flex; justify-content: space-around; width: 100px; height: 30px; margin-bottom: 5px;"></div> DON'T KNOW.....99998 → SKIP TO H6.09	DAY 1 WEEK 2 MONTH..... 3 YEAR..... 4 DON'T KNOW....8 → SKIP TO H6.09					
H6.06	Do you pay a mortgage on this house, that is, a regular payment towards purchasing the house?	YES..... 1 NO 2 → SKIP TO H6.09				
H6.07	How often do you make mortgage payments?	ONCE A MONTH..... 1 ONCE EVERY 3 MONTHS 2 ONCE EVERY 6 MONTHS 3 ONCE A YEAR 4 OTHER (SPECIFY) 6				
H6.08	How much do you pay each time you make a payment on your mortgage in [BIRR]?	<div style="border: 1px solid black; display: flex; justify-content: space-around; width: 100px; height: 30px; margin-bottom: 5px;"></div> AMOUNT IS VARIABLE.....999995 DON'T KNOW.....999998				
H6.09	In the past 12 month, how much did you spend on major repairs, renovations & maintenance to this house in [BIRR]?	<div style="border: 1px solid black; display: flex; justify-content: space-around; width: 100px; height: 30px; margin-bottom: 5px;"></div> DON'T KNOW.....999998				

MODULE H7. DURABLE GOODS EXPENDITURES

"Now I'd like to ask you some questions about items that may be owned by your household."

ITEM	Item Code	Does your household own a [ITEM]?	How many [ITEM]s do you own?	What is the age of these [ITEM]s in years? IF MORE THAN ONE ITEM OWNED, AVERAGE AGE.	If you wanted to sell one of these [ITEM]s today, how much would you receive? IF MORE THAN ONE ITEM OWNED, AVERAGE VALUE.	Did you purchase or pay for any of these [ITEM]s in the last 12 months?	How much did you pay for one of these [ITEM]s in the last 12 months?" IF MORE THAN ONE ITEM OWNED, AVERAGE VALUE
	H7.01	H7.02	H7.03 NUMBER	H7.04 AGE IN YEARS	H7.05 BIRR (999999)	H7.06	H7.07 BIRR (999999)
Furniture and fixtures	251	YES 1 NO 2 → NEXT ITEM				YES 1 NO 2 → NEXT ITEM	
Electric fan	252	YES 1 NO 2 → NEXT ITEM				YES 1 NO 2 → NEXT ITEM	
Cassette/CD recorder or player, radio, etc.	253	YES 1 NO 2 → NEXT ITEM				YES 1 NO 2 → NEXT ITEM	
Television/ DVD player/ VCR	254	YES 1 NO 2 → NEXT ITEM				YES 1 NO 2 → NEXT ITEM	
Sewing machine	255	YES 1 NO 2 → NEXT ITEM				YES 1 NO 2 → NEXT ITEM	
Kitchen appliances (refrigerator, cooking range, blenders, etc.)	256	YES 1 NO 2 → NEXT ITEM				YES 1 NO 2 → NEXT ITEM	
Bicycle	257	YES 1 NO 2 → NEXT ITEM				YES 1 NO 2 → NEXT ITEM	
Motorcycle	258	YES 1 NO 2 → NEXT ITEM				YES 1 NO 2 → NEXT ITEM	
Motor car or other such vehicle	259	YES 1 NO 2 → NEXT ITEM				YES 1 NO 2 → NEXT ITEM	
Mobile phone	260	YES 1 NO 2 → NEXT ITEM				YES 1 NO 2 → NEXT ITEM	
Clock	261	YES 1 NO 2 → NEXT ITEM				YES 1 NO 2 → NEXT ITEM	
Iron (for pressing clothes; electric or other)	262	YES 1 NO 2 → NEXT ITEM				YES 1 NO 2 → NEXT ITEM	
Computer, including equipment & accessories	263	YES 1 NO 2 → NEXT ITEM				YES 1 NO 2 → NEXT ITEM	
Solar panels	264	YES 1 NO 2 → NEXT					
Carpentry tools	265	YES 1 NO 2 → NEXT ITEM					
Other, specify _____	266	YES 1 NO 2 → NEXT ITEM				YES 1 NO 2 → NEXT ITEM	
Other, specify _____	267	YES 1 NO 2 → NEXT ITEM				YES 1 NO 2 → NEXT ITEM	

TABLE OF CONTENTS

SHOCKS

Module R1. Shocks

ASSETS

Module R2. Productive assets (excluding livestock)

Module R2a. Livestock assets

ACCESS TO MARKETS, SERVICES AND INFORMATION

Module R3. Access to markets, infrastructure and services

Module R5. Access to financial services: credit

Module R6. Access to financial services: savings

Module R7. Access to information

RESILIENCE CAPACITIES

Module R8. Group participation

Module R9. Collective Action

Module R10. Livelihood activities

Module R11. Migration and use of remittances

Module R12. Food insecurity coping strategies

Module R13. Social and capacity-building support

Module R14. Aspirations and confidence to adapt

Module R15. Government support

Module R16. Gender norms

MODULE R1: SHOCKS AND STRESSORS

	R103	R104	R105	R106	R107
	<p>Over the past year (12 months) did your household experience [the shock]?</p> <p>1= Yes 2 = No 99 -= Don't know >>If 2 or 99, Next event</p>	<p>How severe was the impact on your household's income?</p> <p>Enter code from list</p>	<p>How severe was the impact on your household's food consumption?</p> <p>Enter code from list</p>	<p>How did you cope with the [shock]?</p> <p>Enter code from list (Select all that apply)</p>	<p>To what extent has your household been able to recover?</p> <p>Enter code from list</p>
Climatic shocks					
1. Excessive rains/ flooding					
2. Variable rain/drought					
3. Hail/frost					
4. Landslides/erosion					
Biological shocks					
5. Crop disease (rust on wheat, sorghum)					
6. Crop pests (locusts)					
7. Weeds (e.g., associated with striga)					
8. Livestock disease					
9. Human disease outbreaks (from contaminated water)					
Conflict shocks					
10. Theft or destruction of assets					
11. Theft of livestock (raids)					
Economic shocks					
12. Delay in PSNP food assistance					
13. Increasing food prices					

14. Increased prices of agricultural or livestock inputs					
15. Decreased prices for agricultural or livestock products					
16. Loss of land/rental property					
17. Unemployment for youths					
18. Death of household member					

SHOCKS CODE LIST

R104, R105	R107
Severity of impact	Ability to recover
1. None (the same)	1. Did not recover
2. Slight decrease	2. Fully recovered, same as before the shock
3. Severe decrease	3. Fully recovered and better than before the shock
4. Worst ever happened	4. Partially recovered
99. Don't know	5. Not affected by [event]
	99. Don't know

R106

R106	
LIVESTOCK AND LAND HOLDINGS	COPING STRATEGIES TO GET MORE FOOD OR MONEY
A. Send livestock in search of pasture	M. Take up new/additional work (casual labor, wage labor)
B. Sell livestock	N. Sell household items (e.g., radio, bed)
C. Slaughter livestock	O. Sell productive assets (e.g., plough, water pump)
D. Lease out land	P. Take out a loan (with interest) from a (formal) bank
MIGRATION	Q. Take out a loan (with interest) from an MFI or village savings group
E. HH member migrated for work	R. Take out a loan (with interest) from a money-lender
F. Migrate (the whole family)	S. Take out a loan (no interest) from friends or relatives within the community (bonding)
G. Send children or an adult to stay with relatives	T. Take out a loan (no interest) from friends or relatives outside of the community (bridging)
	U. Gift of money (not remittances) or food from family, friends, church or other group within community (bonding)
COPING STRATEGIES TO REDUCE CURRENT EXPENDITURE	V. Gift of money (not remittances) or food from family, friends, church or other group outside of community (bridging)
H. Take children out of school	W. Send children to work for money (e.g., domestic service)
I. Move to less expensive housing	X. Receive emergency food aid from the government or NGO
J. Reduce food consumption (quantity/meal; # of meals/day)	Y. Receive emergency cash transfer from the government or NGO
K. Reduced non-essential HH expenses	Z. Participate in government or NGO food-for-work or cash-for-work activities
L. Gotten food on credit from a local merchant	a. Use money from savings
	b. Remittances from a relative that migrated
	c. Other (specify)
	d. Did nothing

Shock exposure and severity (cont'd)

R108	To what extent has your ability to meet food needs returned to the level it was before all the shocks and stressors you experienced in the last 12 months? <i>[PROMPT]</i>	Ability to meet food needs is the same as before the shock.....1 Ability to meet food needs is better than before the shock.....2 Ability to meet food needs is worse than before the shock.....3	
	R109	In light of the shocks and stressors you faced in the last 12 months, to what extent do you believe you will be able to meet your food needs in the next year? <i>[PROMPT]</i>	Ability to meet food needs will be the same as before the shock.....1 Ability to meet food needs will be better than before the shock.....2 Ability to meet food needs will be worse than before the shock.....3
		R110	What have you done to protect your household from the impact of shocks in the future? [Read list; select all that apply]

MODULE R2. PRODUCTIVE ASSETS

		R201	R202
		Number owned now 99 Don't know	Did you sell any of these items in the past 12 months because your household was in distress from a shock or stress (not enough money to cover normal expenses)? 1. Yes 2. No 99 Don't know
1.	Plough (oxen-pulled)		
2.	Mechanical plough		
3.	Sickle		
4.	Pick axe		
5.	Axe		
6.	Pruning/cutting shears		
7.	Hoe		
8.	Spade or shovel		
9.	Traditional beehive		
10.	Modern beehive		
11.	Knapsack chemical sprayer		
12.	Mechanical water pump		
13.	Motorized water pump		
14.	Stone grain mill		
15.	Motorized grain mill		
16.	Broad bed maker (oxen-pulled)		
17.	Small tractor		
18.	Hand-held motorized tiller		
19.	Agricultural land (hectares)		

MODULE R2A. LIVESTOCK ASSETS

		R201A	R202A
		Number owned now 99 Don't know	Did you sell any of this item in the past 12 months because your household was in distress from a shock or stress (not enough money to cover normal expenses)? 1. Yes 2. No 99 Don't know
1.	Oxen		
2.	Cattle		
3.	Goats		
4.	Sheep		
5.	Donkey/mule		
6.	Poultry		
7.	Camels		
8.	Horse		
9.	Honey bees (hives)		

MODULE R3. ACCESS TO MARKETS, INFRASTRUCTURE , AND SERVICES

		R301
		Are the following services available IN or WITHIN FIVE KM of your village? 1= yes 2= no 99 Don't know
a.	Institutions where people can borrow money	If yes, go to R302
b.	Institutions where people can save money	
c.	Primary school	If yes, go to R303a
d.	Health services (post, clinic, or center)	If yes, go to R304a
e.	Agricultural extension services	If yes, go to R305a
f.	Veterinary services (mobile vet, vet center, etc.)	If yes, go to R306a
g.	Electricity from public utility (main grid)	If yes, go to R307
h.	Mobile phone service	
i.	A public telephone	
j.	Public transport service	Go to R308

ASK ONLY IF R301a = YES		
R302	Who provides this service? Select all that apply	A. Banks B. MFI C. NGO D. Savings/loan group E. Friends/relatives F. Shops/merchants G. Money lender

		H. Other (specify): Y. Don't know >> Go to R301b
ASK ONLY IF R301c = Yes		
R303a	Are there enough teachers for the primary school that children in this village attend?	1. Yes 2. No 99. Don't know
R303b	What is the physical condition of the primary school that the children in this village attend?	1. Very good 2. Good 3. Poor 4. Very poor 99. Don't know >> Go to R301d
ASK ONLY IF R301d = Yes		
R304a	What is the physical condition of the health service used by people in this village?	1. Very good 2. Good 3. Poor 4. Very poor 99. Don't know
R304b	In the last year was there a time when your household needed health services but could not get them?	1. Yes 2. No 99. Don't know } → Go to R301e
R304c	If yes, why were you not able to get the health services? Select all that apply	A. No beds, facility was full B. No staff in the facility C. Health facility was destroyed D. Security problem E. No transportation F. No road or poor road condition G. No drugs at the health center H. No money for services I. Quality of the service is very poor J. Other (specify): Y. Don't know >> Go to R301e
ASK ONLY IF R301e = Yes		

R305a	In the last year was there a time when you needed agricultural extension services but could not get them?	1. Yes 2. No 99. Don't know } → Go to R301f
R305b	Is yes, why were you not able to get agricultural extension services? Select all that apply	A. No service provider (woreda office, ag agent) in area B. No equipment/inputs available from service provider C. No road or poor condition into or out of village D. Bad timing of ext agent visit E. Quality of the services is poor F. Other (specify): Y. Don't know >> Go to R301f
ASK ONLY IF R301f = Yes		
R306a	In the last year was there a time when you needed veterinary services but could not get them?	1. Yes 2. No 99. Don't know } → Go to R301g
R306b	If yes, why were you not able to get the veterinary services? Select all that apply	A. No service provider (vet center, veterinarian) in area B. Service provision too expensive C. No vaccines/medicines available D. No road or poor condition into or out of village E. No money for services F. Quality of the services is poor G. Other (specify): Y. Don't know >> Go to R301g
ASK ONLY IF R301g = Yes		
R307	Does your household have electricity from a public utility (main grid)?	1. Yes 2. No 99. Don't know >> Go to R301h

ASK AFTER COMPLETING R301j		
R308	Can the village be reached by a paved road all year around?	1. Yes 2. No 99. Don't know
R309	How far away is the nearest livestock market from this village?	_____ km 99. Don't know
R310	How far away is the nearest market for selling agricultural products from this village?	_____ km 99. Don't know
R311	How far away is the nearest market for purchasing agricultural inputs from this village?	_____ km 99. Don't know

MODULE 5. ACCESS TO FINANCIAL SERVICES/ CREDIT

R501	Have any household members taken out a cash loan in the last 12 months?	1. Yes Skip to R503 2. No 99 Don't know Skip to next module
R502	If no, why not?	1. Didn't need 2. Couldn't find a loan that met my needs" (i.e. "is appropriate" in terms of size, terms, etc); 3. Afraid I couldn't pay back 4. No loan providers in my area 5. Other (specify) Skip to next module 99 Don't know
R503	Did you or any other household member take out a loan in the last 12 months to deal specifically with a shock or stress?	1. Yes 2. No 99 Don't know } → Skip to next module
R504	What is the primary source of loan taken out in the last year?	1. Friend/family within the village 2. Friend/family outside of the village 3. Money-lender 4. MFI 5. RuSACCO 6. Bank

		7. NGO 8. Village-based savings group 9. Religious group 10. Input supplier 11. Local trader/merchant 12. Other 99 Don't know
--	--	---

MODULE R6. ACCESS TO FINANCIAL SERVICES/ SAVING

R601	Do you or any other household member regularly save cash?	1. Yes 2. No module 99. Don't know	} → Skip to next
R602	Where are the savings primarily held? Select only one	1. At home 2. MFI 3. Village savings/credit group (e.g., RuSACCO) 4. Bank 5. Mobile banking 6. Other 99. Don't know	
R603	Who primarily decides how savings are used? Select only one	1. Yourself 2. Your spouse/partner 3. You and your spouse/partner 4. Yourself and other HH member jointly 5. Your spouse/partner and other HH member jointly 6. Other (specify): 99. Don't know	
R604	Did you or any other household member use savings specifically to deal with a shock or stress in the last 12 months?	1. Yes 2. No 99. Don't know	

MODULE R7. ACCESS TO INFORMATION

		R701	R702	R703
		Did you or anyone in the household receive any information on [topic] in the last 12 months? 1. Yes 2. No 99 Don't know If 2, 99, skip to next topic	What was your main source of information about [topic]? See codes below	Did the information influence any decisions made by household members? 1. Yes, result of decision benefitted HH 2. Yes, result of decision had a negative effect on HH 3. Yes, no effect on HH 4. No, did not influence decisions 5. No decisions made 99 Don't know
1.	Early warning for natural hazards (flooding, hail, landslide)			
2.	Long-term changes in weather patterns			
3.	Rainfall/ weather prospects for coming season			
4.	Water prices and availability in local boreholes, shallow wells etc			
5.	Animal health (e.g., disease, epidemic) threats/prevention			
6.	Crop health (e.g., pest outbreaks, disease) threats/prevention			
7.	Improved crop production practices/technologies (CA, seeds)			
8.	Improved livestock production practices (health, husbandry)			
9.	Current market prices for live animals in the area			
10.	Market prices for animal products (milk, hides, skins, etc.)			
11.	Grazing conditions in nearby areas			

12.	Conflict or security issues			
13.	Business and investment opportunities			
14.	Opportunities for borrowing money			
15.	Market prices of the food that you buy			
16.	Child nutrition and health information			
17.	Equal rights for women and men			
18.	Gender-based violence			
19.	Natural resource management			

CODES FOR R702 - Main Information sources			
1	Relatives, friends, neighbors	8	Local market
2	Kebele leaders	9	Gov't: rural development agents, health/agriculture ext.
3	Village Development Army	10	NGOs
4	School teachers	11	Newspaper /Radio / TV
5	Group in community (e.g., savings, forest users, farmers)	12	Internet or SMS
6	Religious leaders	13	Private sector (input supplier, veterinarian, etc.)
7	Elders	14	Policy and security people
		99	Don't know

MODULE R8. GROUP PARTICIPATION

		R801	R802
		<p>Are any of the following groups active in this village?</p> <p>Read list</p> <p>1= yes 2= no 99 Don't know</p> <p>If =2 or 99, skip to next topic</p>	<p>For any HH member who is in the group, how active is s/he in the group's decision-making?</p> <p>1. No HH member in group 2. HH member does not participate in decision-making 3. Somewhat active 4. Very active 5. HH member is a leader 99. Don't know</p>
1.	Communal water users' group	If yes, go to R803	
2.	Communal grazing land users' group	If yes, go to R805	
3.	Communal natural resources group	If yes, go to R806	
4.	Credit or micro-finance group		
5.	Savings groups (VLSA, merry-go-round, etc.)`		
6.	Mutual help group (e.g., ritban, afoosha, ofera/webera, burial, etc.)		
7.	Religious group		
8.	Mothers' group		
9.	Women's group		
10.	Youth group		
11.	Other (specify)		

ASK ONLY IF R801a = Yes		
R803	Does the water user's group manage communal water for livestock in this village?	1. Yes 2. No 99. Don't know
R804	Does the water user's group manage communal water for irrigation in this village?	1. Yes 2. No 99. Don't know >> Go to R802a
ASK ONLY IF R801c = Yes		
R805	Does the group decide who in the village can use communal grazing land and when they can use it?	1. Yes 2. No 99. Don't know >> Go to R802c
ASK ONLY IF R801d = Yes		
R806	Does the communal natural resources group decide who in the village can gather firewood and how much?	1. Yes 2. No 99. Don't know >> Go to R802d

ASK AFTER COMPLETING R801 and R802 FOR ALL GROUPS

R807	Over the last 12 months , how often have you been a part of a group that provided labor to someone in the village who needed help?	1. None, no one needed help 2. None, I wasn't part of a group 3. Once or twice 4. 3-5 times 5. 6 or more times 99. Don't know
R808	Over the last 12 months , how often have you been a part of a group that provided food to someone in the village who needed help?	1. None, no one needed help 2. None, I wasn't part of a group 3. Once or twice 4. 3-5 times 5. 6 or more times 99. Don't know
R809	Over the last 12 months , how often have you been a part of a group that provided some other type of help to someone else in the village?	1. None, no one needed help 2. None, I wasn't part of a group

		3. Once or twice 4. 3-5 times 5. 6 or more times 99. Don't know
R810	Has the amount of help you can provide to others in your village changed over the last five years?	1. No (stayed the same) 2. Yes, decreased slightly 3. Yes, decreased greatly 4. Yes, increased slightly 5. Yes, increased greatly 99. Don't know

MODULE R9. COLLECTIVE ACTION

R901	In the last 12 months, have you worked with others in your village to do something for the benefit of everyone in the village?	1. Yes 2. No 99. Don't know
R902	What activities did you participate in that benefit the village? Read list; select all that apply	A. Soil conservation (terracing, bunds, half-moons, gabions, etc.) B. Flood diversion activities C. Repaired/built schools D. Repaired/built health posts or centers E. Road maintenance/construction F. Planted trees on communal land G. Area enclosure H. Other (specify) Y. Don't know

MODULE R10. LIVELIHOOD ACTIVITIES

		R1001	R1002
		What were the sources of your household's food/income over the last 12 months? Read each source Add up number of sources and enter into R1003	Rank these sources based on the proportion of food/income they provide for your household 1 = highest
1.	Farming/crop production and sales		
2.	Livestock production/fattening and sales		
3.	Wage labor (WITHIN THE COMMUNITY)		
4.	Wage labor (OUTSIDE THE COMMUNITY)		
5.	Salaried work		
6.	Sale of wild/bush products (including charcoal, firewood)		
7.	Honey production and sales		
8.	Petty trade (selling other products, e.g., grain, veggies, oil, sugar, etc.)		
9.	Petty trade (selling own products, e.g., local beer, sex work)		
10.	Other self-employment/own business (agricultural, e.g., buying/reselling chat)		
11.	Other self-employment/own business (non-agricultural, e.g., stone cutting, hair braiding, etc.)		
12.	Rental of land, house, rooms		
13.	Remittances		
14.	Gifts/inheritance		
15.	Safety net food/cash assistance		
16.	Other (specify):		
17.	Other (specify):		

	R1003
	Total number of sources

MODULE R11. MIGRATION AND USE OF REMITTANCES

R1101	Over the last two years, has anyone who was living in your household migrated to SOMEWHERE ELSE IN ETHIOPIA looking for work?	1. Yes 2. No 99. Don't know } → Skip to R1104
R1101a	Did the person(s) migrate SOMEWHERE ELSE IN ETHIOPIA permanently or temporarily for work?	1. Permanent 2. Temporary 99 Don't know
R1102	Does the person(s) living SOMEWHERE ELSE IN ETHIOPIA send money back to your household?	1. Yes, regularly 2. Yes, irregularly 3. No 99. Don't know
R1103	Who migrated to SOMEWHERE ELSE IN ETHIOPIA within the last two years looking for work? Select all that apply	A. Male HHH B. Female HHH C. Other adult males in HH D. Other adult females in HH E. Youths Y Don't know
R1104	Over the last two years, has anyone who was living in your household migrated to ANOTHER COUNTRY looking for work?	1. Yes 2. No 99. Don't know } → Skip to R1107
R1104a	Did the person(s) migrate to ANOTHER COUNTRY permanently or temporarily for work?	1. Permanent 2. Temporary 99 Don't know
R1105	Does the person living in ANOTHER COUNTRY send money back to your household?	1. Yes, regularly 2. Yes, irregularly 3. No 99. Don't know
R1106	Who migrated to ANOTHER COUNTRY within the last two years looking for work?	A. Male HHH B. Female HHH C. Other adult males in HH

	Select all that apply	D. Other adult females in HH E. Youths Y Don't know
R1107	CHECK ANSWERS TO R1102 AND R1105: IF 1102 AND 1105 = 3 or 99, END OF MODULE	
R1108	Did you or any other household member use remittances specifically to deal with a shock or stress in the last 12 months?	1. Yes 2. No 99. Don't know

MODULE R12. FOOD INSECURITY COPING STRATEGIES

R1201		
Over the past 7 days, how many days did your household:		Number of days out of the past seven
Read list		Use 0 – 7 to answer number of days.
1.	Rely on less preferred and less expensive foods?	
2.	Borrow food, or rely on help from a friend or relative?	
3.	Purchase food on credit?	
4.	Gather wild food, hunt, or harvest immature crops?	
5.	Consume seed stock held for next season?	
6.	Send household members to eat elsewhere?	
7.	Limit portion size at mealtimes?	
8.	Restrict consumption by adults in order for small children to eat?	
9.	Feed working members of HH at the expense of non-working members?	
10.	Reduce number of meals eaten in a day?	
11.	Skip entire days without eating?	

MODULE R13. SOCIAL AND CAPACITY-BUILDING SUPPORT

INFORMAL SOURCES OF SOCIAL SUPPORT		
R1304	<p>If your household had a problem and needed money or food urgently, who IN THIS VILLAGE could you turn to for help?</p> <p>Read list; select all that apply</p>	<p>A. Relatives B. Non-relatives C. No one D. Other (specify) Y. Don't know</p>
R1305	<p>If your household had a problem and needed money or food urgently, who OUTSIDE THIS VILLAGE could you turn to for help?</p> <p>Read list; select all that apply</p>	<p>A. Relatives B. Non-relatives C. No one D. Other (specify) Y. Don't know</p>
R1306	<p>Compared to one year ago has your ability to get this type of assistance (from someone within or outside of your village):</p>	<p>1. Increased 2. Stayed the same 3. Decreased 99. Don't know</p>
R1307	<p>Who INSIDE THIS VILLAGE would you help if they needed food or money urgently?</p> <p>Read list; select all that apply</p>	<p>A. Relatives B. Non-relatives C. No one D. Other (specify) Y. Don't know</p>
R1308	<p>Who OUTSIDE THIS VILLAGE would you help if they needed food or money urgently?</p> <p>Read list; select all that apply</p>	<p>A. Relatives B. Non-relatives C. No one D. Other (specify) Y. Don't know</p>
R1309	<p>Do you or does anyone else in your household personally know an elected government official?</p>	<p>1. Yes 2. No 99. Don't know</p> <p>} → Skip to R1312</p>

R1310	How do you (or other household member) know the government official? Is he or she a... Read list; select all that apply	A. Family member or relative B. Friend /neighbor C. Acquaintance (members of a group, friend of a friend, etc.) D. Other (specify): Y. Don't know
R1311	Could you ask the official to help your family or village if help was needed?	1. Yes 2. No 99. Don't know
R1312	Do you or does anyone else in your household personally know a staff member of an NGO?	1. Yes 2. No 99. Don't know } → Skip to R1315
R1313	How do you (or another household member) know the NGO staff member? Is he or she a... Read list; select all that apply	A. Family member or relative B. Friend /neighbor C. Acquaintance (members of a group, friend of a friend, etc.) D. Other (specify): Y. Don't know
R1314	Could you ask the NGO staff member to help your family or community if help was needed?	1. Yes 2. No 99. Don't know
R1315	Has your household given assistance to anyone WITHIN THIS VILLAGE in the past 12 months?	1 Yes 2 No 99. Don't know } → Skip to 1318
R1316	What types of assistance has your household <i>given</i> to anyone WITHIN THIS VILLAGE in the past 12 months? Read list; select all that apply	A. Labor sharing (weeding, plowing, construction, etc.) B. Gifts (donation) of cash, animals, materials/supplies or food C. Loan of cash, labor, seeds, animals D. Other (specify): Y. Don't know
R1317	In the past 12 months, who IN THIS VILLAGE have you given assistance to?	A. Relatives B. Non-relatives

	Read list; select all that apply	C. No one D. Other (specify) Y. Don't know
R1318	Within the last 12 months, has your household received assistance from anyone WITHIN THIS VILLAGE ?	1 Yes 2 No 99. Don't know } → Skip to 1321
R1319	Who WITHIN THIS VILLAGE provided you with assistance over the last 12 months? Read list; select all that apply	A. Relatives B. Non-relatives C. Other (specify) Y. Don't know
R1320	What types of assistance has your household received from anyone WITHIN THIS VILLAGE in the past 12 months? Read list; select all that apply	A. Labor sharing (weeding, plowing, construction, etc.) B. Gifts (donation) of cash, animals, materials/supplies or food C. Loan of cash, labor, seeds, or animals D. Other (specify): Y. Don't know
R1321	Within the last 12 months, has your household given assistance to anyone OUTSIDE THIS VILLAGE ?	1 Yes 2 No 99. Don't know } → Skip to 1324
R1322	Who OUTSIDE THIS VILLAGE did you give assistance to over the last 12 months? Read list; select all that apply	A. Relatives B. Non-relatives C. Other (specify): Y. Don't know
R1323	What types of assistance did you give to someone OUTSIDE THIS VILLAGE in the past 12 months? Read list; select all that apply	A. Labor sharing (weeding, plowing, construction, etc.) B. Remittances C. Gifts (donation) of cash, animals, materials/supplies, or food D. Loan of cash, labor, seeds, or animals E. Other (specify):

		Y. Don't know
R1324	Within the past 12 months, has your household received assistance from anyone OUTSIDE THIS VILLAGE?	1 Yes 2 No 99. Don't know } → Skip to 1327
R1325	Who OUTSIDE THIS VILLAGE provided you with assistance over the past 12 months? Read list; select all that apply	A. Relatives B. Non-relatives C. Other (specify): Y. Don't know
R1326	What types of assistance did you receive from someone OUTSIDE THIS VILLAGE in the past 12 months? Read list; select all that apply	A. Labor sharing (weeding, plowing, construction, etc.) B. Remittances C. Gifts (donation) of cash, animals, materials/ supplies, or food D. Loan of cash, labor, seeds, or animals E. Other (specify): Y. Don't know
EDUCATION AND TRAINING SUPPORT		
R1327	Have you or anyone in your household ever received any vocational (job) or skills training?	1. Yes 2. No 99. Don't know
R1329	Have you or anyone in your household ever received any business development training (including financial literacy)?	1. Yes 2. No 99. Don't know
R1331	Have you or anyone in your household ever received any early warning training?	1. Yes 2. No 99. Don't know
R1333	Have you ever or anyone in your household received any natural resource management training?	1. Yes 2. No 99. Don't know

R1335	Have you or anyone in your household ever received seed packets/starter packets from the government or NGOs?	1. Yes 2. No 99. Don't know
R1336	Have you or anyone in your household ever received adult education?	1. Yes 2. No 99. Don't know
R1338	Have you or anyone in your household ever received training in how to use your mobile phone to get market information like prices?	1. Yes 2. No 99. Don't know
R1340	Can you or any other adult in your household read or write?	1. Yes 2. No 99. Don't know

MODULE R14. ASPIRATIONS AND CONFIDENCE TO ADAPT

R1401	Please tell me which one of these two views you most agree with.	1. "Each person is primarily responsible for his/her success or failure in life". 2. "One's success or failure in life is a matter of his/her destiny".
R1402	Please tell me which one of these two views you most agree with.	1. "To be successful, above all one needs to work very hard". 2. "To be successful above all one needs to be lucky".
R1403	Are you willing to move somewhere else to improve your life?	1. Yes 2. No
R1403a	Are you hopeful about your children's future?	1. Yes 2. No
R1403b	What level of education do you want for your children?	1. No preference 2. Any level of primary (but not graduated) 3. Graduated from primary 4. Graduated from secondary

		5. Post-secondary (college, university)
R1404	Do you agree that one should always follow the advice of the elders?	1. Yes 2. No
R1405	Do you communicate regularly with at least one person outside the village?	1. yes 2. No
R1406	During the past week, have you engaged in any economic activities with other villages or clans? For example, farming, trading, employment, borrowing or lending money.	1. Yes 2. No
R1407	How many times in the past month have you gotten together with friends, family, neighbors, etc. to discuss issues, or have food or drinks, either in their home or in a public place?	
R1408	How many days in the past month have you attended a church/ mosque or other religious service?	
R1409	In the last year, how many times have you stayed more than 2 days outside this kebele?	

Below is a series of statements that you may agree or disagree with. Using the scales below indicate your agreement with each item.

		Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
R1411	My experience in my life has been that what is going to happen will happen.	1	2	3	4	5	6
R1412	My life is chiefly controlled by other powerful people.	1	2	3	4	5	6
R1413	It is not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune.	1	2	3	4	5	6
R1414	I can mostly determine what will happen in my life.	1	2	3	4	5	6
R1415	When I get what I want, It is usually because I worked hard for it.	1	2	3	4	5	6

R1416	My life is determined by my own actions.	1	2	3	4	5	6
R1417	Most people are basically honest.	1	2	3	4	5	6
R1418	Most people can be trusted.	1	2	3	4	5	6
R1419	I trust my neighbors to look after my house if I am away.	1	2	3	4	5	6

MODULE R15: GOVERNMENT SUPPORT

R1501	Are there any government or NGO programs in this village?	1. Yes 2. No 99. Don't know } → Skip to 1503
R1502	What types of programming do they provide? Read list; Select all that apply	A. Emergency food assistance B. Emergency cash assistance C. Conditional cash transfers (e.g., CFW) D. Conditional food transfers (e.g., FFW) E. Unconditional cash transfers (non-emergency) F. Unconditional food transfers (non-emergency) G. Household materials and non-food items H. Educational assistance I. Agricultural inputs J. Livestock inputs K. WASH L. Disaster planning/response M. Safety net (PSNP) N. Child malnutrition/infant feeding O. Other Y Don't know
R1503	Is there an emergency plan for livestock offtake if a drought hits your village?	1. Yes 2. No 99 Don't know
R1504	Do you have a conflict resolution committee in your village?	1. Yes 2. No

		99. Don't know
R1506	Who provides the nearest security/police force for your village?	<ul style="list-style-type: none"> 1. Kebele government 2. Woreda government 3. National government 4. Local militia 5. Community members 6. No one 7. Other (specify): 99. Don't know
R1507	<p>How long does it take for the nearest security/police force to reach this village?</p> <p>Only ask this question if R1506 = 1,2,3 or 4</p>	<ul style="list-style-type: none"> 1. Over one hour 2. About one hour 3. Half an hour 4. Minutes 99. Don't know

MODULE R16: GENDER NORMS

R1601	Generally, do adult men and women sit and eat together within households?	<ul style="list-style-type: none"> 1. Yes, regularly 2. Yes, occasionally 3. No 99. Don't know
R1602	Generally, do you and your spouse sit and eat together?	<ul style="list-style-type: none"> 1. Yes, and it is culturally acceptable 2. Yes, but it is not culturally acceptable 3. No, but it is culturally acceptable 4. No, and it is not culturally acceptable 5. Only for special occasions 6. No spouse/spouse absent 99. Don't know
R1603	Generally, do adult men and women sit together in public?	<ul style="list-style-type: none"> 1. Yes, regularly 2. Yes, occasionally 3. No

		99. Don't know
R1604	Generally, do you and your spouse sit together in public?	<ul style="list-style-type: none"> 1. Yes, and it is culturally acceptable 2. Yes, but it is not culturally acceptable 3. No, but it is culturally acceptable 4. No, and it is not culturally acceptable 5. Only for special occasions 6. No spouse/spouse absent 99. Don't know
R1605	Generally, do men in the village help with childcare around the household?	<ul style="list-style-type: none"> 1. Yes, regularly 2. Yes, but rarely 3. Yes, occasionally 4. No 99. Don't know
R1606	Who primarily cares for your children?	<ul style="list-style-type: none"> 1. Yourself 2. Your spouse/partner 3. You help your spouse/partner 4. Your spouse/partner helps you 5. Not applicable 6. Other (specify) 99. Don't know

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF TEAM LEADER: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____

ANNEX 4
Population-Based Survey Data
Treatment and Analysis Plan



USAID
FROM THE AMERICAN PEOPLE

Ethiopia Joint Baseline/End-line PBS Data Treatment and Analysis Plan

Evaluation and Learning (EVELYN) Mechanism

Office of Food for Peace (FFP)

Contract #: AID-OAA-I-15-00-24

Order #: AID-OAA-TO-17-00005

DRAFT – September 14, 2017

This publication was produced for review by the U.S. Agency for International Development. It was prepared by the EVELYN PBS team.

ACRONYMS

ANC	Antenatal care
BL	Baseline
CAPI	Computer-assisted personal interviewing
CHN	Child health and nutrition
CRS	Catholic Relief Services
DFSA	Development food security activity
DTAP	Data treatment and analysis plan
EVELYN	Evaluation and Learning Mechanism
EL	End-line
FANTA	Food and Nutrition Technical Assistance Project III
FFP	Office of Food for Peace
FH	Food for the Hungry
FIES	Food insecurity experience scale
GHT	Gendered household type
HDDES	Household dietary diversity score
ICF	ICF International
IFSS	Internet file streaming system
IP	Implementing partner
MAD	Minimum acceptable diet
MCHN	Maternal and child health and nutrition
MHN	Maternal health and nutrition
MDD-W	Minimum dietary diversity for women
ME&A	Mendez, England and Associates
ORT	Oral rehydration therapy
PBS	Population-based survey
REST	Ethiopia Relief Society of Tigray
USAID	U.S. Agency for International Development
WASH	Water, sanitation and hygiene
WV	World Vision

TABLE OF CONTENTS

1.	BACKGROUND.....	1
2.	STUDY DESIGN AND SAMPLE.....	1
3.	QUESTIONNAIRE.....	2
4.	DATA COLLECTION AND QUALITY CONTROL.....	3
	4.1. DATA COLLECTION MODE AND DATA TRANSMISSION PROCEDURE.....	3
	4.2. CAPI DATA ENTRY TRAINING.....	4
	4.3. FIELD QUALITY CONTROL PROCEDURES.....	4
	4.4. DATA PROCESSING QUALITY CONTROL PROCEDURES.....	5
5.	DATA PREPARATION.....	8
	5.1. SAMPLING WEIGHTS.....	8
	5.2. FFP INDICATOR DEFINITIONS.....	8
	5.2.1 Anthropometry Indicators.....	10
	5.2.2 Agricultural Indicators.....	11
	5.2.3 Poverty Indicators.....	12
	5.2.4 Resilience Indicators.....	13
	5.3. HANDLING OF MISSING DATA AND “DON’T KNOW” RESPONSES.....	13
6.	DATA ANALYSIS PLAN.....	13
	6.1. ANALYSES FOR 2017 BL PBS.....	13
	6.1.1 Household Characteristics.....	14
	6.1.2 Calculation and Tabulation of Indicators.....	14
	6.1.3 Bivariate Analyses.....	14
	6.2. ANALYSES FOR 2017 EL PBS.....	18
	6.2.1 Comparison of 2012 BL and 2017 EL Household Characteristics.....	19
	6.2.2 Calculation and Tabulation of Indicators.....	19
	6.2.3 Comparison of 2012 BL and 2017 EL Indicators.....	19
	6.2.4 Additional Analyses.....	19

APPENDIX A: Sampling Weights

APPENDIX B: Methodology to Calculate Poverty Indicators

APPENDIX C: Resilience Indicators and Analyses

I. BACKGROUND

In Fiscal Year (FY) 2016, the U.S. Agency for International Development (USAID) Office of Food for Peace (FFP) awarded funding for four multi-year development food security activities (DFSAs) in Ethiopia. These DFSAs will be implemented by prime contractors Catholic Relief Services (CRS), Food for the Hungry (FH), Relief Society of Tigray (REST), and World Vision (WV) and their partners.

Under the Evaluation and Learning Mechanism umbrella contract (EVELYN), FFP contracted with the Mendez England & Associates (ME&A) and its subcontractors, ICF International (ICF) and TANGO International (TANGO), to conduct population-based surveys (PBSs) and a resilience assessment for the DFSAs in Ethiopia. In addition to a baseline (BL) PBS, the EVELYN team will conduct an end-line (EL) PBS in the target areas for four development food assistance projects (DFAPs) awarded in FY 2011 that expired in December 2016. The four prior DFAPs were implemented by prime contractors CRS, FH, REST, and Save the Children United States (SCUS) and their partners.

The project areas for the DFSAs and prior DFAPs overlap to a large extent. For this reason, EVELYN will administer a joint BL/EL PBS using a common questionnaire in the overlap and non-overlap areas encompassed by the DFSAs and prior DFAPs. The common questionnaire will be driven by the indicators required for the BL PBS for the DFSAs, many of which (but not all) overlap with those required for the prior DFAPs. The data for the joint BL/EL PBS will be collected in July/August of 2017. The BL data collection for the prior DFAPs was conducted in February and June/July of 2012.

The purpose of the BL PBS for the DFSAs is to assess the current status of key indicators, to gain a better understanding of the prevailing conditions and perceptions of the populations in the DFSA implementation areas, and to serve as a point of comparison for future EL PBSs. Results will also be used to further refine program targeting and, where possible, to understand the relationship between variables to inform program design. The results of the EL PBS will be used for the final evaluation of the prior DFAPs to evaluate change over time for some of the indicators that were measured in the prior BL study.

This document provides a detailed description of the data treatment and analysis plan (DTAP) for the joint BL/EL PBS in Ethiopia. This report is divided into six sections. The next section provides a brief description of the joint BL/EL PBS design and sample, the third section describes the questionnaire, the fourth section describes quality control and data processing procedures, the fifth section focuses on data preparation measures, and the final section describes the data analysis plan.

2. STUDY DESIGN AND SAMPLE

This section briefly describes the study design and sample. A more detailed description of the sampling design for the joint BL/EL PBS is available in the “Ethiopia Joint Baseline/End-line PBS Protocol”, July 2017. A detailed description of the sampling design for the BL PBS for the prior DFSAs can be found in the “Development Food Aid Program in Ethiopia Baseline Survey” Report, October 2012.

The BL component of the joint BL/EL PBS serves as the first phase of a pre-post survey cycle for the DFSA awards, and the EL component of the joint BL/EL PBS serves as the second phase of a pre-post survey cycle for the prior DFAP awards. The pre-post design (using the 2012 BL survey and the 2017 EL component of the joint BL/EL PBS) allows for the determination of statistically significant change in

indicators between the BL and EL for the prior DFAPs; however, it does not allow statements about attribution or causation relating to project impact to be made.

The target population for the joint BL/EL PBS consists of two components: 1) all households in the areas where the prior DFAPs were implemented and 2) all households in the areas where the DFSAs will be implemented. These target populations overlap since the DFSAs will be implemented in some of the same areas where the prior DFAPs were implemented.

The sample size for the joint BL/EL PBS was derived by: 1) calculating the sample size needed for the BL survey for the DFSAs, 2) identifying the sample size needed for the EL survey for the prior DFAPs, and 3) deriving a joint sample size based on these sample sizes and the overlap between the DFSA and prior DFAP project areas. The sample size calculation for the joint BL/EL PBS is based on a multi-stage clustered sample designed to adequately power a test of differences between the BL and EL estimates for the FFP stunting indicator for each DFSA. Table 2.1 shows the areas covered and derived sample size by implementing partner for the prior DFAPs and joint BL/EL PBS.

Table 2.1. Program Area and Sampled Households by Implementing Partner

Implementing Partner	Program Area	Number of sampled households for 2012 BL Study	Number of households needed for 2017 EL study	Number of households needed for 2017 BL study	Number of sampled households for 2017 joint BL/EL study
CRS	Oromia Region and Dire Dawa Administrative Unit	1,522	1,540	1,740	2,670
FH	Amhara Region	1,530	1,540	1,740	1,740
REST	Tigray Region	1,542	1,540	1,740	2,190
SCUS*	Somali and Oromia Regions	1,513	--	--	--
WV**	Oromia and Amhara Regions	--	--	1,740	1,860
TOTAL		6,097	4,620	6,960	8,460

*The CSUS Project areas were not included as part of the joint BL/EL PBS.

**Although WV was not an implementing partner for the prior DFAPs, some areas covered by the prior FH DFAP were included in the WV DFSA target area, thus resulting in more households.

3. QUESTIONNAIRE

The joint BL/EL questionnaire was developed through a series of consultations with FFP, the Food and Nutrition Technical Assistance III Project (FANTA), and the IPs before, during, and after the BL planning workshop in April 2017. All questionnaire modules follow FFP and Feed the Future guidelines, as described in the *FFP Indicators Handbook* (April 2015)¹ and the *Feed the Future Indicator Handbook* (September 2016).²

¹ Food and Nutrition Technical Assistance III Project (FANTA III). 2015. *FFP Indicators Handbook Part I: Indicators for Baseline and Final Evaluation Surveys*. Washington, DC. Available at http://pdf.usaid.gov/pdf_docs/PBAAE201.pdf. A newer version of the FFP Indicators Handbook is pending release in 2017.

² Available at https://feedthefuture.gov/sites/default/files/resource/files/Feed_the_Future_Indicator_Handbook_Sept2016.pdf

The questionnaire consists of separate modules covering the following topics:

- Module A: Household identification and informed consent
- Module B: Household roster
- Module C: Household food security
- Module D: Children’s nutrition and health
- Module E: Women’s nutrition and health
- Module F: Water, sanitation, and hygiene
- Module G: Agriculture
- Module H: Poverty
- Module J: Gender – Cash
- Module K: Gender – Maternal and Child Health and Nutrition (MCHN)
- Module R: Resilience
- ANTHROPOMETRY

Questions for Modules A through G, J and K were adapted using questions from the FFP Standard Indicators Handbook and the Demographic and Health Survey (DHS) questionnaire.³ Questions for Module H were adapted from the World Bank’s Living Standards Measurement Study (LSMS). Questions for Module R were developed by TANGO.

The questionnaires are prepared in English first and then translated into three local languages (Amharic, Tigrigna and Oromia) and pre-tested in the field. The total time for completing the survey is expected to be approximately 2-3 hours.

The 2012 BL PBS questionnaire included modules to collect data for: household food security; women’s dietary diversity; water, sanitation and hygiene; household economy; gender and social perspectives; persons living with disabilities; social services; nutritional status for children; infant and young children’s feeding practices; children’s diarrhea; and access to antenatal care. Some (but not all) of these modules overlap with the joint BL/EL PBS questionnaire. A list of the overlapping indicators where change over time can be measured for the EL PBS are provided in Table 5.2 of section 5.2.

4. DATA COLLECTION AND QUALITY CONTROL

4.1. Data Collection Mode and Data Transmission Procedure

The 2017 joint BL/EL PBS data will be collected with tablets using Computer-Assisted Personal Interviewing (CAPI) mode by local data collection subcontractor, Kimetrica. Tablets will be loaded with a CSPro data entry application developed at ICF for FFP surveys and tailored to fit the PBS questionnaire. All data will be entered directly into the tablets and edited while interviewing in the field.

For transmission of data from the field, Kimetrica will use Internet File Streaming System (IFSS), a cloud-based electronic file delivery web service. The primary objective of the service is to deliver files from one user to another in a way that is fast and secure. The EVELYN CSPro programmer will work in-

³ MEASURE DHS. *DHS model questionnaire: Phase 6 (2008-2013) (English, French)*. Available at <http://www.measuredhs.com/publications/publication-dhsq6-dhs-questionnaires-and-manuals.cfm>

country to set up and test the cloud-based data transmission system, as well as to provide technical support during the first week of data collection, to ensure that tablets and the IFSS transmission system are operating smoothly. The subcontractor will upload data to the IFSS on a regular schedule.

4.2. CAPI Data Entry Training

All interviewers and supervisors will participate in a CAPI data entry training prior to the start of fieldwork to ensure the successful use of tablets during data collection. ICF IT specialists will lead the CAPI training sessions, which will include:

- Basic use of the tablet, including how to check and prepare the tablets, switching off/on, login, touch screen/keyboard, rotating screen, buttons to avoid, change of batteries, power management, click/double click, swiping, basic OS tasks
- Review of different types of responses to questions, including predetermined numeric, open-ended numeric, predetermined alpha, open text, and multiple response
- Trouble spots in the questionnaire and troubleshooting, error messages
- Anthropometry data entry with anthropometry measurement exercises
- Practice interviews with tablets in pairs, including starting/stopping the interview, reading questions, entering different types of responses, household rosters, use of calendar for age verification
- Workflow, including assigning interviews, receiving assignments and sending completed interviews back to supervisors, supervisors transferring updates to interviewers
- Bluetooth transfers of data to the central office via the IFSS

4.3. Field Quality Control Procedures

ICF ensures high-quality data through a strong emphasis on training field staff, monitoring data collection and quality control at the field level. During critical periods, including training, anthropometry standardization testing, pretesting, piloting, and at the beginning of fieldwork, the ICF survey coordinator will be in-country to coordinate and oversee these activities. When the ICF survey coordinator is not in the country, the local survey monitor will oversee fieldwork activities and closely update the ICF survey coordinator on fieldwork progress or any issues encountered during data collection. The quality control procedures established in the field include:

Proper fieldwork oversight: Maximum ratio of one supervisor for every four interviewers, and one anthropometry specialist. Each interviewer will be accompanied by a Team Supervisor for one full interview, from start to finish, within the interviewer's first three clusters of households.

Inconsistency checks: These will be built into the CSPro data entry application and will include respondent eligibility checks, checks for questionnaire skip patterns and filters, valid response range checks and other quality control checks.

Field-check tables: These tables will be run on raw survey data that are uploaded from the survey teams to the central office via the Internet file transfer system. Therefore, they represent a near real-time snapshot of the status of the survey data quality. Field-check tables are designed to flag indicators that appear to be lower or higher than anticipated, such as the expected number of eligible women and children per household. The ICF CSPro programmer and supervisors will work together to review the tables and identify any problems. If data collection problems are discovered

at the team level, individual-level tabulations can be run to determine whether problems are team-wide or restricted to one or two of the team members. Immediate action will be taken to address problems, either by contacting the team supervisor by telephone or by visiting the team to review the findings. In cases of serious problems, a brief written report will be produced detailing the teams with problems and the actions that were taken. The supervisors of teams whose data indicate serious problems in data collection will be informed immediately of the specific problems observed.

Data review: Supervisors will review the electronic data received from interviewers and resolve error messages identified by the program. The review will be conducted on a daily basis to identify any missing or problematic data items. Supervisors will not be able to close a cluster and transmit the final data to the central office until all error messages identified are resolved.

Re-interviews: During fieldwork, ten percent of the households interviewed per cluster (three households) will be randomly selected for a short re-interview by the team supervisor. The supervisor will visit the household and conduct a quick re-interview on paper comprising the first two sections of the household questionnaire (the cover page and the household roster). The team supervisor will then compare the manually collected responses to the responses in the CAPI system. Any significant discrepancies between the two will be followed up by the supervisor. Re-interviews can be effective in detecting issues, such as falsifying interviews and deliberate displacement of ages of household members to reduce workload.

Completion of interviews: Interviewers will make up to three visits to the household to interview a respondent, and will plan one to two visits with the respondents to successfully complete the interview, as necessary.

Closing the cluster: This is the last step for the field team and supervisors before leaving each cluster. This is an ongoing activity throughout the data collection period. After the supervisor receives all data from the team, s/he will run a program to check all data collected for completeness and structural integrity. The program will generate a report flagging any missing or incomplete data items. The supervisor will make sure that any problems are resolved before leaving the cluster. When there are no issues remaining, the system will archive the data and automatically upload them to the local subcontractor's central office. Data transfers from the field to the central data office in Addis Ababa will take place regularly during the data collection.

4.4. Data Processing Quality Control Procedures

The CSPro data capture and processing program is designed to allow only valid data ranges, to check questionnaire logic (skips and filters) and to flag data inconsistencies during data entry. The CSPro program will also make comprehensive reviews of the data at the cluster level.

Within CSPro, a hierarchical structure is used to store the survey data; each module corresponds to a unique record within the CSPro dictionary (codebook). For singly-occurring modules (i.e., one set of values per sampled household), such as C, F, H and R, there will be one line of data in the ASCII file corresponding to the CSPro record where those variables have been defined. For modules where more than one person is included (such as the household roster (Module B), the anthropometry modules for children and women, and Modules D, E, G, J, and K), there will be one line of data for each person eligible for that roster/module. For example, if there are five persons in the household, there will be five lines of data in the data file corresponding to the record created to represent Module B.

The complete suite of quality control checks used during the data processing cycle include the following:

1) Data Capture

- a) Range checking for numeric responses: Based on all possible values being listed in the CSPro dictionary, CSPro automatically ensures that values cannot be entered outside that range. For example, once the variable "sex" has been assigned to the codes 1 (male) and 2 (female), no other value can be entered.
- b) Range checking for alphabetic responses: For questions that allow multiple responses to be selected (corresponding to the alphabetic responses), a specially-programmed function has been added, which ensures that: (1) only the letters listed can be entered; (2) allowable letters only appear once ("A", but not "AA"); (3) responses requiring an "other" text entry (generally indicated with the "X" and sometimes "W" characters) are captured; (4) responses that must appear in isolation from any other response (usually "Y" (no one) or "Z" (don't know)) do not appear in combination with any other letter; and (5) the field cannot be left blank.
- c) Consistency checks: In selected fields when applicable, answers will be cross-checked against other fields for validity. For example, in Modules D and E and the anthropometry sections, age and date of birth will be compared to one another to ensure agreement. In addition, in any module that asks for a person's age, this will be cross-checked against the age given in the household roster (Module B); if an age difference exists, a warning message is issued and the interviewer must verify the correct age.
- d) Skips: If a skip is present, then based on the respondent's answer to the question, the skip will be applied by the CAPI system. Responses that are skipped will be designated as missing by the CAPI system. For numeric responses, missing is indicated by filling the field with the number "9". For alpha fields, missing is indicated by filling the field with "X" to indicate "text missing".
- e) Filters: If a question should not be asked, it will be skipped. For example, persons under the age of 15 are not asked their marital status in the household roster. Therefore, the question will be skipped over for those under-age persons.
- f) Identifier integrity: A file containing the geographic identifiers will be created for each country. The file provides, for any given cluster, all levels of geographic identifiers. This information will be prefilled from the sample files. This step ensures that the correct identifier is associated with each record.

2) Structure Checks

- a) Files are created at the cluster level. They are concatenated into a single file at the very end of closing the clusters. The final data are then transmitted to the central office. When closing the clusters, the total number of households with complete (result=1) and incomplete (result <> 1) result codes are also logged in. A check is applied that compares the number of households found within their data file against what was expected from the sample file, with an error being generated if the two are not the same. Likewise, if the total number of households found is correct, but if there are some partially saved households, an error message will be generated. The cluster cannot be closed until these problems have been resolved.

- b) In addition to checking for result codes and total number of households, the program will ensure for each household that the required number of individual records exist, based on the eligibility of the persons within Module B. For example, if the household roster indicates three persons should be administered Module D, then three records must exist in the file before the structure check can succeed. The cluster cannot advance to the consistency editing stage until these problems have been resolved.

3) Consistency Checks

- a) More complex issues are handled at this stage, rather than during fieldwork. Once a cluster has been closed in the field and data have been transmitted to the central office, a secondary (consistency) edit program will be run against the data in the central office. Many of the checks made during the interviewing process will be repeated here. All error messages are assigned a unique number.
- b) The central office will be provided a secondary editing manual that lists all error messages in numerical order. It will describe the problem that prompted the error, and possible methods to resolve the conflict. In general, the method is to review the data collected, compare the variables (questions) involved, and look for any notes the interviewer may have made, or changes the field supervisor or field coordinators may have made, that created/exacerbated the problem. Checks for missing values are not made at this time, as it is too late for the field team to resolve this type of error.

4) Miscellaneous Data Quality Measures

- a) Field-check tables will be run on a weekly basis that will report on several key items measuring fieldwork quality. These tables will show data at the team level. For example, a table will be generated that shows age distributions of female respondents between 12-18 years that allows survey managers to determine if teams are dropping respondents with ages below 15, in order to disqualify women from Module E. This helps to identify underperforming teams.
- b) Frequencies will be generated to ensure reasonable distribution of the data and that no out-of-range values exist.

ICF will conduct a quality control review of the raw and edited data as the data is received from the central office in Addis Ababa. Data transfers will take place weekly from the central office to ICF via the IFSS secure file transfer protocol. Data cleaning will take place based on secondary (consistency) editing reports generated in-country, and per ICF feedback. Final review and data cleaning will take place at ICF in Rockville, MD, upon receipt of the final clean datasets. The final raw CSPro datasets will be accompanied by a data dictionary/codebook with all variables clearly labeled. The raw CSPro datasets will be converted to facilitate data analysis using SAS, Stata or SPSS Statistical Software.

5. DATA PREPARATION

5.1. Sampling Weights

Sampling weights will be computed and used in the data analyses. Weights will be computed separately for the BL PBS data analyses and the EL PBS data analyses according to the unique sampling scheme that is relevant to the associated sampled household or individual. This will involve computing an overall sampling weight for each indicator by taking the inverse of the product of the probabilities of selection from each stage of sampling (cluster selection and household selection). Weights will be calculated for:

- Households (used for indicators derived from Modules C, F, H, and R)
- Children under five years of age (Module D)
- Women 15-49 years of age (Module E)
- Non-pregnant women 15-49 years (Women's anthropometry)
- Farmers (Module G)
- Cash-earning adults (Module J)
- Parents of children under two years of age (Module K)

Weights will be calculated separately for each of the project areas and will be adjusted to compensate for household- and individual-level non-response, where appropriate. The household level nonresponse adjustment is based on the total number of households with completed interviews and the total number of households in each cluster from the listing exercise. Individual level non-response adjustments for Modules D, E, G, J, and K are based on the number of completed interviews for each individual and the number of eligible individuals from the household roster.⁴

A more detailed description of the calculation for sampling weights is provided in Appendix A.

5.2. FFP Indicator Definitions

The FFP required indicators to be included in the data analysis are listed in Table 5.2. Definitions of the FFP indicators are provided in the *FFP Indicator Handbook*, and definitions for resilience indicators are described in this section. Out of the full set of indicators included in the joint BL/EL PBS, 15 indicators, highlighted in green, were included in the 2012 BL PBS.

Table 5.2. Joint BL/EL PBS Indicators

Indicator	Disaggregation Level	Target Population
FOOD SECURITY		
1. Average Household Dietary Diversity Score (HDDS)	None	Household
2. Prevalence of moderate or severe food insecurity*	GHT**	Household
POVERTY		
3. Per capita expenditures (as a proxy for income) of USG-assisted areas	GHT	Household
4. Prevalence of poverty: Percent of people living on less than \$1.25 or \$1.90 per day	GHT	Household
5. Depth of Poverty: Mean percent shortfall relative to the \$1.25 or \$1.90 poverty line	GHT	Household

⁴ Strictly speaking, a separate non-response adjustment should be made for all indicator subgroups, e.g., children 0-5 months, children 6-23 months, women married in a union, etc. However, nonresponse for these subgroups very closely mirrors nonresponse for the entire group, so these separate nonresponse adjustments are not needed.

WATER, SANITATION AND HYGIENE (WASH)		
6. Percentage of households using a basic drinking water source	Distance from service	Household
7. Percent of households in target areas practicing correct use of recommended household water treatment technologies	Technology type	Household
8. Percentage of households using a basic sanitation facility	None	Household
9. Percent of households in target areas practicing open defecation	None	Household
10. Percent of households with soap and water at a handwashing station commonly used by family members	None	Household
AGRICULTURE		
11. Percentage of farmers who used financial services (savings) in the past 12 months	Sex	Farmer
12. Percentage of farmers who practiced the value chain activities promoted by the project in the past 12 months	Sex	Farmer
13. Percentage of farmers who used at least [a project-defined minimum] sustainable agriculture (crop, livestock and NRM) practices and/or technologies in the past 12 months	Sex	Farmer
14. Percentage of farmers who used at least [project-defined minimum number] of sustainable crop practices and/or technologies in the past 12 months	Sex	Farmer
15. Percentage of farmers who used at least [project-defined minimum number] of sustainable livestock practices and/or technologies in the past 12 months	Sex	Farmer
16. Percentage of farmers who used at least [project-defined minimum number] of sustainable natural resource management practices and/or technologies in the past 12 months	Sex	Farmer
17. Percentage of farmers who used improved storage practices in the past 12 months	Sex	Farmer
WOMEN'S HEALTH AND NUTRITION		
18. Prevalence of underweight women	None	Women 15-49 years
19. Prevalence of women of reproductive age consuming a diet of minimum diversity	None	Women 15-49 years
20. Contraceptive Prevalence Rate	None	Women 15-49 years who are married or in a union
21. Percent of births receiving at least four antenatal care (ANC) visits during pregnancy	None	Women 15-49 with a live birth in the past 5 years
CHILDREN'S HEALTH AND NUTRITION		
22. Prevalence of underweight children under five years of age	Gender	Children 0-59 months
23. Prevalence of stunted children under five years of age	Gender	Children 0-59 months
24. Prevalence of wasted children under five years of age	Gender	Children 0-59 months
25. Percentage of children under age five who had diarrhea in the prior two weeks	Gender	Children 0-59 months
26. Percentage of children under five years old with diarrhea treated with Oral Rehydration Therapy (ORT)	Gender	Children 0-59 months with diarrhea in the last 2 weeks
27. Prevalence of exclusive breast-feeding of children under 6 months of age	Gender	Children 0-5 months
28. Prevalence of children 6-23 months receiving a minimum acceptable diet (MAD)	Gender	Children 6-23 months
GENDER		
29. Percentage of men and women who earned cash in the past 12 months	Sex	Adults 15+ years

Indicator	Disaggregation Level	Target Population
30. Percentage of men/women in union and earning cash who make decisions alone about the use of self-earned cash	Sex	Adult cash earners married or in a union
31. Percentage of men/women in union and earning cash who make decisions jointly with spouse/partner about the use of self-earned cash	Sex	Adult cash earners married or in a union
32. Percentage of men and women with children under two who have knowledge of maternal and child health and nutrition (MCHN) practices	Sex	Parents of children under 2 years
33. Percentage of men/women in union with children under two who make maternal health and nutrition (MHN) decisions alone	Sex	Parents of children under 2 years married or in a union
34. Percentage of men/women in union with children under two who make MHN decisions jointly with spouse/partner	Sex	Parents of children under 2 years married or in a union
35. Percentage of men/women in union with children under two who make child health and nutrition (CHN) decisions alone	Sex	Parents of children under 2 years married or in a union
36. Percentage of men/women in union with children under two who make CHN decisions jointly with spouse/partner	Sex	Parents of children under 2 years married or in a union
RESILIENCE		
37. Shock exposure index	None	Households
38. Cumulative impact of shock exposure index	None	Households
39. Absorptive capacity index	None	Households
40. Adaptive capacity index	None	Households
41. Transformative capacity index	None	Households

* Food insecurity is measured using the Food Insecurity Experience Scale (FIES) based on a 12 month and 30 day recall

** Gendered household type

5.2.1 Anthropometry Indicators

Children: Children's nutritional status indicators will be computed following the method used by the DHS. To obtain anthropometric indicators on stunting, underweight, and wasting children, the World Health Organization (WHO) growth reference standards (WHO Multicentre Growth Reference Study Group 2006) will be used to compute three nutritional scores, described as z-scores. These z-scores are the HAZ (height-for-age), WAZ (weight-for-age), and WHZ (weight-for-height), relating to stunting, underweight, and wasting, respectively.

Each z-score is calculated by comparing the child's height/length or weight with the median value of the WHO 2006 reference population. The difference is divided by the standard deviation of the reference population as shown in the following formula:

$$\text{Z-score} = (\text{Individual value of the child} - \text{median value of children in the reference population}) / (\text{standard deviation of the reference population})$$

Using the above formula, each z-score for HAZ, WAZ, and WHZ is calculated as follows:

$$\text{Z-score for HAZ} = (\text{Height-for-age of children in the sample} - \text{median value of height of children in the reference population having the same age}) / (\text{Standard deviation of height of children in the reference population having the same age})$$

Z-score for WAZ = (Weight-for-age of children in the sample – median value of weight of children in the reference population having the same age) / (standard deviation of weight of children in the reference population having the same age)

Z-score for WHZ = (Weight-for-height of children in the sample – median value of weight of children in the reference population having the same height) / (standard deviation of weight of children in the reference population having the same height)

After obtaining the z-scores, datasets will be cleaned by flagging cases with z-scores beyond specified lower or upper cutoffs and excluding them from the computation of all indicators. The purpose of flagging is to eliminate extreme values that are most probably due to measurement or data-entry errors. Flags used in cleaning anthropometric data prior to computing indicators are shown in Table 5.2.1a below. Cases with height-for-age z-scores that are less than -6 standard deviations (SD) from the median or greater than +6 SD above the median will be flagged and excluded from the calculation of the prevalence of stunting. Similarly, cases with weight-for-age z-scores that are less than -6 SD from the median or greater than +5 SD above the median will be flagged and excluded from the calculation of the prevalence of underweight. Finally, cases with weight-for-height z-scores that are less than -5 SD from the median or greater than +5 SD above the mean will be flagged and excluded from the estimation of the prevalence of wasting.

Table 5.2.1a: Flags used in cleaning anthropometric data prior to computing indicators

Z-score	Cut-off point
Height-for-age z-scores (HAZ)	<-6 SD or >+6 SD
Weight-for-age z-scores (WAZ)	<-6 SD or >+5 SD
Weight-for-height z-scores (WHZ)	<-5 SD or >+5 SD

Women: For women, body mass index (BMI) will be used to measure nutritional status. The BMI is the ratio of the weight in kilograms to the square of the height in meters (kg/m²). Criteria for measuring women’s nutritional status by BMI levels are shown in Table 5.2.1b.

Table 5.2.1b: Indicators of women’s nutritional status by BMI levels

Women’s Nutritional Status	BMI
Moderately & severely underweight	< 17
Mildly underweight	17.0 - 18.49
Normal weight	18.5 - 24.9
Overweight	25.0 - 29.9
Obese	>=30

5.2.2 Agricultural Indicators

Country-specific adaptations of the FFP agricultural indicators were developed after discussions with FFP, FANTA, and the IPs during the BL planning workshop held in April, 2017. Indicators relating to the use of financial services, value chain activities, sustainable agricultural practices, and improved storage practices were defined based on those activities and practices used and promoted by the projects; and

the minimum thresholds for the sustainable agriculture practices indicators were set separately by each DFSA.

The following tabulation instructions will be used to calculate the agricultural indicators:

- *Percentage of farmers who used financial services* (savings, agricultural credit, and agricultural insurance) in the past 12 months is calculated based on the sample weighted number of farmers who reported using at least one financial service divided by the sample weighted total number of farmers.
- *Percentage of farmers who practiced the value chain activities* promoted by the project in the past 12 months is calculated based on the sample weighted number of farmers who reported using at least one value chain activity to be promoted by the project divided by the sample weighted total number of farmers.
- *Percentage of farmers who used a project-defined minimum number of sustainable crop practices* in the past 12 months is calculated based on the sample weighted number of farmers who reported using the minimum number of sustainable crop practices and/or technologies to be promoted by the project divided by the sample weighted total number of farmers who have access to and make decisions over a plot of land.
- *Percentage of farmers who used a project-defined minimum number of sustainable livestock practices* in the past 12 months is calculated based on the sample weighted number of farmers who reported using the minimum number of sustainable livestock practices and/or technologies to be promoted by the project divided by the sample weighted total number of farmers who raise and make decisions about livestock and/or aquaculture.
- *Percentage of farmers who used a project-defined minimum number of natural resource management (NRM) practices* in the past 12 months is calculated based on the sample weighted number of farmers who reported using the minimum number of sustainable NRM practices and/or technologies to be promoted by the project divided by the sample weighted total number of farmers.
- *Percentage of farmers using improved storage practices* is calculated based on the sample weighted number of farmers who reported using at least one improved storage practice and/or technology divided by the sample weighted total number of farmers.

5.2.3 Poverty Indicators

Calculation of the three poverty indicators involves a complex and time-consuming methodology that follows guidance from USAID and the World Bank. A detailed description of this methodology is provided in Appendix B.

5.2.4 Resilience Indicators

The resilience questionnaire module and indicators were developed by TANGO. Resilience indicators will be calculated based on the definitions and methodology provided by TANGO, as described in Appendix C.⁵

5.3. Handling of Missing Data and “Don’t know” Responses

Missing data points will be excluded from both the denominator and the numerator for the calculation of all indicators. “Don’t know” and “Refused” responses will be excluded from the numerators used in the calculation of the indicators. For example, for the HDDS component, “Yes,” “No,” and “Don’t know” responses will be included in the denominator, but only “Yes” responses will be counted in the numerator. For poverty indicators, there are special instructions for handling missing data (see Appendix B).

6. DATA ANALYSIS PLAN

Separate datasets will be prepared for the 2017 BL sample and the 2017 EL sample. Data analyses will be conducted separately for the BL and EL PBS. Analyses will include examination of key demographic characteristics of the study population, calculation of all FFP indicators, bivariate analyses and multivariate analyses as appropriate. Analyses of the EL PBS data will include comparisons between the 2012 BL and 2017 EL key demographic characteristics, calculation of all FFP indicators and comparison between 2012 BL and 2017 EL for overlapping indicators. TANGO will conduct the resilience analyses, as described in Appendix C. Indicators will be calculated separately for each project and for the combined project area, and all analyses will be weighted to reflect the full target population. Stata version 14⁶ will be used for analysis and statistical testing. A detailed data analysis plan for the BL PBS and EL PBS is provided below.

6.1. Analyses for 2017 BL PBS

Data analysis for the BL PBS includes examination of key demographic characteristics of the study population, calculation of all FFP indicators, and bivariate analysis of indicators that can help inform program targeting and program design where possible. The baseline indicator estimates are presented for the combined project areas and for each project area separately; and will be disaggregated by overlapping versus non-overlapping geographic areas with the prior DFAPs because the overlapping areas will be of most interest for the new DFSAs.

Bivariate analyses including disaggregation by key sub-populations will be conducted for each project area. They will not be performed for the combined project areas since the combined estimates will mask differences by project area; and program targeting and the design of interventions are project-specific. Additional multivariate analyses may be conducted if warranted by the preliminary indicator estimates and bivariate analyses, or to triangulate the results from the qualitative study. In some cases, it may not be possible to conduct the proposed analyses due to sample size limitations.

⁵ TANGO will calculate resilience indicators and conduct all further analyses of these indicators.

⁶ StataCorp. 2015. *Stata Statistical Software: Release 14*. College Station, TX: StataCorp LP.

6.1.1 Household Characteristics

The baseline report will provide an overview of the size and sociodemographic characteristics of the population in the project areas and an explanation for why or how these characteristics may influence the baseline indicators and the achievement of program targets over time.

This includes the percentage of individuals in the following key target population groups in the combined project areas and by project:

- Adults (15+ years), total and by sex
- Cash earners (15 + years), total and by sex
- Farmers (15+ years), total and by sex
- Women of reproduction age (15-49)
 - Non-pregnant
 - Married or in a union
 - With a live birth in the past 5 years
 - Pregnant and lactating women
- Children under 5 years, total and by sex
- Children under 2 years, total and by sex
- Children under 6 months, total and by sex
- Children 6 -23 months, total and by sex
- Gendered household type (Percent of households)

This analysis also includes the following household-level statistics for the combined project areas and by project:

- Average household size (Number of persons)
- Average number of adults (15+ years) per household
- Percent of households with children under 5 years of age
- Percent of households with a child 6-23 months of age
- Percent of households with a child under 6 months of age
- Household headship (Percent male)
- Education level of head of household (Percent of households)

6.1.2 Calculation and Tabulation of Indicators

All indicators will be generated using relevant sampling weights to represent the full target population and tabulated for the combined program areas and for each DFSA separately. All indicators will be disaggregated, as specified in Table 5.2. Point estimates and variance estimation (derived using Taylor series expansion) will take into account the design effect associated with the complex sampling design; 95 percent confidence intervals will be provided for all FFP indicators at the aggregated program level and for each DFSA separately.

6.1.3 Bivariate Analyses

Select bivariate analyses will be conducted to explore relationships between indicators and other important household/individual characteristics, and to explore associations between outcome and

impact indicators. These analyses are intended to provide useful information to help identify particular sub-groups on which to focus or to help inform program design by illustrating the factors that are associated with the outcome and impact indicators. Differences in means or proportions between groups or correlations will be tested using appropriate statistical test of differences (t-test, proportion test, chi square test).

The rationale and some plausible explanations of the bivariate analyses are discussed below, followed by a description of the proposed analyses by content area.

- *Gendered household type*: Based on other FFP countries' data, certain gendered household types, particularly those with adult females only and adult males only, seem to have higher hunger scores. As such, it would be interesting to explore if the gendered household type also affects women and children's dietary intake indicators such as minimum dietary diversity – woman (MDD-W) and minimum acceptable diet (MAD), and possibly some of the child nutrition indicators.
- *Education*: Since head of the household plays a major role in household decision making, his/her education are expected to affect most of the indicators. Education status of primary caregiver plays an important role in children's health and nutrition and overall household wellbeing. A significant positive relation could provide evidence for projects to invest more resources in interventions that could improve adult literacy, particularly that of female adults.
- *Gender bias in intra-household resource allocation*: Gender bias in intra-household resource allocation is well-documented in Asia, and recent studies in Africa, including Ethiopia, also provided evidence of gender bias.⁷ Gender bias can affect both adult women and female children. Analysis of children's health and nutrition by sex of the child and sex of the household head might shed important light on gender bias. Increased household food security in theory, could mean improved dietary intake for children and women. The non-existence of such relationships could mean several things, including a lack of adequate distribution of food among the children and women within the household. A quick relational analyses of food security indicators (HDDS and FIES) could provide useful insights for the projects to better understand the targeted households' food dynamics in the project areas.
- *Sustainable agriculture practices*: Use of improved and sustainable agriculture practices, including access to credit and improved grain storage practices, could help improve the households' food security; in turn, improved access to food may contribute to consumption of more nutritious foods, thereby improving the nutritional status of households. The suggested analysis will provide evidence of these relationships so that the projects can better design their agriculture interventions.
- *Health behavior*: Household WASH practices can affect household nutrition and wellbeing. Unsafe drinking water, poor or non-existent handwashing practices, and/or inadequate disposal of human feces can cause infections and diseases. Analyses in this section will reveal the evidence of such relationships, which could be very useful for the project implementers to prioritize WASH interventions.

⁷ Feridoon Koohi-Kamali, *Intrahousehold Inequality and Child Gender Bias in Ethiopia*, The World Bank

- *Women's empowerment:* Women's ability to earn cash can give them leverage to participate in household decision making, such as decisions about household consumption and expenditures, which may contribute to improved nutrition among children and women and improve the food security of the overall household. The proposed analyses will investigate perceived control over decisions about how cash is spent and decisions about child health and nutrition; and FFP indicators related to women and children's nutrition and household security.

Household Food Security, Poverty, and Livelihood Activities

- Analysis of food security, poverty and livelihood activities will be presented in the same section because of their interrelationship. The FFP indicators for food security and poverty will be disaggregated by gendered household type and the level of education of the household head. The results of these analyses are intended to help focus targeting on subgroups that may be more vulnerable to food insecurity and poverty. Knowledge of the characteristics of the head of households who are particularly vulnerable to poverty or food insecurity can inform program design. For example, the literacy and level of education may influence how information in meetings or trainings intended to build skills and provide information are rolled out.
- Food security and poverty indicators will also be analyzed in relation to the type of development assistance programming available in the village at the time of the survey and prior receipt of education and training support. The results of this analysis are expected to illustrate the type of program assistance or interventions associated with lower vulnerability to food insecurity and poverty.
- Bivariate analyses will be conducted for the FFP food security and poverty indicators, such as (1) average daily per capita consumption by household hunger status; (2) average household dietary diversity score by household poverty status; and (3) prevalence of poverty and prevalence of hunger. This analysis is intended to empirically test hypothesized relationships in the theory of change on the interrelationship between food security and poverty and to establish a baseline profile of the economic status of food-insecure households.
- The analysis of livelihood activities will look at the percentage of households that engage in more than one livelihood activity or have more than one source of income. It will also identify primary livelihood activities. These two variables will be disaggregated by gendered household type, prior receipt of business development training, and prior receipt of vocational or skills training. Bivariate analyses of these two variables will be conducted with the food security and poverty indicators. The results of these analyses are intended to inform program targeting and design by (1) identifying primary livelihoods that households are currently pursuing, (2) identifying the types of program assistance that can help households diversify their livelihood activities, and (3) identifying livelihood activities that potentially contribute to higher income and reduce vulnerability to food security poverty.

Agriculture

- The types of crops and livestock produced in each of the project areas will be presented and analyzed by sex of the farmer, land ownership and size of land. The types of crops planted will also be analyzed in relation to whether the land is used for sharecropping. The results of the analyses are intended to highlight whether certain subgroups are more likely to focus on food

crops versus cash crops. We are unable to discuss crop and livestock productivity using the quantitative data because the survey does not collect this information. However, univariate analyses will be provided for the following variables to provide a baseline understanding of some of the factors that may be related to agricultural productivity: land ownership and size of land, availability and accessibility of agricultural extension services, and availability and accessibility of veterinary services.

- The baseline estimates for use of financial services, sustainable agriculture practices, value chain activities and improved storage methods will be presented and disaggregated by sex of farmer. To better understand the factors that open pathways to the use of financial services, bivariate analyses of the use of financial services will be conducted with the availability of institutions where people can save money within five miles of respondents' villages and the availability of institutions where people can borrow money within five miles of respondents' villages. Bivariate analyses will also explore the relationship between use of financial services and use of agro-inputs for crops or livestock to empirically test a hypothesized relationship in the theory of change on the relationship between access to financial services and use of inputs that enhance productivity.

Water, Sanitation and Hygiene (WASH)

- The WASH indicators will be disaggregated by gendered household type and level of education of the household head, and the availability of WASH government or NGO programs in the respondents' villages. The results of these analyses are intended to inform program targeting, for example, by highlighting certain subgroups or villages whose baseline estimates are significantly lower than the project area average. Bivariate analyses of WASH practices and children's health and nutrition status are covered in the section on Child Health and Nutrition. The results of these analyses are intended to highlight whether program interventions should consider focusing on the use of a particular WASH infrastructure.

Women's Health and Nutrition

- Bivariate analyses will be conducted for the prevalence of underweight women and MDD-W with the household poverty status and type of development assistance programming available in the village. Results can illustrate the types of program assistance that are statistically associated with women's nutrition and potentially serve as a basis for discussing how and whether to align future interventions with existing ones. Additionally, bivariate analyses will be conducted for the following: (1) antenatal care and availability of health services within five miles of respondents' villages; (2) antenatal care and physical condition of health service used by people in respondents' villages; and (3) contraceptive use and availability of health services within five miles of respondents' villages. Results can help shed light on the factors associated with women's sexual and reproductive health care practices.
- Additional multivariate analyses that control for confounding variables may be conducted to illustrate the potential pathways for improvements in women's health and nutrition. These analyses should control for households' use of sustainable or improved agriculture practices and value chain activities, maternal health decision making, and female-level and household-level factors that can influence women's health and nutrition. The results of these analyses may help inform program design and empirically validate relationships in the underlying theory of change.

These analyses will be conducted if warranted by the results of the bivariate analyses or the qualitative study.

Children's Health and Nutrition

- Children's health and nutrition indicators will be disaggregated by sex. Bivariate analyses will be conducted for children's malnutrition indicators (stunting, underweight, and wasting) and the prevalence of diarrhea with the following: (1) use of improved water source, (2) use of improved sanitation facility, (3) correct water treatment; and (4) handwashing facility with soap and water. Use of ORT will be analyzed in relation to the availability of health services within five miles of respondents' villages and the ability to access the health service facility. Results are intended to highlight any gender bias and suggest factors that are associated with children's health and nutrition and inform program design where possible.
- Additional multivariate analyses that control for confounding variables may be conducted to illustrate the potential pathways for improvements in children health and nutrition. These analyses could control for households' use of sustainable or improved agriculture practices and value chain activities, decision making over children's health, and a host of child-level and household-level factors that can influence children's health and nutrition. The results of these analyses could help inform program design and empirically validate relationships in the underlying theory of change. These analyses will be conducted if warranted by the results of the bivariate analyses or the qualitative study.

Gender

- Gender analysis will be conducted throughout the report, for example by looking at gender differences in the indicators. In addition, the following will be disaggregated by sex: (1) ownership of agricultural land, (2) size of plot of land, and (3) participation in cash-earning opportunities.
- Bivariate analyses will be conducted for the following: (1) cash decision making and household hunger, (2) cash decision making and household dietary diversity; (3) maternal health decision making and use of contraception, (4) maternal health decision making and antenatal care, (5) child health decision making and children's nutritional status (stunting, wasting and underweight), and (6) child health decision making and feeding practices of children (MAD). Results are intended to highlight existing gender gaps in access to and control over resources on which to focus, and to shed light on decision-making processes within the household that could impact women and children's health and nutrition and household food security.

6.2 Analyses for 2017 EL PBS

Data analysis for the EL PBS includes an examination of key demographic characteristics of the study population at BL and EL, calculation of all FFP indicators at EL, and comparisons of BL and EL indicators estimates where possible. In addition, where relevant, bivariate and multivariate analyses will be performed to explore the plausible determinants for key outcome indicators.

6.2.1 Comparison of 2012 BL and 2017 EL Household Characteristics

A comparison of household characteristics between the BL and EL samples will be conducted to determine if differences exist. The same demographic and socioeconomic characteristics described in Section 6.1.1 will be evaluated. If differences are found between BL and EL, an explanation for why or how these differences may influence the change in indicators over time and the achievement of program targets will be provided.

6.2.2 Calculation and Tabulation of Indicators

All indicators will be generated using relevant sampling weights to represent the full target population, and will be tabulated for the combined program areas and for the three prior DFAPs separately. All indicators will be disaggregated, as specified in Table 5.2. Point estimates and variance estimation (derived using Taylor series expansion) will take into account the design effect associated with the complex sampling design; 95 percent confidence intervals will be provided for all FFP indicators at the aggregated program level and for each prior DFAP separately.

As mentioned in Section 2, data for 15 of the 41 indicators collected in 2017 were also collected in 2012. Although the other 26 indicators were not measured at baseline, all indicators will be calculated for the EL sample. Even though change over time cannot be measured for the non-overlapping indicators, we can learn something about these indicators at EL in the prior program areas, which has implications for the new DFSAs, particularly in the overlapping geographic areas.

6.2.3 Comparison of 2012 BL and 2017 EL Indicators

For each prior DFAP, the 15 overlapping indicators will be statistically compared between BL and EL to determine if significant changes occurred over time. Although the results from this comparison will provide an indication of whether change occurred over time, the change cannot be directly attributed to the DFAP activities.

6.2.4 Additional Analyses

Bivariate analyses as described in section 6.1.4 will be conducted to explore relationships between indicators. Additional multivariate analyses may be conducted if warranted by the preliminary indicator estimates and bivariate analyses, to explore plausible determinants of key outcome indicators. The PBS data will be interpreted based in part on FFP's conceptual model/framework, secondary data from other studies (including the Tufts performance evaluation completed in 2017) and, as available, primary information derived from qualitative data collected for the 2017 baseline study in villages that participated in the previous DFAPs.

Ethiopia PBS Data Treatment and Analysis Plan
APPENDIX A – SAMPLING WEIGHTS

Household and individual weights will be computed separately for the 2017 baseline and end-line PBS samples. The calculations for these weights are described below.

HOUSEHOLD WEIGHTS

Household weights will be applied for household level indicators derived from Modules C, F, H and R and included in the construction of individual weights for all other modules.

Household design weights are calculated based on the separate sampling probabilities for each sampling stage and for each cluster (Kebele).

P_{1hi} = first-stage sampling probability of the i -th cluster in stratum h

P_{2hi} = second-stage sampling probability within the i -th cluster (household selection).

The probability of selecting cluster i in the sample is: $P_{1hi} = \frac{m_h \times N_{hi}}{N_h} \times b_{hi}$

The second-stage probability of selecting households in cluster i is: $P_{2hi} = n_{hi} / L_{hi}$

Where:

m_h = number of sample clusters selected in stratum h .

N_{hi} = total households in the frame for the i -th sample cluster in stratum h .

N_h = total households in the frame in stratum h .

b_{hi} = the number of selected segments⁸ divided by the total number of segments in the i -th sample cluster in stratum h

n_{hi} = number of sample households selected for the i -th sample cluster in stratum h .

L_{hi} = number of households listed in the household listing for the i -th sample cluster in stratum h .

The overall selection probability of each household in cluster i of stratum h is the product of the selection probabilities of the two (or three) stages:

$$P_{hi} = P_{1hi} \times P_{2hi} = \frac{m_h \times N_{hi}}{N_h} \times b_{hi} \times n_{hi} / L_{hi}$$

The household design weight for each household in cluster i of stratum h is the inverse of its overall selection probability:

$$W_{hi} = \frac{1}{P_{hi}} = \frac{N_h \times L_{hi}}{m_h \times N_{hi} \times n_{hi} \times b_{hi}}$$

⁸ In Ethiopia, Kebeles are subdivided into Gotts (sub-Kebeles), having a clear physical demarcation and having a certain number of households.

The household sampling weight is calculated using the household design weight corrected for non-response in each of the selected clusters. Response rates are calculated at the cluster level as ratios of the number of interviewed households divided by the number of eligible households. The household sampling weight is calculated by dividing the household design weight by the household response rate.

INDIVIDUAL WEIGHTS

Individual sampling weights will be applied for indicators derived from Modules D (children), E (women of reproductive age), G (farmers), J (cash earners), and K (parents of children under two years).

Since all individuals will be selected for each Module, these weights will include a non-response adjustment only.

The nonresponse adjustment will be applied using the inverted proportion of the total number of completed interviews for each group divided by the total number of eligible individuals for each group.

The World Bank defines poverty as whether households or individuals have enough resources or abilities today to meet their needs. Poverty is usually measured based on consumption expenditures rather than income. Consumption expenditures are more closely related to well-being because households adopt strategies to meet their current basic needs. Also, in poor agrarian economies and in urban economies with large informal sectors, income may be difficult to estimate. It may be seasonal and erratic, and it may be difficult to estimate particularly for agricultural households whose income may not be monetized.

The prevalence of household poverty will be measured using information on household consumption expenditures to compute a household consumption aggregate. The consumption aggregates will be constructed following guidelines from Deaton & Zaidi (2002)⁹ and Grosh & Muñoz (1996)¹⁰ by adding together the various goods and services consumed by each household during a period of 12 months. The various components of consumption will be grouped together into 6 main categories, including food, usual expenses (expenses in the last 7 days), occasional expenses (expenses in the last 30 days), unusual expenses (expenses in the last 12 months), housing and durable assets.

In general, consumption will be calculated by adding the value in local currency units (LCU) of the items consumed by the household, as reported by household informants. These items will be collected according to different time horizons, but will be then transformed into a daily per capita consumption expenditure aggregate.

Whenever a household is missing data on the monetary value of an item it has consumed, that value will be imputed using the closest local median value for that item. That is, if a household is missing consumption information on a given item, it will be assigned the median value reported by other households in the vicinity. Whenever the item is reported frequently enough, this imputation will be done at the cluster level. However some items may be consumed by few households. In those cases the level of imputation would be at a higher level, depending on how rare the item is. These imputed amounts will be subject to checks that the imputed prices are plausible to avoid undue influence from outliers.

The reported values for each item and each consumption component will be checked for outliers to detect possible coding errors or extreme values. Depending on the distribution of variable, values that are 1 to 5 standard deviations (SD) over the average will be flagged and checked for plausibility. Values deemed implausible will be imputed using the methodology described above.

Besides this general methodology, some components require specific computations.

- **Food Consumption**

Computation of food consumption is complex because it involves products that are purchased in the market, where price information is available, and products that are home-produced or received as a gift, where price information is not available. Even when products are purchased, it is often difficult for

⁹ Deaton, A. and S. Zaidi (2002), A Guide to Aggregating Consumption Expenditures, Living Standards Measurement Study, Working Paper 135. Available at:

<http://siteresources.worldbank.org/INTPA/Resources/429966-1092778639630/deatonZaidi.pdf>

¹⁰ Margaret Grosh and Juan Muñoz (1996). A Manual for Planning and Implementing the Living Standards Measurement Study Surveys. LSMS Working Paper #126, The World Bank. Available at:

<http://documents.worldbank.org/curated/en/1996/05/438573/manual-planning-implementing-living-standards-measurement-study-survey>

household informants to report the precise market value of the amounts consumed by the household over the reference period, which often results in missing data.

The value of non-purchased food (and of any food missing value information), will be imputed by first transforming the amounts consumed by the household to a common reference unit, and multiplying the local median value of that unit times the amount consumed. If a product is reportedly consumed, but information on the quantity consumed is missing, the median daily per capita amount consumed by local households will be imputed.

- **Assets**

Purchases of durable goods represent large and relatively infrequent expenses. While almost all households incur relatively large expenditures on these at some point, only a small proportion of all households are expected to make such expenditures during the reference period covered by the survey. As indicated by Deaton & Zaidi (2002) “From the point of view of household welfare, rather than using expenditure on purchase of durable goods during the recall period, the appropriate measure of consumption of durable goods is the value of services that the household receives from all the durable goods in its possession over the relevant time period” (p. 33).

Consumption of durable goods will be calculated as the annual rental equivalent of owning the asset. This rental equivalent is computed as the price of the asset in its current shape multiplied by the sum of the real interest rate and the depreciation rate:

$$S_t P_t (r_t - \pi_t + \delta)$$

Where $S_t P_t$ is the current price of the asset, $r_t - \pi_t$ is the real rate of interest, and δ is the depreciation rate for the durable good. Each of these components will be computed separately.

1. Current value of the asset ($S_t P_t$): This will be obtained from household reports of the value of the asset in its current shape (second-hand).
2. Real rate of interest ($r_t - \pi_t$): In theory, r_t is the general nominal rate at time t , and π_t is the specific rate of inflation for each asset at time t . However in practice this is calculated as a single real rate of interest that is used for all goods, taken as an average over several years (see Deaton & Zaidi, 2002 p. 33). Data on real interest rates will be obtained from the World Bank¹¹ and averaged for the appropriate period to obtain a single real rate of interest.
3. Rate of depreciation (δ): The rate of depreciation for each of the items is given by the formula:

$$1 - \left(\frac{P_t}{P_{t-T}} \right)^{1/T}$$

Where P_t is the current value of the item at current time t , P_{t-T} is the value of the item when purchased, and T is the age of the item in years. Inflation-adjusted rates of depreciation will be obtained using the local median price of an item at the time of purchase. In order to minimize

¹¹ Data on the real interest rates for Ethiopia are available for the period 1985 - 2008. Estimates are based on the average real interest rate during 1988-2008, which is 2.11%. Source: <http://data.worldbank.org/indicator/FR.INR.RINR?locations=NE>

the influence of outliers, the median δ will be used for each of the durable assets for which data are collected (i.e. rather than using household-specific values of δ calculated from the data).

A rental equivalent estimating the daily per capita flow of services from the durable goods is then derived by dividing the annual rental equivalent over the number of members in the household and the 365 days of the year.

- **Housing**

The case of housing is similar to other durable goods, in that it is better measured as an annual consumption of housing services, either annual rent expenditures for renters, or an annual rental equivalent for non-renters.

The baseline survey will collect information on rent paid among renters, and an estimated rental equivalent for non-renters. It is likely that the housing rental market is small and a significant amount of non-renters are unable to provide an estimated rental equivalent. These missing responses will be imputed using two approaches. First, the age of the house and its current replacement value will be used to estimate a housing rental equivalent, using the methodology described above for durable goods. For those cases where the estimated current value or age of the house are not available, a hedonic OLS (Ordinary Least Squares) regression model will be used (where “hedonic” regression is a preference method of estimating demand or value), as suggested by Grosh & Muñoz (1996). The model will be built on the sample of households reporting non-zero rent or rental equivalents, with the log of rent paid by renters as a dependent variable, and several sets of independent variables, that may include:

- Housing characteristics: number of members, type of water access, type of sanitation services, asset ownership.
- Location: Woreda

The final model will be estimated based on the following regression equation,

$$\log(R_i) = \beta_0 + \beta X_i + \varepsilon_i$$

where R_i represents the reported non-zero rent paid by household i , β_0 is the constant term, X_i is the final vector of independent variables and ε_i is the error term accounting for unexplained variance. The initial model will contain consumption variables in log form and a set of dummies for all categorical variables. In order to avoid problems with multi-collinearity, a forward stepwise regression approach will be used to exclude variables that do not contribute to model fit and were thus statistically redundant. The unstandardized beta weights resulting from this regression equation will be applied to the vector of independent variables among non-renting households to estimate their annual rent equivalent.

- **Average daily per capita consumption expenditures**

In October, 2015, the World Bank raised the poverty line to USD \$1.90 using 2011 purchasing power parity (PPP) rates. To facilitate the transition between the 2011 PPP rates and the prior framework based on 2005 PPP rates, this indicator will be computed as the average daily per capita consumption expenditures in constant 2010 US dollars, using both the 2005 and the 2011 Purchasing Power Parity (PPP) exchange rates adjusted to 2010 US prices.

- **2005 PPP rates:** The steps to convert daily per capita consumption expenditures data collected in local currency units (LCU)¹² to constant 2010 US\$ (2005 PPP adjusted to 2010 US prices) are:
 - 1) Convert LCU (Ethiopian Birr) at the time of the survey (July-August, 2017) to LCU at 2005 prices, by dividing by the ratio of the CPI for the survey month (242.59)¹³ to the average annual CPI in 2005 for Ethiopia (44.84).¹⁴
 - 2) Convert 2005 LCU to 2005 US\$ by dividing by the 2005 PPP conversion rate of 2.75.¹⁵
 - 3) Convert US\$ in 2005 prices to US\$ in 2010 prices by multiplying by 1.1165 which is the ratio of the US CPI in 2010 (218.06) to the US CPI in 2005 (195.30).¹⁶
- **2011 PPP rates:** The steps to convert daily per capita consumption expenditures collected in local currency units (LCU) to constant 2010 US\$ (2011 PPP adjusted to 2010 US prices) are:
 - 1) Convert LCU at the time of the survey (July-August, 2017) to LCU at 2011 prices, by dividing by the ratio of the CPI for the survey month (242.59) to the average annual CPI in 2011 for Ethiopia (133.22).¹⁷
 - 2) Convert 2011 LCU to 2011 US\$ by dividing by the 2011 PPP conversion rate of 5.44.¹⁸
 - 3) Convert US\$ in 2011 prices to US\$ in 2010 prices by dividing by 1.032, which is the ratio of the US CPI in 2011 (224.94) to the US CPI in 2010 (218.06).¹⁹

Note that average daily per capita consumption expenditures is expressed in US\$ in 2010 prices in order to enable comparisons with other countries – so a common standard is essential.

- **Prevalence of Poverty**

The prevalence of poverty, or poverty headcount ratio, is the proportion of the population in the survey area living in extreme poverty. To facilitate the transition between the 2011 PPP rates and the prior framework based on 2005 PPP rates, the poverty line will be defined as a daily per capita consumption of less than US\$1.25 at 2005 prices, or less than US\$1.90 at 2011 prices.

Consumption data in the joint baseline and end-line PBS will be collected in Ethiopian *Birr*. In order to compare the Ethiopia consumption expenditure data in Ethiopian *Birr* to the international poverty lines, the poverty lines first need to be converted into the LCU. However, if we use current market exchange

¹² The local currency unit (LCU) in Ethiopia is the Ethiopian Birr (ETB).

¹³ CPI for the months of July and August 2017 for Ethiopia were not available therefore the CPI for the nearest available month (May 2017) was used. The CPI for May 2017 for Ethiopia is 242.59.

Source: <http://data.imf.org/?sk=6ac22ea7-e792-4687-b7f8-c2df114d9fdc&slid=1390030341854>.

¹⁴ Source: <http://data.imf.org/?sk=6ac22ea7-e792-4687-b7f8-c2df114d9fdc&slid=1390030341854>.

¹⁵ PPP conversion factor, private consumption (LCU per international\$), 2011 International Comparison Program. Source: <http://data.worldbank.org/indicator/PA.NUS.PRVT.PP>

¹⁶ Source: <http://www.bls.gov/cpi/cpid10av.pdf>

¹⁷ CPI for the months of July and August 2017 for Ethiopia were not available therefore the CPI for the nearest available month (May 2017) was used. The CPI for May 2017 for Ethiopia is 242.59. Source: <http://data.imf.org/?sk=6ac22ea7-e792-4687-b7f8-c2df114d9fdc&slid=1390030341854>

¹⁸ PPP conversion factor, private consumption (LCU per international\$), 2011 International Comparison Program. Source: <https://data.worldbank.org/indicator/PA.NUS.PRVT.PP>

¹⁹ Source: https://www.bls.gov/cpi/cpi_dr.htm

rates we would underestimate consumption. One Ethiopian *Birr* can buy more products and services in Ethiopia than the equivalent amount in US\$ (1 Ethiopian *Bir* = US \$0.043)²⁰ can purchase in the US. The conversion of LCUs to US\$ should use an exchange rate that takes into account the differences in purchasing power of different currencies. This exchange rate is referred to as the Purchasing Power Parity (PPP) exchange rate. Poverty lines will be calculated to estimate the proportion of the population living in extreme poverty, defined as:

- Average daily per capita consumption expenditures of less than US\$1.25 per day, converted into LCU (Ethiopian Birr) at 2005 Purchasing Power Parity (PPP) exchange rates. This is done following two steps:
 - 1) The \$1.25 poverty line will be converted into LCU by multiplying it by the 2005 PPP conversion factor for private consumption for Ethiopia (2.75).
 - 2) The resulting figure (\$1.25 * 2.75 = 3.44) will be adjusted for cumulative price inflation since 2005. The adjustment will be done using the consumer price index (CPI) for the survey month as the numerator, and the average annual CPI for 2005 for Ethiopia as the base factor.²¹ The US\$1.25 poverty line is equal to 3.44 * (242.59 / 44.84) = 18.61 in May 2017 Ethiopian Bir.
- Average daily consumption expenditures of less than US\$1.90 per day, converted into LCU (Ethiopian Birr) at 2011 Purchasing Power Parity (PPP) exchange rates. This is done following two steps:
 - 1) The \$1.90 line will be converted into LCU by multiplying it by the 2011 PPP conversion factor for private consumption for Ethiopia (5.44).
 - 2) The resulting figure (\$1.90 * 5.44 = 10.34) will be adjusted for cumulative price inflation since 2011. The adjustment will be done using the consumer price index (CPI) for the survey month as the numerator, and the average annual CPI for 2011 for Ethiopia as the base factor. The US\$1.90 poverty line is equal to 10.34 * (242.59 / 133.32) = 18.81 in May 2017 Ethiopian Bir.

- **Mean depth of poverty**

This indicator is useful to understand the average, over all people, of the gaps between poor people's living standards and the poverty line. It indicates the extent to which individuals fall below the poverty line (if they do).

Mean depth of poverty is sometimes also called the poverty gap index (PGI). The PGI is computed as the average of the differences between an individual's total daily per capita consumption and the poverty line, divided by the poverty line, with individuals over the poverty line having a contribution to the PGI of 0. The PGI is given by the formula:

$$PGI = \left(\frac{1}{N} \sum_{i=1}^N \left(\frac{z - y_i}{z} \right) \right) \times 100$$

²⁰ <http://www.exchange-rates.org/converter/ETB/USD/1>

²¹ CPI for the months of July and August 2017 for Ethiopia were not available therefore the CPI for the nearest available month (May 2017) was used. The CPI for May 2017 for Ethiopia is 242.59. Source: <http://data.imf.org/?sk=6ac22ea7-e792-4687-b7f8-c2df114d9fdc&sl=1390030341854>.

Where N is the total number of individuals in the population, z is the poverty line and y_i is the daily per capita consumption of individual i . For individuals above the poverty line, set $y_i = z$ so that contribution to PGI is 0 for those individuals.

MEASURING RESILIENCE AND RESILIENCE CAPACITY

Resilience is viewed as a set of capacities that enable households and communities to effectively function in the face of shocks and stresses and still meet a set of well-being outcomes. The ability to measure resilience involves measuring the relationship between shocks, capacities, responses, and future states of well-being. **Thus, there is no single indicator that measures resilience.** There is a need for a number of variables to be used as part of a measurement framework. There are four key factors to consider in measuring resilience:

- Identify the well-being outcomes to be achieved and measure resilience in relation to these outcomes.
- Identify the shocks and stresses that individuals, households, communities and systems are exposed to and the severity and duration of these shocks and stresses.
- Measure the absorptive, adaptive and transformative capacities in relation to these shocks and stresses at different levels.
- Identify the responses of individuals, households, communities and systems to these shocks and stresses and trajectory of well-being outcomes.

The key questions to be explored through measurement of resilience are:

- Does shock exposure have a negative impact on food security and child nutritional status?
- Does greater resilience capacity have a positive impact on these outcomes?

• Resilience and Resilience Capacity Indicators

○ Well-being Outcomes

A number of outcome indicators can be used for measuring well-being:

1. Depth of Poverty: The mean percent shortfall relative to the \$1.25 poverty line
2. Prevalence of households with moderate or severe hunger (Household Hunger Scale - HHS)
3. Prevalence of wasted children under five years of age
4. Average Household Dietary Diversity Score (HDDS)
5. Prevalence of stunted children under five years of age
6. Ability to recover from shocks/stressors

○ Shocks and Stresses

The shock exposure index measures the overall degree of shock exposure for each household. The shocks should be those that are experienced by the target population and may include: flooding /excessive rainfall; landslides/erosion; drought or unpredictable or insufficient rain; hail or frost; pests or disease outbreak (crop or livestock); human disease outbreaks (e.g., cholera); death in the HH; unemployment for youths; market price fluctuation; and theft/ conflict. The index is based on household data regarding:

- Number of shocks to which a HH is exposed in the past 12 months
- Perceived severity of the shocks

○ Resilience capacities

Resilience capacities are measured as a set of indices, one for each of the three dimensions of resilience capacity—absorptive capacity, adaptive capacity, and transformative capacity—and one overall index combining these three indexes.

Absorptive capacity index. Absorptive capacity is the ability to minimize exposure to shocks and stresses through preventative measures and appropriate coping strategies to avoid permanent, negative impacts. The absorptive capacity index will be constructed from eight variables, some of which are themselves indices. The variables to be used include:

- Availability of informal safety nets
- Bonding social capital
- Access to cash savings
- Access to remittances
- Asset ownership
- Shock preparedness and mitigation
- Access to insurance
- Availability of humanitarian assistance

Adaptive capacity index. Adaptive capacity is the ability to make proactive and informed choices about alternative livelihood strategies based on an understanding of changing conditions. This index is constructed from the following ten variables, again some of which are themselves indices. The variables are:

- Bridging social capital
- Linking social capital
- Social network index
- Education/training
- Livelihood diversification
- Exposure to information
- Adoption of improved practices
- Asset ownership
- Availability of financial services
- Aspirations/confidence to adapt index

Transformative capacity index. Transformative capacity involves the governance mechanisms, policies/regulations, infrastructure, community networks, and formal and informal social protection mechanisms that constitute the enabling environment for systemic change. This index is constructed from fourteen variables, including some that are indices. The variables are:

- Availability of formal safety nets
- Availability of markets
- Access to communal natural resources
- Access to basic services
- Access to infrastructure
- Access to agricultural services
- Access to livestock services

- Bridging social capital
- Linking social capital
- Collective action
- Gender equitable decision-making index
- Participation in local decision-making
- Local government responsiveness
- Gender index

• Resilience capacity variables and their corresponding questions

Table 1 presents the resilience capacity variables and their respective survey questions. Questions sourced from the FFP/FTF core household baseline questionnaire are preceded by “BL” and those from the household resilience module are preceded by “R”.

Table 1. Resilience capacity variables and sources.

Resilience capacity variable	Questions
Ability to recover	R108, R109
Shock exposure index	
Exposure: Number of shocks experienced in the past 12 months	R103
Shock severity: Impact of shock on income security Impact of shock food consumption	R104 R105
Absorptive capacity index	
Availability of informal safety nets	R801, R802
Bonding social capital	R1304, R1307
Access to cash savings	R601
Access to remittances	R1101, R1102, R1104, R1105
Asset ownership	BL H7.02, H7.03, R201, R201A
Shock preparedness and mitigation	R901, R902, R110, R1501-R1503
Access to insurance	BL G09
Availability of humanitarian assistance	R1501, R1502 (1,2)
Adaptive capacity index	
Bridging social capital	R1305, R1308
Linking social capital	R1309-R1314
Social network index	R801, R807-R809
Education/training	BL B21, R1327, R1329, R1331, R1333, R1336, R1338
Livelihood diversification	R1001, R1002
Adoption of improved practices	BL G13b, G16, G18, G21
Exposure to information	R701, R702
Asset ownership	See above
Availability of financial institutions	R301
Aspirations/confidence to adapt	R1401, R1402, R1403, R1403a, R1403b, R1405-R1409, R1411-R1416
Transformative capacity index	
Availability of formal safety nets	R1501-R1503

Resilience capacity variable	Questions
Availability of markets	R309-R311
Access to communal natural resources	R801a-R801d, R803, R804, R806
Access to basic services	R301a-R301d, R302, R303a, R303b, R304a-R304c, R1506, R1507
Access to infrastructure	BL F04, R301h-R301j, R307, R308
Access to agricultural services	R301e, R305a, R305b
Access to livestock services	R301f, R306a, R306b
Bridging social capital	See above
Linking social capital	See above
Collective action	R901, R902
Gender equitable decision making index	R603, BL J07, J10, J11, K05, K14, K15
Participation in local decision-making	R801, R802
Local government responsiveness	R801c, R801d, R805, R806, R1504, R1506, R1507
Gender index	R1601-R1606

In order to eliminate duplication of questions between the FFP/FTF core questionnaire and resilience modules, Table 2 maps specific changes to the FFP/FTF household questionnaire assumed as part of this analysis plan. If questions in the FFP/FTF core questionnaire are deleted that should be included, then these questions need to be added to the relevant section in the resilience module. Similarly, those sections/questions identified as not necessary in the FFP/FTF core questionnaire must be deleted in order to not duplicate those in the resilience modules, which are designed specifically with a resilience focus.

Table 2. Assumptions regarding FFP/FTF household questionnaire.

Includes: ²²		Does not include: ²³	
FFP/FTF modules/sections	Questions	FFP/FTF modules/sections	Questions
Identification and Informed Consent	Module A	HHS	C16-C21
Household roster, with maximum level of education	B21	Humanitarian Assistance	C22-C24
HDDS	C3-C15	Shocks/stresses	C25
Main source of drinking water	F04	Livestock care/raising	G15
Improved practices for crops	G13B	Access to hazard insurance	G09
Improved practices for livestock	G16		
Improved practices for natural resources	G18		
Improved practices for crop storage	G21		
Gender - Cash	J07, J10, J11		
Gender - MCHN	K05, K14, K15		
Durable goods expenditures	H7.02, F7.03		

• Calculation of shock exposure and measures of resilience capacity

²² If the FFP/FTF questionnaire does NOT include modules/questions listed here, they need to be added in the resilience module or elsewhere.

²³ Items listed here are preferred in the resilience module and need to be removed from the FFP/FTF questionnaire.

Throughout this document, the explanation for how each index or variable is calculated is followed by the relevant questions from the baseline survey and proposed resilience modules used for each index (in red print). Those from the baseline household questionnaire are preceded by “BL” and those from the household resilience module are preceded by “R”.

It should be noted that the specific calculations for how each resilience element is calculated can change slightly, depending on the data. Thus, this document outlines the basic construction of the three resilience capacity indices but may vary slightly once the data have been collected and cleaned.

○ Ability to recover

1. Ability to recover index. Ability to recover index is based on estimation of the ability of households to recover from the typical types of shocks that occur in the Title II program areas based on data regarding the shocks households experienced in the year prior to the survey.

The index is calculated based on responses to two questions:

“To what extent has your ability to meet food needs returned to the level it was before the shocks and stressors you experienced in the last 12 months?” With possible responses and weighted values:

- Ability to meet food needs is the same as before the shocks (= value of 2)
- Ability to meet food needs is better than before the shocks (= value of 3)
- Ability to meet food needs is worse than before the shocks (= value of 1)

AND

“In light of the shocks you faced in the last 12 months, to what extent do you believe you will be able to meet your food needs in the next year?”, with possible responses and weighted values:

- Ability to meet food needs will be the same as before the shocks (= value of 2)
- Ability to meet food needs will be better than before the shocks (= value of 3)
- Ability to meet food needs will be worse than before the shocks (= value of 1)

The responses to the two questions are combined into one variable that has a minimum value of 2 and a maximum value of 6.

Survey questions: R108, R109

○ Index of shock exposure

A measure of shock/ stressor exposure and severity is created that takes into account the shocks or stressors to which a household is exposed out of the total number of shocks or stressors (e.g., 18), and the perceived severity of the shock on household income and food consumption.

Perceived severity is measured using two variables: impact on income security and impact on food consumption. The variables are based on respondents’ answers to the questions, “How severe was the

impact on your income?” and “How severe was the impact on household food consumption?” which are asked of each shock or stressor experienced. The possible responses are:

- No impact = value of 1
- Slight decrease = value of 2
- Severe decrease = value of 3
- Worst ever = value of 4

The responses to the two questions are combined into one variable that has a minimum value of 2 and a maximum value of 8.

The shock exposure measure is then a weighted average of the incidence of experience of each shock (a variable equal to 1 if the shock was experienced and zero otherwise), weighted by the perceived severity of the shock. The shock exposure index ranges from 1 to 144 (i.e., 8*total number of shocks).

Survey questions: R103, R104, R105

○ Absorptive capacity index

The absorptive capacity index is constructed from eight variables, some of which are themselves indices. The variables and explanations of their calculation are as follows.

1. Availability of informal safety nets. This variable is the total number of community organizations that typically serve as informal safety nets that are available and have been active within the community during the 12 months prior to the survey. The six groups are:

- Credit or micro-finance group
- Savings group
- Mutual help group (e.g., ritban, afoosha, ofera/webera, burial, eqqub, etc.)
- Religious group
- Mothers’ group
- Women’s group

Survey question: R801, R802

2. Bonding social capital index. The bonding social capital index is based on the responses to two questions:

- whether the household indicates it would be able to **get help** from various categories of people living WITHIN their community if they needed it;
- whether the household indicates it would be able to **give help** to people living WITHIN their community who needed it.

The possible responses for whom a household could get help from or to whom they would give help are: “relatives”, “non-relatives/neighbors within my ethnic group/clan”, “non-relatives/neighbors of other ethnic groups/clan” and “no one”. An additive index ranging from 0 to 6 is calculated based on these responses.

Survey questions: R1304, R1307

3. Access to cash savings. This is a binary (dummy) variable equal to 1 if the respondent reported that a household member regularly saves cash.

Survey questions: R601

4. Access to remittances. This is a binary (dummy) variable equal to 1 if the respondent reported that the household receives remittances from someone who migrated within the country, OR someone who migrated to another country, OR both.

Survey questions: R1101, R1103, R1105, R1107

5. Asset ownership index. Asset ownership is measured using the number of consumer durables, productive assets, and livestock owned.

Survey questions: BL H7.02, H7.03, R201, R201A

6. Shock preparedness and mitigation. Summary variable ranging from 0 to 4 based on the following:

- There is a government and/or NGO disaster planning and/or response program in the village (1); Survey questions: R1501-R1502 (12)
- There is an emergency plan for livestock off-take in the village if a drought hits (1); Survey question: R1503
- Household reports participating in any of the following activities: soil conservation activities, flood diversion structures (i.e., protection of land/infrastructure from flooding), planting trees on communal land, or improving access to health services (1); Survey questions: R901, R902
- Household reports engaging in any of the following ways of protecting their household from the impact of future shocks: increasing savings, putting aside grains/fodder, switching to different crops/livestock, added ag activity to non-ag activity, added non-ag activity to ag activity, acquiring crop insurance (1); Survey question: R110

7. Access to insurance. This is a binary (dummy) variable equal to 1 if the household has agricultural insurance.

Survey question: BL G09

8. Availability of humanitarian assistance. This is a binary (dummy) variable equal to 1 if government or NGO emergency food or cash assistance is available in the respondent's village OR the household reported receiving emergency food or cash assistance from the government or NGO during the 12 months prior to the survey.

Survey questions: R1501, R1502 (1,2)

Combine the eight variables described into an absorptive capacity index using polychoric factor analysis.

○ Adaptive capacity index

The adaptive capacity index is constructed from ten variables, including some which are indices. The variables and calculations are as follows.

1. Aspirations/confidence to adapt index. This index is based on variables of the underlying concepts around people's aspirations, confidence to adapt, and a sense of control over one's life.

The **aspirations** component is based on questions regarding an absence of fatalism and belief in the future. The absence of fatalism is based on two sets of binary variables: the first is based on two yes/no questions about whether the respondent agrees that:

- Each person is responsible for his/her own success or failure in life.
- To be successful one needs to work very hard rather than rely on luck.

The second set of variables regarding fatalism is based on a 6-point agreement scale regarding the statements:

- My experience in life has been that what is going to happen will happen.
- It is not always good for me to plan too far ahead because many things turn out to be a matter of good or bad fortune.

Belief in the future is based on two binary variables regarding the respondent's view of the future.

- Whether they are hopeful for their children's future.
- The level of education they want for their children.

Survey questions: R1401, R1402, R1403a, R1403b, R1411, R1413

The **confidence to adapt** component is based on six variables regarding the degree to which the respondent is exposed to alternatives. Three binary variables involve whether the respondent:

- Is willing to move somewhere else to improve his/her life.
- Communicates regularly with at least one person outside of the village.
- Engaged in any economic activities with members of other villages or clans during the week prior to the survey.

The remaining three variables are based on answers to the following:

- How many times in the past month have you gotten together with people to have food or drinks, either in their home or in a public place?
- How many times in the past month have you attended a church/mosque or other religious service?
- How many times in the past month have you stayed more than two days outside of this kebele?

Survey questions: R1403, R1405, R1406, R1407-R1409

The **locus of control** component is based on four variables constructed from a 6-point agreement scale regarding the following:

- My life is chiefly controlled by other powerful people.
- I can mostly determine what will happen in my life.
- When I get what I want, it is usually because I worked hard for it.

- My life is determined by my own actions.

Survey questions: R1412, R1414-R1416

The variables are combined into an index using polychoric factor analysis.

2. Bridging social capital. The bridging social capital index is based on the responses to two questions:

- whether the household indicated it would be able to **get help** from various categories of people living OUTSIDE OF their community if they needed it;
- whether the household indicated it would be able to **give help** to people living OUTSIDE OF their community who needed it.

The possible responses for whom a household could get help from or to whom they would give help are: “relatives”, “non-relatives within my ethnic group/clan”, “non-relatives of other ethnic groups/clan” and “no one”. An additive index ranging from 0 to 6 is calculated based on these responses.

Survey questions: R1305, R1308

3. Linking social capital. The linking social capital index is based on answers to questions regarding whether household members know a government official and/or NGO leader, how well they know them, and whether they believe the official/leader would help their family or community if help was needed. The index ranges from 0 to 6.

Survey questions: R1309-R1314

4. Social network index. This index is a sum ranging from 0 to 6 based on a series of binary (dummy) variables as follows:

- There is a savings group in the village (1);
- There is a mutual help group in the village (1);
- There is a women’s group in the village (1);
- The HH reports that any household member participated in a group that provided food to someone in that village at least once in the last 12 months (1);
- The HH reports that any household member participated in a group that provided labor to someone in that village at least once in the last 12 months (1);
- The HH reports that any household member participated in a group that provided some other type of help to someone in that village at least once in the last 12 months (1);

Survey questions: R801, R807-R809

5. Education/training. A summary variable ranging from 0 to 8 as follows:

- A binary (dummy) variable equal to 1 if any adults in the household can read or write (1)
Survey question: R1340
- A binary (dummy) variable is equal to 1 if any household adult has a primary or higher education (1) Survey question: BL B21

- The total number of trainings (ranging from 0 to 6) the respondent or any adult household member has had, where the possibilities are: vocational (job) training, business development training (including financial literacy), early warning training, natural resources management training, adult education (literacy or numeracy), or how to use your cell phone to get market information (e.g., prices) **Survey questions: R1327, R1329, R1331, R1333, R1336, R1338**

6. Livelihood diversification. The total number of livelihood activities engaged in over the last year. The question asked to identify these livelihoods is “What were the sources of your household’s food/income over the last 12 months?” The possible options are:

- Own farming/crop production and sales
- Own livestock production and sales
- Ag wage labor (within the village)
- Ag wage labor (outside the village)
- Non-ag wage labor (within the village)
- Non-ag wage labor (outside the village)
- Salaried work
- Sale of wild/bush products (e.g., charcoal, firewood)
- Honey production
- Petty trade (reselling other products, e.g., grains, veggies, oil, sugar, etc.)
- Petty trade (own products, e.g., local beer, sex work)
- Other self-employment/own business (agricultural, e.g., buying/selling chat)
- Other self-employment/own business (non-agricultural, e.g., stone cutting, hair braiding, etc.)
- Rental of land, house, rooms
- Remittances
- Gifts/inheritance
- Safety net food assistance
- Other

Survey questions: R1001, R1002

7. Exposure to information. The number of topics the respondent has received information on in the last year.

Survey questions: R701, R702

8. Adoption of improved practices. This binary (dummy) variable is equal to 1 if respondents report adopting three or more improved practices for crop production (including vegetables) OR respondents report adopting three or more improved practices for livestock production OR respondents report following one natural resource management practice or technique not related directly to on-farm production OR respondents report using any improved storage method.

Survey questions: BL G13b, G16, G18, G21

9. Asset ownership index. See above.

10. Availability of financial institutions. The variable is equal to zero if there is no institution in a village that provides credit or savings support, to one if there is one only, and to two if there are both types of support.

Survey questions: R301

The overall adaptive capacity index is calculated using polychoric factor analysis.

- **Transformative capacity index**

The transformative capacity index is constructed from fourteen variables, some of which are indexes. The variables and calculations are as follows.

1. Availability of formal safety nets. This variable is a sum ranging from 0 to 4 of the number of formal safety nets available in a household's village. The possible safety nets are:

- Places in a village where people can get food assistance
- Places in a village where people can get housing materials and other non-food items
- Places in a village where people can get assistance due to losses in livestock
- The availability of a government or NGO disaster response program

Survey questions: R1501-R1503

2. Availability of markets. A summary variable based on the number of markets available within 5 kms of a village:

- Markets for selling agricultural products
- Markets for purchasing agricultural inputs
- Livestock market

Survey questions: R309-R311

3. Access to communal natural resources. This variable is a sum ranging from 0 to 4 based on the number of communal natural resources that are managed by the community as follows:

- A water users' group who manages the community's communal water for livestock (1)
Survey questions: R801a, R803
- A water users' group who manages the community's communal water for irrigation (1)
Survey questions: R801a, R804
- A group who manages the community's communal grazing lands (1) Survey questions: R801c, R805
- A group who manages the community's firewood resources (1) Survey questions: R801d, R806

4. Access to basic services. This variable is the number of basic services available in a village and that were either in good condition or accessible during the 12 months prior to the survey.

- Primary schools. A 4-point scale is constructed as follows:
 - No primary school within 5 km (0)
 - A primary school within 5 km but its physical condition is “poor” or “very poor” AND there are not enough teachers (1)
 - A primary school within 5 km but its physical condition is “poor” or “very poor” OR there are not enough teachers (2)
 - A primary school within 5 km and its physical condition is “good” or “very good” AND there are enough teachers (3)

Survey questions: R301c, R303a, R303b

- Health services (post, clinic, center). A 4-point scale is constructed as follows:
 - No health services within 5 km (0)
 - Health services within 5 km but its physical condition is “poor” or “very poor” AND there was time over the last year that people needed health services but could not get them because of problems with the quality of service (1)
 - Health services within 5 km but its physical condition is “poor” or “very poor” OR there was time over the last year that people needed health services but could not get them because of problems with the quality of service (2)
 - Health services within 5 km and its physical condition is “good” or “very good” AND there were no problems accessing services over the last year (3)

Survey questions: R301d, R304a, R304b, R304c

- Police/security force. A binary (dummy) variable regarding the presence of government security forces (local or national) that can reach a village within one hour.

Survey questions: R1506, R1507

- Financial services. A binary (dummy) variable equal to 1 if there are formal institutions (i.e., government regulated banks) in a village where people can borrow or save money.

Survey questions: R301a, R301b, R302

5. Access to infrastructure. This variable is the number of types of infrastructure available in the respondent’s village or accessed by the respondent’s household, as determined by the following conditions:

- At least one-half of households in the village have access to piped water;
- At least one-half of households in the village have electricity from the main grid;
- The village either has mobile phone service/network coverage OR a public telephone/kiosk;
- The village can be reached with a paved road all year round OR is served by a public transportation system

Survey questions: BL F04, R301h, R301i, R301j, R307, R308

6. Access to agricultural extension services. This variable is based on whether agricultural extensions services are available in a village and were accessible over the 12 months prior to the survey. A 3-point scale is constructed as follows:

- No agricultural extension services within 5 km (0)
- Agricultural extension services available within 5 km but there was a time in the last year when people were unable to get extension services when they needed them (1)
- Agricultural extension services available within 5 km and people were able to get the services they needed over the last year (2)

Survey questions: R301e, R305a, R305b

7. Access to livestock services. This variable is based on whether livestock veterinary services are available in a village and were accessible over the 12 months prior to the survey. A 3-point scale is constructed as follows:

- No veterinary services within 5 km (0)
- Veterinary services available within 5 km but there was a time in the last year when people were unable to get veterinary services when they needed them (1)
- Veterinary services available within 5 km and people were able to get the services they needed over the last year (2)

Survey questions: R301f, R306a, R306b

8. Bridging social capital. See above.

9. Linking social capital. See above.

10. Collective action. A household-level summary variable based on the number of types of collective action a household engaged in over the last 12 months to benefit the entire community.

Survey questions: R901, R902

11. Gender equitable decision-making index. Recent experience in Bangladesh, Mali, and Nepal suggest data used to construct this index may be too limited (i.e., respondent restrictions result in a large reduction in sample size). Thus, the following analysis may not be possible, depending on the actual data collected.

This community-level variable²⁴ is based on binary (dummy) variables created regarding four types of decision-making control within households: control of income, control over use of savings, control over household purchases and control over health and nutrition decisions.

The first variable, **gender-equitable control of income**, uses responses from the first male and female eligible persons from the roster who state they have been paid in “cash only” or “cash and kind” for work done in the past 12 months. Households without a male and female responding to Module J are

²⁴ This variable cannot be calculated at the household level because all households do not satisfy the conditions for inclusion. For example, not all households have male and female adults, and not all households have both male and female adults who earn cash income. After the data are collected, it will become clearer whether the proposed method of measuring gender-equitable decision-making at the community level will be viable in practice.

excluded. The variable is equal to 1 if male respondents report they participate (solely or jointly) in decisions on how cash they themselves have earned is used AND female respondents also report they participate (solely or jointly) in decisions on how cash they themselves have earned is used. The variable is equal to 0 if either males or females in a household report that “spouse/partner” or “other person” makes this decision.

Survey questions: BL J07, J10

The variable **gender-equitable decision-making control over savings** is equal to 1 if respondents report that males and females jointly determine how savings will be used.

Survey questions: R603

The variable **gender-equitable control over health and nutrition decisions** uses responses from the first male and female from the household roster who state they have a child under 2 years (K05). Households without a male and female responding “yes” to K05 are excluded. The variable is equal to 1 if female respondents report they make decisions about their own health and nutrition (response 1 “yourself” is only valid response) AND female respondents also report they participate jointly in decisions about their child’s health and nutrition AND male respondents report they participate jointly in decisions about their child’s health and nutrition. The variable is equal to 0 if all three conditions are not met.

Survey questions: BL K05, K14, K15

The variable **gender-equitable household decision-making** uses responses from the first male and female eligible persons from the roster who state they have been paid in “cash only” or “cash and kind” for work done in the past 12 months. Households without a male and female responding to Module J are excluded. The variable is equal to 1 if male respondents report they participate (solely or jointly) in decisions on major household purchases AND female respondents also report they participate (solely or jointly) in decisions on major household purchases. The variable is equal to 0 if either males or females in a household report that “spouse/partner” or “other person” makes this decision.

Survey questions: BL J07, J11

The information from the survey households in each community is used to create the community-level index as follows: The four dummy variables are employed to calculate the percentage of eligible households (i.e., who the dummy variable can be calculated for) in each community satisfying the condition for gender-equitable decision making. Subsequently, the mean of the four indexes is used as the measure of gender-equitable decision making control for each community.

12. Local government responsiveness. Summary variable ranging from 0 to 2 as follows:

- A security/police force provided by the local government that can reach the village in less than one hour (1) Survey questions: R1506, R1507
- A conflict resolution committee (1) Survey question: R1504

13. Gender index. This index is a summary variable ranging from 0 to 3 based on binary (dummy) variables regarding gender-neutral practices at the community level. Each binary variable is equal to 1 if there are no constraints to gender-neutral behavior at the community level:

- Men and women regularly sit and eat together within their households (1)
- Men and women regularly sit together at public meetings (1)
- Men in the village help with childcare (1)

Survey questions: R1601, R1603, R1605

A household-level gender variable may also be calculated.²⁵ For those households with husband and wife, the household-level component is a summary variable ranging from 0 to 6 based on the degree to which the household engages in gender-neutral behavior. A 3-point scale is constructed for whether the respondent and his/her spouse/partner sit and eat together within their household and whether they sit together at public meetings as follows:

- Not culturally acceptable = 0
- Culturally acceptable and the household engages in the behavior = 1
- Not culturally acceptable but the household engages in the behavior = 2

One binary (dummy) variable is based on who helps with childcare as follows:

- Male respondents
 - report they themselves care for OR help their spouse/partner care for the children (1);
- Female respondents
 - report their spouse/partner cares for OR helps them care for the children (1);

Survey questions: R1602, R1604, R1606

14. Participation in local decision-making. A binary (dummy) variable equal to 1 if the respondent reports any household member’s level of participation in any group’s decision-making as “leader”, “very active”, or “somewhat active”.

Survey questions: R801, R802

Combine the variables into a transformative capacity index using polychoric factor analysis.

○ Index of household resilience capacity

The overall index of resilience capacity is calculated using polychoric factor analysis, with the indexes of absorptive capacity, adaptive capacity, and transformative capacity as inputs.

• Responses to Shocks and Stresses

Program interventions that focus on resilience strengthening should be designed and implemented so that they lead to intermediate outcomes (e.g., strengthened resilience capacity of the target population), which themselves should then lead to appropriate response outcomes. Fundamentally, resilience interventions are about strengthening the ability of households (or society) to choose – from a

²⁵ It might be possible to combine the community and household gender variables into a single gender index, depending on the sample size of households with both husband and wife, etc. but can only be explored during analysis of the data.

whole 'portfolio' of options – what they perceive at that time as the “right” response(s). An appropriate response (e.g., using social capital, accessing savings) increases the chances of positive well-being outcomes, while an inappropriate or ill-chosen one often leads to vulnerability. Resilience analysis should measure the effect of different resilience responses at multiple levels (i.e., households, communities, local, provincial and national authorities). The current analysis involves only the household level.

In the context of food security, the Coping Strategies Index (CSI) represents a viable response indicator as it measures the occurrence of specific detrimental coping strategies. However the CSI focuses on short-term consumption-related behavior after a shock or stressor. Other short-term ex-post responses might also be relevant such as those focusing on cash or money-borrowing strategies, easily measured by variables that capture access to or utilization of financial services (e.g., savings groups, credit). Improved resilience capacity, however, is not simply about avoiding detrimental short-term response strategies. It is also about nurturing or fostering the ability of actors to engage in positive and sustainable responses that improve all three resilience capacities, i.e., absorptive, adaptive, and transformative capacity.

Thus a reduction in the adoption of detrimental coping strategies (i.e., a lower CSI) might serve as one universal indicator in resilience programs for improving absorptive responses. However, resilience response variables should also measure changes in adaptive and transformative behavior (Table 3). These responses have to be understood in relation to the specific social and ecological contexts and constraints within which these households are operating.

Table 3. Resilience response variables and sources.

Resilience response variables	Questions
Absorptive responses	
Coping Strategy Index (CSI)	R1201
Use of savings to deal with shocks	R106 (aa), R604
Use of remittances to deal with shock	R106 (bb), R1108
Use of hazard insurance	BL G09
Use of bonding social capital	R106 (s,u), R1315-R1320
Receipt of humanitarian assistance	R106 (x,y)
Adaptive Responses	
Application of information	R703
Adoption of improved agricultural practices	BL G13b, G16, G18, G21
Use of bridging social capital	R106 (t,v), R1321-R1326
Transformative Responses	
Participation in local decision-making	R802 (3,4,5)
Participation in collective action	R901, R902
Gender equitable decision making index	BL J07, J10, J11, K05, K14, K15, R604
Participation in safety net program	R106 (z)

5BB9L)

DfchcV` Zcf`E i U]hUj Y`Gh Xm

ANNEX 5: QUALITATIVE BASELINE STUDY DATA COLLECTION AND PROTOCOLS

EVELYN used key informant interviews (KIIs) and group interviews (GIs) to collect qualitative baseline data based on a set of questions designed to help interpret and contextualize quantitative data from the PBS. The topical areas and interview questions were keyed to one or more modules in the PBS household (HH) survey questionnaire. The HH questionnaire for the PBS was used to interview individuals in a randomly-selected sample of approximately 8,460 HHs covering the regions where DFSAs are working with GOE officials to implement the fourth round of its PSNP. Data collection for the qualitative and quantitative baseline study took place concurrently.

Data Collection Sites

The qualitative study covered eight data collection sites. Each IP selected two data collection sites based on criteria developed in April and May 2017. A data collection site is defined by a single woreda, two kebeles, and a targeted village selected for interviews in each kebele (see Qualitative Study Methodology, Site Selection Criteria, pg. x.)

Data Collection Instruments and Study Participants

A total of seven data collection instruments covering group and key informant interviews per type of participant and per woreda, kebele and village were finalized following review by USAID/Ethiopia FFP activity managers and IPs, and reviews and approval from USAID/FFP. The final set of data collection instruments was transmitted to Green Professional Services in Addis Ababa approximately one month in advance for review. Some changes were made to clarify the intent of questions.

Woreda Level: A group interview was conducted with government officials associated with PSNP4 administration and oversight. Groups comprised the head woreda official, the head of the Office of Agriculture, and the head of the Office of Water and/or Irrigation, and the heads of the Office of Natural Resource Management and the Office of Women and Children's Affairs. Other officials (as available) included the chairs of the Woreda Food Security Task Force (WFSTF) and of the Disaster Response Committee, the Development Agent, the Agriculture Extension Agent and the Livestock Extension Agent. Questions corresponding to each topic were covered during these interviews: 1) food insecurity, poverty, livelihoods migration; 2) agriculture; 3) WASH/MCHN; and 4) food gap seasons.

Kebele Level: A group interview was conducted with government officials associated with PSNP management and implementation that mirror the woreda level positions. Kebeles are the lowest level government administration unit, and officials are responsible for governance, security, and PSNP in the villages in their coverage area. This group also included the Chair of the PSNP Appeals Committee. A KII was conducted in the kebele health center with the HEW on issues related to MCHN and WASH. AEAs, LEAs, DAs, and Gender, NRM, and Water/Irrigation officers work very closely with PSNP household beneficiaries in areas of their expertise to increase the food security of these households and their villages.

Contextual Information from Woreda and Kebele Officials: PSNP beneficiaries in DFSA implementation areas are affected by the prevailing climatic, political, economic, and security environment. To understand the current environment during baseline data collection, data collection instruments for both woreda and kebele officials included questions on the current food security situation and current and recent historical events, such as flooding, drought, political events, security incidents and gender issues. These officials were also queried on PSNP implementation on topics related to the timing and delivery points for PSNP food and cash distributions, public work (Food for Work Program), emergency aid, PSNP beneficiary complaints, and PSNP graduates.

Village Level: In each of the selected villages, a KII was conducted with the village chief. Village chiefs are directly in contact with kebele officials, particularly on PSNP issues. GIs were held with four separate village groups based on demographic and household characteristics: 1) male heads of household (MHHH); 2) females who are co-HHH (FCo-HHH); 3) women HHHs (WHHH) who are widowed, divorced, or abandoned; and 4) young mothers with infants and children five years of age and under (MIC5). Each group provides distinct perspectives and experiences related to food security, poverty, agriculture, and health and nutrition issues.

A single data collection instrument was used with MHHHs and FCo-HHHs to contrast male and female points of view and experience, and to understand intra-household decision-making and the status of women. The group of WHHHs covered many of the same questions, but focused on understanding their strategies for filling basic household needs. WHHHs are a particularly vulnerable group, lacking able-bodied male labor to help prepare, plant, and harvest crops; and, without an adult partner, these women have fewer means to increase household resiliency to face and recover from shocks. They are among the poorest and most food insecure households. GIs were conducted with a group of MIC5 in each village to gain information on their knowledge, understanding and practices related to maternal and child health and nutrition, use of contraceptives, sanitation and hygiene, and gender issues in the context of family decision-making.

GPS hired qualitative data collection specialists for each of the teams, a driver for each team, and a senior qualitative analyst responsible for designing the qualitative database, reviewing and coding approved English language transcripts, data entry, and the first stage of analysis. GPS also hired an experienced senior interpreter for the EVELYN Senior Evaluation Specialist who served the overall Qualitative Study Director and the team leader for one of the two teams. Each team comprised a team leader, a senior qualitative data collection specialist, and a junior/mid-level qualitative data specialist. The latter was responsible for taking notes and recording each KII and GI, and transmitting completed English language transcripts to GPS. EVELYN hired a senior qualitative data collector to lead the second team. Ethiopian team members were all fluent in English and Amharic. Members of Team 1 covering data collection sites in Tigray were also fluent in **Tigrayina**. Members of Team 2 covering sites in Oromia, were also fluent in **Oromiana**.

The four DFSA IPs provided the QSD with a designated contact person working in the data collection site areas they selected for the qualitative study. In most cases, the IP M&E specialist was assigned. The QSD transmitted full contact information for each of the selected contact persons (total of 8). Per request, each contact person provided GPS advanced information on recommended accommodations in the woredas, distance between the woreda and each kebele and village, information on road quality, and recommended routes. The contact person also informed the woreda and kebele head officials and the village chief about the study, study purpose and dates a team would arrive. They arranged interview

dates and scheduled time frames for interviews in each location, and worked with local officials on the selection of study participants for group interviews with different groupings of village residents based on criteria provided by the QSD. Lastly, the contact person arranged to meet the team leader upon arrival in the study woreda, and introduced the team to woreda officials participating in the study. These same individuals also introduced the team to officials in each of the selected kebeles, and to the village chief in each village.

In-briefing and Pre-Field Work Preparation

EVELYN's QSD arrived in Addis on June 29th. The QSD (also serving as leader for Team One), the Team Leader for Team Two, and the GPS Managing Director held an in-briefing on July 30 at USAID Ethiopia with FFP Activity Managers and the FFP M&E Specialist to review and discuss the protocols, data collection sites, types of study participants at each administrative level, and field logistics. A two-day team planning meeting and review workshop was held on July 1 and 2 with the QSD, Managing Director of GPS, all team members scheduled to go to the field, the interpreter, and the GPS senior qualitative data analyst responsible for developing the data base and initial stages of analysis. The purpose of the workshop was to review the data collection process and protocols, and to review and discuss questions contained in each data collection instrument. Based on these reviews, each instrument was revised for language suitable to Ethiopian participants and redundant questions were removed. On July 3 members of both data collection teams and the GPS Managing Director pilot-tested the data collection instruments for woredas, kebeles and villages. A pilot-testing debrief was held on July 4 with the QSD to discuss how long each KII and GI took during the pilot testing, the flow of questions, and how well individual questions were understood. Based on the debriefing, each data collection instrument was shortened by selecting the most critical questions associated with each PBS HH topical module, and questions were further clarified for respondent understanding.

Field Work and Field Work Protocols

The fieldwork portion of the qualitative baseline study was conducted from July 5, 2017 through August 4, 2017 under the overall direction of the QSD. Data collection was conducted in several locations within two woredas per DFSA. Team 1 traveled to two data collection sites selected by FH; and two data sites selected by REST. Team 2 traveled to two data collection sites selected by CRS; and two sites selected by WV. The two team leaders communicated once per week, or more frequently as necessary, to resolve problems and discuss issues. Each team held a full discussion on findings following the completion data collection at each site.

Teams began by collecting qualitative data at the first woreda selected by the DFSA IP. They conducted a GI with woreda-level officials, and then traveled to the first kebele selected within that woreda to conduct a GI with selected kebele officials, and a KII with the kebele HEW. Following interviews in the first kebele, the teams then proceeded to conduct a KII with the village chief and GIs in the targeted village selected for that kebele. The team then repeated the same process of conducting interviews in the second kebele and, when completed, moved to the target village in that kebele. At the second site, teams followed the same procedures for interviewing officials at the woreda and kebele level, followed by a KII and GIs in the target villages. The team then traveled to the data collection sites selected by the second DFSA IP to repeat this process.

The complete set of interviews for each data collection site took approximately two and one half to three days depending on the distances and road conditions between each location within a given data collection site. One travel day (and occasionally 1 ½ travel days) was required to arrive at each team's second data collection site. Teams lodged at a facility in the woreda selected by the IP for their "base camps." Because of the distances required to travel within each data collection site between the woreda and each kebele selected, and between the woreda and each village selected, each team worked a seven-day work week. In mid-July, each team took one day off before proceeding to their second set of data collection sites. In total, each of the teams collected qualitative data in four woredas, eight kebeles, and eight villages. Across the two teams, qualitative data were collected in a total of eight woredas, 16 kebeles, and 16 villages.

ANNEX 6
Data Collection Sites Selected by
Implementing Partners and
Rationale

Implementing Partner	Data Collection Sites	Site Selection Rationale
FH-Ethiopia	AMHARA: Woreda 1: Lay Gayint	This woreda was included in the previous DFAP implementation area and continues to be a beneficiary location for the GOE PSNP. It contains a high number of beneficiaries.
	Kebele 1.1: Mekubia	These two kebeles each contain a high number of beneficiaries and provide contrasts related to average distance from the woreda center and different agroecological zones. Mekubia is a highlands area located four km away from the woreda center. Roads are paved. Sofia-Meda is a lowland area located 67 km. away from the woreda. Roads are unpaved and in very poor condition.
	Kebele 1.2: Sofia-Meda	
	AMHARA: Woreda 2: Abergelie	In contrast to Woreda 1, Lay Gayint, Abergelie was not included in the previous FH DFAP. It also contains a high number of beneficiaries.
	Kebele 2.1: Niruak	Nurak and Debi represent agroecological contrasts. Nurak is characterized by lowlands and is in a malarial area; roads are unpaved and in poor quality, and the location from the woreda is relatively far. Debi is characterized by midlands; roads are unpaved, but in good shape. It is more closely located to the woreda.
	Kebele 2.2: Debi	
Relief Society of Tigray	TIGRAY: Woreda 1: Werie Leke	Werie Leke is a DFSA overlap woreda.
	Kebele 1.1: May Chekemte	These kebeles were selected to contrast highland and lowland agro-ecological zones. Both kebeles have a high caseload of PSNP beneficiaries
	Kebele 1.2: May Segli	
	TIGRAY: Woreda 2: Hintalo Wajirit	New woreda for the REST DFSA.
	Kebele 2.1: Adi Keyh	See description of rationale for kebeles 1.1 and 1.2 in Werie Leke.
	Kebele 2.2: Metkel	
World Vision	OROMIA: Woreda 1: Gemechis	Woredas 1 and 2 were selected to contrast behaviors and practices related to nutrition and WASH, the availability of opportunities for improved livelihoods, and the potential for participating in “nutritious” value chains.
	Kebele 1.1: Sire Gudo	These kebeles were selected because they have a high number of beneficiaries and are often affected by shock. They also provide contrasts in terms of scarcity of water and access to health facilities.
	Kebele 1.2: Sire Kelo Haro Tate	
	AMHARA: Woreda 2: Lasta	See description of rationale for Woreda 1.
	Kebele 2.1: Bilbala	These kebeles were selected for the same reasons as kebeles 1.1 and 1.2.
	Kebele 2.2: Degosach	
Catholic Relief Services	OROMIA: Woreda 1: Midega Tola	The two woredas were chosen based on IP responsibility so each IP can receive data related to one of the woredas where they work, Meki Catholic Secretariat (west) and Harage Catholic Secretariat (east.)
	Kebele 1.1: Terkan Feta	Both kebeles have a high caseload of PSNP beneficiaries and differing agro-ecological zones. Initially Gedo Geri Kebele was selected. However, due to security reasons, Gedo Geri was replaced in July with Berzala.
	Kebele 1.2: Berzala	
	OROMIA: Woreda 2: Arsi Negele	See rationale for Woreda 1 – Midega Tola.
	Kebele 2.1: Daka Wara Kelo	See rationale for Kebeles 1.1 and 1.2 in Midega Tola.
	Kebele 2.2: Edo Gigessa	

ANNEX 7
Qualitative Data Collection
Instruments

ANNEX 6: DATA COLLECTION INSTRUMENTS

GUIDE for GROUP INTERVIEW with WOREDA OFFICIALS

GROUP COMPOSITION: Head of Woreda, Heads of Office of Agriculture and Office of Water/Irrigation, Chair of Woreda Food Security Task Force, Chair of Disaster Risk Management Committee, Head of Office of NRM, Food Security Representative, Head/Chair of Women and Children Affairs

NOTE: In some woredas, the head of the woreda may also serve as the Chair of the Woreda Food Security Task Force

INTERVIEW DATA			
Implementing Partner	Facilitator	Date of Interview	Start Time:
Team Leader	Recorder		End Time:
Region	Woreda		
PARTICIPANT INFORMATION			
List of Participants by Role	Interview Recorded (Please check)	Total Number of Participants:	
	Yes No	Number of Female Participants:	
		Number of Male Participants:	
	Number of verbal (or signature) consents recorded on consent form		
P6- Women affairs			
P7- livestock expert			
P8- Irrigation expert			

General Observations about the Interview

Thank you for the opportunity to speak with you. My name is _____ and this is _____. We are from Green Professional Services, and we are working with the US-based company MEA. We are conducting individual/group discussions with people like you in communities across several regions to strengthen and improve the PNSP. These questions in total will take approximately two hours and your participation is entirely voluntary. If you agree to participate, you can choose to stop at any time or to skip any questions you do not want to answer. Your answers will be completely confidential; we will not share information that identifies you with any one. If you choose not to participate it will not change any services or benefits that you receive now or in the future. You can stop participating at any time without penalty and without having to give any reason. You can also decline to answer any specific questions that you do not want to answer, also without penalty and without having to give any reason.

We are going to record this discussion only for the purpose of reviewing our notes to make sure the notes correctly capture the contributions of the group. We will destroy the recording after the notes have been checked and finalized.

Do you have any questions about what I have said?

PRODUCTIVE SAFETY NET PROGRAMME (PSNP), ENVIRONMENTAL/CLIMATE EVENTS, FOOD SECURITY		
Facilitator introduces the topics for this set of questions and informs the group the interview will begin with the Productive Safety Net Program		
1	PSNP 4regulations	<p>Do kebeles in this woreda receive cash payments, a mix of cash payments and foot allotments, or all food? What about specifically in kebele x and y?</p> <p>How is the cash transmitted to PSNP beneficiaries?</p> <p>Can you clarify the distribution chain of food allotments for PSNP 4 beneficiary households from the woreda to the kebele and then from the kebele to the villages?</p> <p>Are food allotments provided at extra times during events such as prolonged drought, massive crop failure due to diseases, flooding, etc.? If there is a shock and extra food allotments are needed, what is the source of that extra food (e.g., is it PSNP4 contingency, HRD, other?)</p>
2	Env/Climatic events and food security	<p>Is this woreda, and specifically the kebele x and y (<i>insert name of kebeles to be visited for data collection</i>) experienced drought, outbreak of pests or disease, or flooding in the past 12 months?</p> <p>If the answer is <u>no</u>, ask the following questions:</p> <ul style="list-style-type: none"> Have you noticed significant rainfall variability in recent years? How has this affected the sources and availability of water people rely on for (household) HH use, crops (and/or livestock)?

		<p>If the answer is <u>yes</u>, currently this area is experiencing drought, outbreak of pests or diseases, or flooding, <u>OR, very recently</u> such events occurred, ask the following questions:</p> <ul style="list-style-type: none"> • How long has it been going on (or how long did it last)? How severe? Does it cover the entire woreda? Kebele X and Kebele Y? • What effect has this had (or still having) on farmers' production of crops/or their livestock? (massive crop failure, livestock death, etc.?)
3	<i>Food gaps/food security</i>	<p>Do households in this area experience months in which there is a food gaps? What about villages in kebele x and y?</p> <ul style="list-style-type: none"> • How often does this happen? • What are the typical reasons that HHs experience food gaps? <p>(Probe for reasons, for example: run out of food before the next food distribution, crop ruined, death of livestock, insufficient crops for harvesting, death or migration of a male member of the household, etc.?)</p> <ul style="list-style-type: none"> • Has there been any change in the length of food gaps villages experience? Or frequency? • How would you contrast the food security situation of PSNP4 beneficiaries between kebele x and kebele y? • Are some HH becoming more food secure? What are the characteristics of HHs that are becoming more food secure? • Are some HHs that previously were doing well becoming less food secure?

AGRICULTURE TOPICS

Team Leader introduces the next set of questions on agriculture beginning with climate forecasts and early warning information

4	<i>Climate forecasts and use of information</i>	<p>Does this woreda receive forecasts about climatic conditions? If the response is <u>no</u>, skip to questions in the next section on early warning information.</p> <p>If the response is <u>yes</u>, ask the following:</p> <ul style="list-style-type: none"> • Where do the climate forecasts come from? What organization does this? • What is the quality of the information? Is it understandable? • Is it accurate? Reliable? • How is this information transmitted to kebeles? • Does it come at the right time for farmers to use it?
5	<i>Early warning information on outbreaks of pests, disease and use of information</i>	<p>Do this woreda receive early warning information for major crops (or livestock) pests and disease outbreaks? If response is <u>no</u>, skip to next set of questions on market information.</p> <p>If response is <u>yes</u>, this woreda does receive early warning information, ask the following questions:</p> <ul style="list-style-type: none"> • How often do you receive forecasts? • What is the quality of the information? Is it easy to understand? • How do you use this information? • How is this information transmitted to the kebeles? • Do farmers receive the information in time to respond?
6	<i>Price information, use of price information</i>	<p>Does the kebeles in this woreda receive price information for the crops they produce for sale? If the answer is <u>no</u>, skip to the questions on storage</p> <p>If the answer is <u>yes</u>, ask the following questions:</p> <p>How often does price information come out? Is it usually up-to-date? Accurate?</p> <p>How does this information get transmitted down to the kebeles?</p> <p>To your knowledge, how is market information on prices benefiting kebele residents in this woreda?</p>
7	<i>Availability and use of</i>	<p>Do farmers/livestock owners in the kebeles in this woreda have access to community storage facilities for their harvested crops (or to store dairy products/eggs? What about in kebele x and y?</p>

	<i>storage</i>	<p>If the answer is <u>no</u>, skip to set of questions on agriculture extension services.</p> <p>If <u>yes</u>, ask the following questions</p> <ul style="list-style-type: none"> • What kind of storage facilities are available for farmers (and/or pastoralists, pastoralists) to use? • Do farmers/livestock owners use it? • To your knowledge, what impact has the use of storage had for village residents that use it?
GOVERNANCE AND SECURITY TOPICS		
Team Leader announces that this is the last set of questions. The topic is on security issues in the region.		
8	<i>Security issues, incidents of violence</i>	<p>Have there been, or are there presently, major security issues or incidents of violence in any of the kebeles in this woreda? In kebele x and kebele y?</p> <p>If the answer is <u>no</u>, <u>end the interview</u> with the closing question.</p> <p>If the answer is <u>yes, there have been in the recent past</u>, ask the following questions:</p> <ul style="list-style-type: none"> • How long ago? Can you please describe what happened? • Where did it occur? • What was the impact of this incident in those areas? <p>If <u>currently there are major</u> security issues or incidents of violence, ask the following questions:</p> <ul style="list-style-type: none"> • Can you please describe what the incidents are? • Where is the trouble occurring? • What impact is this incident having on residents?

	<p><i>Response to security issues, incidents of violence</i></p> <p><i>Effect on HH food security</i></p>	<p>Have (or were) any actions been taken to resolve the issues causing these problems?</p> <p>If the answer is <u>yes</u>, ask the following:</p> <ul style="list-style-type: none"> • What has been/what is being done? By whom? • Has the security situation (or incidence of violence) been effectively resolved? • Is it likely to occur again? • How is (or how did) this affecting the food security of HHs in those areas? <p>(Probe as necessary with the following or other examples, e.g.: restricted travel outside villages, restricted access to water, grazing land, restriction on herding livestock, restricting marketing/sales of crops, livestock or livestock products, restricted or temporarily halted delivery of FFP food allocations)</p>
<p><i>Closing Question</i></p>	<p>Are there any other issues we haven't covered that anyone would like to bring up?</p>	
<p>Team Leader Closes the Interview: Thanks all participants for attending the session. Express appreciation given the time taken away from their obligations.</p>		

GUIDE for GROUP INTERVIEW with KEBELE OFFICIALS

GROUP COMPOSITION: Head of Kebele, Head of Office of Agriculture, Head of Office of Natural Resource Management, Chair of Kebele Food Security Task Force, Chair of Appeals Committee, Development Agent serving this kebele, Livestock Extension Agent, Agriculture Extension Agent, Head of Office of Water/Irrigation, Head of Office of Women and Children Affairs

Note: The Head of the Kebele might also be serving as the Char of the Kebele Food Security Task Force

INTERVIEW DATA			
Implementing Partner	Facilitator	Date of Interview	Start Time:
Team Leader	Recorder Mele Ayele		End Time:
Region	Woreda	Kebele	
PARTICIPANT INFORMATION			
List of Participants by Role	Consent given to record interview	Total Number of Participants: Eight	
P1- Agri/ natural resource	yes/no	Number of Female Participants: one	
P2- crop expert			
P3- Agricultural Lead			
P4- Kebele official	Number of verbal consents registered on the consent form	Number of Male Participants: Seven	
P5- Kebele Manager			
P6- Kebele Supervisor			
P7- Women affairs			
P8- Justice			
<p>Introductions and purpose of the interview. Thank you for the opportunity to speak with you. My name is _____ and this is _____.</p> <p>We are from Green Professional Services, and we are working with the US-based company MEA. We are conducting individual/group discussions with people like you in communities across several regions to strengthen and improve the PNSP. These questions in total will take approximately two hours and your participation is entirely voluntary. If you agree to participate, you can choose to stop at any time or to skip any questions you do not want to answer. Your answers will be completely confidential; we will not share information that identifies you with any one.</p> <p>If you choose not to participate it will not change any services or benefits that you receive now or in the future. You can stop participating at any time without penalty and without having to give any reason. You can also decline to answer any specific questions that you do not want to answer, also without penalty and</p>			

without having to give any reason.

We are going to record this discussion only for the purpose of reviewing our notes to make sure the notes correctly capture the contributions of the group. We will destroy the recording after the notes have been checked and finalized.

Do you have any questions about what I have said?

TOPICS ON PSNP: ENVIRONMENTAL/CLIMATE EVENTS, FOOD SECURITY

Team Leader introduces topic starting with PSNP

1	Beneficiary Households, Cash/Food distribution	<p>What beneficiary HH categories are there in Village X? Approximately how many households are there in village X? What percentage of the households are beneficiary households? Do PSNP beneficiaries in this kebele receive cash transfers, a combination of cash and food, or just food allotments? What about in village x (insert name)?</p> <ul style="list-style-type: none"> • How many times a year do beneficiary households receive a cash transfer? (or combination of cash and food?) • How does this differ by beneficiary category? <p>How is the cash transfer made to PSNP beneficiary households? What is the method that is used?</p> <p>Can you clarify the distribution chain of food allotments for PSNP beneficiary households from woreda to the kebeles and from the kebele to the village?</p> <p>What community/public work beneficiaries in Village X (insert name) do in return for their cash/food allotment? What have they developed?</p> <ul style="list-style-type: none"> • How has it benefitted the village residents? <p>Are additional food allotments or cash provided during major disruptive events such as prolonged drought, massive crop failure due to diseases, flooding, etc.?</p> <ul style="list-style-type: none"> • Is the amount of food provided the same as during usual distributions? • What is the source of additional food or cash during such events? PSNP contingency? Etc.? • Do all residents in the village receive food during such events, or do they have to be a PSNP beneficiary?
---	---	---

		<p>What kind of complaints does the Appeals Committee receive?</p> <ul style="list-style-type: none"> • What kind of households usually bring up complaints? • How are complaints brought to your attention? • Do you receive many complaints? • How many complaints have received in the past year? (estimate is fine) • How do you resolve these complaints?
2	<i>Crop production, livestock products for sale and consumption and household decision-making</i>	<p>What kind of crops do households (HHs) grow in this kebele, and particularly in village (insert name)?</p> <ul style="list-style-type: none"> • Which ones are produced primarily for sale for household income? • Are there any crops grown specifically for household consumption? <p>What kind of livestock do people raise in this kebele? In village X?</p> <ul style="list-style-type: none"> • What kind of livestock products do village residents sell? (e.g., milk, skins, meat, etc.) • Are any of them for household consumption? <p>To what extent are women involved in decision-making with their husbands or partners about the kind of crops to grow for sale (or products to produce for sale)?</p> <ul style="list-style-type: none"> • Over the past several years, has there been a change in women's involvement in making major decisions about household well-being with their husbands overall?
3	<i>Env/Climatic Events/Water and Food Security</i>	<p>Is this kebele currently OR in the past 12 months experiencing drought, outbreak of pests or disease, or flooding?</p> <ul style="list-style-type: none"> • How long has it been going on (or how long did it last)? How severe? Does it cover the entire kebele? Village X? • What effect has this had (or still having) on farmers' production of crops/or their livestock? (massive crop failure, livestock death, etc.?) • How are farmers/pastoralist coping with the effects of [this event]? What do they do? <p>Have you noticed significant rainfall variability in recent years?</p> <ul style="list-style-type: none"> • Did the short rains come late? • Is this a light rainy season so far compared to the past two years? • How do Households cope with this variability of rain?

4	Food Gaps/Food Security	<p>Do HHs in this kebele experience months when they have little or no food?</p> <ul style="list-style-type: none"> • How often does this happen? • What are the typical reasons that HH experience food gaps? <p>(Prompt for reasons, for example: run out of food before the next food distribution, crop ruined, death of livestock, insufficient crops for harvesting, death or migration of a male member of the household? etc.)</p> <p>Has there been any change in length of food gaps villages experience? Or frequency?</p>
5		<p>Are some HH becoming more food secure?</p> <ul style="list-style-type: none"> • What are the characteristics of PSNP beneficiary HHs that are becoming more food secure? • How have these household become more food secure? • Have HHs that were becoming more food secure gone backwards? What are the reasons?
Agriculture Topics		
Team Leader introduces the topic of agriculture starting with climate forecasts and early warning information		
6	Climate Forecasts and use of Information	<p>Does this kebele receive forecasts about climatic conditions?</p> <ul style="list-style-type: none"> • Where does the information come from? • Is it accurate? Reliable? • Is it understandable? • How do you use this information? (meaning how is it used at the kebele level) • How is this information transmitted to village residents?

		<ul style="list-style-type: none"> • Does the information come in time for farmers to prepare (for flooding, drought, etc.)? • Do farmers use this information to your knowledge? <p>If the response is <u>no farmers (or some farmers) do not use this information</u>, ask the following:</p> <ul style="list-style-type: none"> • Why do you think farmers do not use the information? <p>If the response is <u>yes, farmers do (or some farmers do) use this information</u>, ask the following:</p> <ul style="list-style-type: none"> • How do farmers use this information? • Were their responses effective in limiting damage to their crops (or livestock?)
7	<p><i>Early warning information on outbreaks of pests, disease and use of information</i></p>	<p>Does this kebele receive early warning information for major crops, pests and disease outbreaks?</p> <ul style="list-style-type: none"> • Where does the information come from? • How accurate is that information? Is it reliable? • Is it understandable? • How do you use it? (at the kebele level) • How does this information get transmitted to village residents? • Does the information come in time for farmers to prepare? • Do farmers/livestock owners use this information to your knowledge? <p>If respondents say NO they <u>do not think farmers/livestock owners use this information</u>, ask the following:</p> <ul style="list-style-type: none"> • What are the reasons they do not use this information? <p>(Prompt as necessary with these or other examples: e.g., it comes too late to do anything to prepare, farmers/livestock owners don't understand this information, don't trust this information, don't know how to use this information, don't think anything can be done about the situation)</p> <p>If respondents say they believe farmers <u>do use</u> this information, ask the following questions:</p> <ul style="list-style-type: none"> • How do they use it? • Were they able to prepare in time? • Were they able to prevent or limit major crop failure/death of livestock?

8	<p><i>Price information, use of price information</i></p>	<p>Does this kebele receive price information for the crops they produce or for any livestock process they sell?</p> <p>If the answer is <u>no</u>, skip to the question 9 on storage and sales</p> <p>If the answer is <u>yes, they do receive price information</u>, ask the following questions:</p> <ul style="list-style-type: none"> • Where does this information come from? • How often does price information come out? • Is it usually up-to-date? Accurate? • How does this information get transmitted down to villages in this kebele? • To your knowledge, do farmers/livestock owners use this information? <p>If some answer is <u>no</u>, ask the following:</p> <ul style="list-style-type: none"> • Why do you think they <u>do not</u> use this information? <p>If some answer is <u>yes</u>, they do use this information, ask the following:</p> <ul style="list-style-type: none"> • How do they use it? Can you give some examples? <p>(Prompt with the following examples or others as needed: Does it affect where they sell their crops/livestock/livestock products? Who they sell to? Does it affect when they sell? The price they sell the product for?)</p> <ul style="list-style-type: none"> • Has use of price information helped to increase HH income? <p>Do farmers/livestock owners in this kebele have access to a community storage facility for their harvested crops/dairy products? What about in village x?</p>
9	<p><i>Availability and Use of Community Storage</i></p>	<p>If the answer is <u>no</u>, <u>skip</u> question 10 on agriculture extension services and adoption of new technologies</p> <p>If the answer is <u>yes</u>, farmers/livestock owners <u>do have access</u> to a community storage facility, ask the following questions:</p> <ul style="list-style-type: none"> • Do farmers/livestock owners use it? <p>If the answer is <u>no, they are not using it, or only a few are</u>, ask the following:</p> <ul style="list-style-type: none"> • To your knowledge, why aren't farmers (and/or livestock owners) using the community storage facility? <p>(Prompt if necessary with the following examples or others as necessary: e.g., need to sell immediately after harvest for the money, costs for storage are not affordable, location of storage is disadvantageous, hard to get to; storage poorly maintained/built/ineffective)</p>

		<p>If the answer is <u>yes, they are using the community storage facility</u>, ask the following questions:</p> <ul style="list-style-type: none"> • Do all farmers (and/or livestock owners) use the storage facility? (more than 50%? More than 25%? 25% or under?) • Has use of storage changed when households sell their crops (and/or dairy products)? • Has it affected prices paid for crops, livestock products? • How has the availability of a community storage facility benefitted the households that use it in village X?
10	<i>Adoption of improved technologies and practices;</i>	<p>What agriculture extension services (and/or livestock extension services) are provided in this kebele, and specifically in village X?</p> <p>How accessible are the agriculture (and/or livestock) extensions agents?</p> <ul style="list-style-type: none"> • Do they provide services to women? <p>If the response is <u>no</u>, probe for the reasons why services are not provided to women.</p> <p>How effectively have these services helped HHs in this kebele? In village x?</p> <p>What recommended changes in crop productions and livestock production have farmers adopted so far?</p> <ul style="list-style-type: none"> • Are farmers adopting recommendations? • For those farmers who have adopted recommendations, what has been the benefit? <p>If the response by some or all the kebele officials is these services are <u>not effective or not very effective</u>, ask the following:</p> <ul style="list-style-type: none"> • What limits the effectiveness of the services they provide?
11	<i>Accessibility and use of agricultural loans</i>	<p>Are there accessible sources of credit that serve PSNP beneficiary households if they want to apply for loans to pay for improved agricultural inputs, technology, feed/medicine for livestock?</p> <p>If the response is <u>no, there are no accessible sources of credit</u>, skip to question 12</p> <p>If response is <u>yes</u>, there are accessible sources of credit, ask the following:</p> <ul style="list-style-type: none"> • What are those sources of credit that most farmers use? • How long ago were lending facilities established in this kebele? • To your knowledge are farmers/pastoralists applying for loans? Are women? <p>If response is <u>no, or very few</u>, ask follow-up questions below.</p> <ul style="list-style-type: none"> • What are the reasons village residents are not applying for loans? • What are the reasons women are not applying for loans?

		<p>If response is <u>yes, they are applying for loans</u>, ask the following:</p> <ul style="list-style-type: none">• Are farmers/pastoralists able to pay back per the terms of their loans?• What happens if they default on their loan?
--	--	---

WAGE EARNING OPPORTUNITIES

Team Leader introduces the topic of wage earning opportunities

12	<i>Wage Opportunities and Migration</i>	<p>Are there wage-earning opportunities nearby in this kebele or woreda?</p> <ul style="list-style-type: none">• Where are those opportunities located?• What kind of work is it?• Is it daily or seasonal?• Which household members usually take advantage of these opportunities? <p>Do people from this kebele migrate outside of the woreda to work for wages? What about from village x?</p> <ul style="list-style-type: none">• Where are these opportunities located?• For what kind of work?• Seasonal? Long-term?• What HH members usually migrate for work?• Do women ever migrate for work?• Do they send back money to their households?• How common is migration for work?• What are the primary reasons people migrate for work?
----	---	---

GOVERNANCE AND SECURITY TOPICS

Team leader introduces the topic of security issues

13	Security issues, incidents of violence	<p>Have there been any major security issues or incidents of violence (or unrest) in this kebele or surrounding areas, or that are happening right now?</p> <p>Interviewer Note: <u>If the answer is no</u>, end the discussion with this group. Go to Closing Question and Team Leader Remarks.</p> <p>Note: If the answer is yes, <u>there have been in the past</u>, ask the following questions:</p> <ul style="list-style-type: none"> • How long ago? Can you please describe what happened? • Where did it occur? • What impact did it have on HHs in this kebele? What about in village x? <p>Note: If there <u>currently</u> are major security issues or incidents of violence, ask the same questions:</p> <ul style="list-style-type: none"> • Can you please describe what these are? • Where is this occurring? • What are the likely causes? • How is (or how did) this affecting HHs in the area? <p>(Prompt as necessary, e.g.: restricted travel outside villages, restricted access to water, grazing land, restriction on herding livestock, restricting marketing/sales of crops, livestock or livestock products, restricted or temporarily halted delivery of FFP food allocations)</p> <p>Have (or were) any actions been taken to resolve the issues causing these problems?</p> <p>If the answer is <u>yes</u>, ask the following questions:</p> <ul style="list-style-type: none"> • What has been/what is being done? By who? • Has the security situation (or incidence of violence) been effectively resolved? • Is it likely to occur again?
	Closing Question	Are there any other issues we haven't covered that anyone would like to bring up?
Team Leader Closes the Interview: Thanks all participants for attending the session. Expresses appreciation given the time taken away from their obligations.		

**KEY INFORMANT INTERVIEW for HEALTH EXTENSION WORKER/S (HEW)
For HEWs Serving Villages Where Interviews Will Be Conducted**

INTERVIEW DATA			
Implementing Partner	Facilitator:	Date of Interview	Start Time:
Team Leader	Recorder:		End Time:
Region: Tigray	Woreda:	Kebele:	
Permission to Record Interview: Y/N		Signed or Verbal Consent Form Obtained: Y/N	

Facilitator Instructions for Beginning the Key Informant Interview with the Health Extension Agent (HEW)

Introductions and purpose of the interview. Thank you for the opportunity to speak with you. My name is _____ and this is _____. We are from Green Professional Services, and we are working with the US-based company MEA. We are conducting individual/group discussions with people like you in communities across several regions to strengthen and improve the PNSP. These questions in total will take approximately two hours and your participation is entirely voluntary. If you agree to participate, you can choose to stop at any time or to skip any questions you do not want to answer. Your answers will be completely confidential; we will not share information that identifies you with any one.

If you choose not to participate it will not change any services or benefits that you receive now or in the future. You can stop participating at any time without penalty and without having to give any reason. You can also decline to answer any specific questions that you do not want to answer, also without penalty and without having to give any reason.

We are going to record this discussion only for the purpose of reviewing our notes to make sure the notes correctly capture the contributions of the group. We will destroy the recording after the notes have been checked and finalized.

Do you have any questions about what I have said?

Summarize the category of questions you will be asking. These include questions on breastfeeding practices for infants; health and nutrition, especially for mothers, infants and children under five; water and sanitation; use of ORS, and gender issues. Inform the HEW that if there are any questions she is uncomfortable with the team will respect that and skip to the next question. Explain how the interview will be run and inform her the meeting will take approximately 1houronce it begins.

Q #	Question Sub-Category	MATERNAL AND CHILD HEALTH AND NUTRITION TOPICS
Team Leader introduces topic of child feeding		
1	<i>Use of exclusive breast feeding practice for infants under 6 months</i>	<p>M: Do most or all mothers in village X practicing exclusive breastfeeding? What about older mothers?</p> <p>Note: If the answer is <u>no</u>, not all mothers practice exclusive breast feeding, ask the following:</p> <ul style="list-style-type: none"> • What are the reasons some mothers do not practice exclusive breastfeeding? • What other kinds of food do mothers who don't practice exclusive breastfeeding give to their infants under 6 months? • What is the reason these foods are given to their infants instead of practicing exclusive breast feeding?
2	Minimum acceptable diet: frequency of feeding and food diversity for infants and children between 6-23 months	<p>M: Are most or all mothers feeding their children between the ages of 6-23 months with diverse types of food?</p> <p>If the answer is <u>yes</u>:</p> <p>M: What kinds of food are they giving these children?</p> <p>M: Do most of these mothers understand the importance of feeding their children different types of food?</p> <p>M: Do men understand this, too?</p>
3		<p>M: By tradition, are there certain kinds of food that are prohibited to give to children between 6-23 months?</p> <p>M: Do you see this changing at all?</p> <p>M: Is there a tradition of giving different types of food to boys versus girls in this age group? M: Do you see this changing at all?</p>
4		<p>M: Do husbands (or male partners) of young mothers ever feed their children in this age group?</p>

		<p>M: Do you see this changing at all?</p> <p>M: Do men give these children different food than their mothers give them?</p> <p>M: Do any other family members (grandmothers, aunts, sisters, brothers, etc.) ever feed children between ages 6-23 months?</p> <p>M: Do they feed those children different foods?</p>
5		<p>M: Do mothers give different kinds of food to male children between ages two and five compared to female children?</p> <p>Do they give male children a greater amount of food than they do to female children?</p> <p>Note to interviewer: If the answer is yes to either one or both of the two questions above, probe for the reasons. Why are mothers giving more and/or different kinds of food to their male children compared to their female children?</p> <ul style="list-style-type: none"> • Do practices about feeding male and female children change depending on whether families are experiencing food gaps?
6		<p>M: To what extent do mothers of children in this age group have control and decision-making authority around what those children eat?</p>
7	<i>Perception and knowledge of stunting, wasting and underweight children under age five</i>	<p>M: What do mothers in these villages know about what a healthy child under age five should look like? For example, in terms of weight, height, or any other features?</p> <p>M: Are mother's ideas of what a healthy child should look like changing?</p> <p>M: What do mothers know about acute and chronic malnutrition? Do they understand the difference?</p> <p>.</p> <p>M: Do mothers in this kebele know how to prevent malnutrition or to treat it? What about in village x?</p> <p>M: Do mothers understand what stunting is and what the signs of stunting are?</p>

8	<i>Women of reproductive age: knowledge and use of nutritious foods</i>	<p>M: What do women of reproductive age know about eating nutritious and diverse foods?</p> <ul style="list-style-type: none"> • Are most of these women eating the range and type of foods that are promoted for their health? <p>M: Are most pregnant women and new mothers following the recommendations? What about in village X?</p> <p>M: What are the reasons some pregnant women and new mothers do not eat nutritious/diverse foods?</p>
9	<i>Women's knowledge and use of family planning and reproductive services for pre- and post-natal care</i>	<p>M: What do women of reproductive age know about the use of family planning?</p> <p>M: Do most women using family planning? Does it vary by age group, or other factors such as the number of children they already have? What about in village x?</p> <p>M: Has this been changing? Do men have a say?</p> <p>M: What are some of the reasons women do not use family planning?</p>
10		<p>M: What do women know about the importance of using reproductive services for pre- and post-natal care?</p> <p>M: To what extent are pregnant women and women who have recently delivered using these services? What about in village x?</p> <p>M: Has this been changing?</p>
11		<p>M: Are any women from the villages you serve using ANC delivery services in the kebele, or do they all use the health post? What about in village x?</p> <p>M: Has this been changing?</p> <ul style="list-style-type: none"> • To the best of your knowledge, what are the reasons mothers have for choosing one or another place to go for delivery service?

WATER, SANITATION AND HEALTH TOPICS (WASH)

Team Leader introduces the topic beginning with child diarrhea

12	<i>Prevalence of diarrhea among children: knowledge of causes and treatment practices and household hygiene and sanitation practices; access to water and soap</i>	<p>M: What do mothers in this area know about the connection between open defecation and the frequency with which their children have diarrhea?</p> <p>M: Do most or all HHs in this kebele use either a community latrine or latrines or latrine holes near their homes? What about in village X?</p> <p>M: Do most HHs that use the community (or household) latrines or latrine holes cover them after use?</p> <p>M: What is motivating those households to use latrines and to cover them after use?</p> <p>M: To what extent are HHs in the same villages still practicing open defecation? What about in village X?</p> <p>M: Is there anything that hinders some HH from adopting these practices?</p>
13		<p>What do mothers know about the connection between washing their hands at critical times and the frequency with which their children have diarrhea?</p> <p>+M: To what extent are mothers following recommendations about washing their hands? What about in village x?</p> <p>M: Are those that do using soap?</p> <p>M: Is this changing?</p> <p>M: Do most HHs in this kabele have a handwashing station close to their community (or household) latrine?</p> <ul style="list-style-type: none"> • Do these stations have soap? • <p>M: What are some of the reasons that some mothers in this area do not wash their hands at critical times?</p> <p>M: How does drought affect these practices?</p>
14		<p>M: Do mothers in this area understand what ORS is and how it should be administered to children with diarrhea? What about in village X?</p> <p>M: Do other caretakers in the household (aunts, older children, etc.) understand the importance of ORS and how it should be administered?</p>

		<p>M: Do men understand?</p> <p>M: Are most mothers (and other caretakers including men) in the villages you serve administering ORS to their children who have diarrhea? Do they administer it correctly?</p> <p>M: Is this changing?</p> <p>M: What is motivating mothers and other caretakers to administer ORS?</p> <ul style="list-style-type: none"> • What are the reasons some mothers do not administer ORS to their children?
GENDER TOPICS: INTRA-HOUSEHOLD DECISION-MAKING, EQUITY, and BEHAVIOR CHANGE		
Facilitator Introduction: We know that part of your work with villages is to promote joint decision-making in households so that women (wives/partners) also have a say on important issues, such as what crops to plant, how to use cash disbursement, FFP/PSNP food, applying for agriculture loans, adopting new technologies.		
15	<i>Intra-household decision-making</i>	<p>M: In your view, has there been any progress to date in women’s involvement in decision-making on important issues?</p> <p>If the answer is <u>yes</u>:</p> <p>M: Are there certain issues about which you are seeing (or hearing) more joint decision-making in HHs between men and women? What about in village x?</p> <p>M: What accounts for those changes you are seeing?</p> <p>.</p> <p>If the answer is <u>no</u>, there has been no progress OR little progress, ask the following question:</p> <ul style="list-style-type: none"> • Why do you think there hasn’t been any progress?
16	<i>Intra-household food distribution and allocation</i>	<p>M: Have there been any changes in the type of food traditionally eaten by men compared to women? Or in the amount of food eaten by men compared to women?</p> <p>M: Please describe what the changes are.</p> <p>M: If this hasn’t changed, what is the difference in the type and amount of food eaten by men versus women?</p> <p>M: Have there been any changes in the traditional order of eating among household members during family meals?</p> <p>M: In HHs where the woman is pregnant, or has just given birth to a child, does she eat different kinds of food?</p>

17	<i>Changes in women's behavior</i>	<p>M: Are there certain activities that women are traditionally prohibited from doing by local custom and traditions? (Prompt as needed, for example: selling at markets outside of the village? Working for wages? Using birth control? Contacting agricultural extension agents? Applying for loans? Picking up the FFP/PSNP HH food package?)</p> <p>M: Do you see any changes in these traditions? Are women starting to do some of these things that they were traditionally prohibited from doing?</p> <ul style="list-style-type: none"> • What has been the reaction from men to these changes in women's behavior? Husbands, older brothers, uncles, etc.? • Has this been changing?
<i>Closing Question</i>	Are there any other issues we haven't covered that you would like to bring up?	
Team Leader Closes the Interview: Thanks the HEW for participating in the interview. Expresses appreciation given the time taken away from her obligations.		

KEY INFORMANT INTERVIEW GUIDE for VILLAGE LEADER

INTERVIEW DATA			
Team Leader	Facilitator:	Date of Interview	Start Time:
Implementing Partner	Recorder:		End Time:
Region	Woreda	Kebele: May	Village:
PARTICIPANT INFORMATION			
Type of Participants by Role if More Than One Village Leader (please check off) Village Leader	Consent given to record interview yes/no Signed or verbal consent recorded on consent reform yes/no	Total Number of Participants:	

Team Leader Instructions for Interviewing Village Leaders

Type and purpose of this interview. The purpose of this guide is to get an overview of the village status, descriptions, how food secure the village is, etc. Many if not all of the questions will be covered in individual interview guides for the four village interview groups, as well as in the interview with kebele officials, the Development Agent, and the Health Extension Worker.

It is important to get the perspective of the village leader/s and their descriptions and explanations. Their views and responses will be compared to responses from the woreda and kebele levels and from village residents during the data analysis phase.

This guide starts out with specific questions on a few critical topics, and then reverts to a topic guide where the topic is presented and there is a list of issues to cover rather than specifically worded questions.

Introductions and purpose of the interview. Thank you for the opportunity to speak with you. My name is _____ and this is _____. We are from Green Professional Services, and we are working with the US-based company MEA. We are conducting individual/group discussions with people like you in communities across several regions to strengthen and improve the PNSP. These questions in total will take approximately two hours and your participation is entirely voluntary. If you agree to participate, you can choose to stop at any time or to skip any questions you do not want to answer. Your answers will be completely confidential; we will not share information that identifies you with any one.

If you choose not to participate it will not change any services or benefits that you receive now or in the future. You can stop participating at any time without penalty and without having to give any reason. You can also decline to answer any specific questions that you do not want to answer, also without penalty and without having to give any reason.

We are going to record this discussion only for the purpose of reviewing our notes to make sure the notes correctly capture the contributions of the group. We will destroy the recording after the notes have been checked and finalized.

Do you have any questions about what I have said?

Summarize the category/type of questions you will be asking. (agriculture, wage opportunities, weather, PNSP, etc.) Inform the village leader that the team would like to understand current conditions/situations in the village. Say that if there are any questions he/they are uncomfortable with and do not wish to discuss, be clear that you will respect that and move on to the next question. Explain how the interview will be run and inform the respondent/s the meeting will take approximately one hour once it begins.

Stress anonymity. You have not written down the respondent/s' names and won't do so during the interview. Explain why you will be taking notes and then request permission to record. If permission is granted, read consent form, and ask for signature/s (or X mark) from each respondent. Thank the respondent/s again, and begin recording after the consent letter is signed. If permission is **not granted**, explain that the recorder will take notes, and make it clear, once again, that the respondent/s' name will not be included in the notes.

KII with Village Leader		
Facilitator explains the interview will begin by asking questions about PNSP beneficiaries.		
1	<i>PNSP 4 beneficiaries</i>	Are there any HHs that have graduated from PNSP? If the answer is <u>yes</u> , ask the following: How are those households doing? Are they able to feed their families and meet other basic needs? Are any of those households re-enrolled in PNSP as a beneficiary?
2	<i>Community Projects</i>	What community project are PNSP beneficiaries working on?

		<p>Why was this project chosen? How will it benefit people living in this village?</p> <p>Have PSNP beneficiary households brought up problems or complaints to the Appeals Committee in kebele X? (insert name of kebele)</p> <p>What kind of problems are brought up to the Appeals s Committee?</p> <p>Are they resolved satisfactorily?</p>
4	Food Gaps/Food Security	<p>Do HHs in this village experience months where they have very little food to eat?</p> <ul style="list-style-type: none"> • How often does this happen? • Why does this happen? • What type of PSNP beneficiaries are most likely to experience periods when they have too little food? • <p>(Probe for reasons, for example: run out of food before the next food (or cash) distribution, crop ruined, death of livestock, insufficient crops for harvesting, death or migration of a male member of the household? etc.)</p> <ul style="list-style-type: none"> • Has there been any changes in length of food gaps villages experience? Or frequency?
5		<p>Are some HH becoming more food secure?</p> <ul style="list-style-type: none"> • What are the characteristics of HH that are becoming more food secure? • Have any of those HH gone back to becoming food insecure? <p>If the answer is <u>yes</u>, ask the following:</p> <ul style="list-style-type: none"> • What are the reasons this happened?
6	AEA and LEA services, Adoption of improved crop and livestock technologies/practices	<p>Are agricultural extension services (and/or livestock extension services) provided to this village?</p> <ul style="list-style-type: none"> • How effectively have these services helped HHs in this village? <p>If the response is <u>not effective or not very effective</u>, ask the following:</p>

		<p>Why aren't their services very effective in helping HHs here?</p> <p>Have HHs adopted any new agricultural technologies/inputs such as seeds, fertilizer?</p> <ul style="list-style-type: none"> • New agricultural practices in soil or water management, cropping? <p>Do HHs learn from AEA/LEA? Agro-dealers? Other sources?</p> <p>Are HH in the village adopting these practices (especially PSNP beneficiaries). If not, why not?</p> <p>For those HHs who have adopted new practices, has it been beneficial?</p>
7	Availability and use of loans	<p>Do HHs apply for loans/credit to purchase any of these new technologies/inputs?</p> <p>From what sources?</p> <p>Are most people able to pay back their loans?</p>
8	Wage earning opportunities	<p>Are their wage-earning opportunities in this region that HHs in the village take advantage of?</p> <p>What HH members are engaged in wage earning work (young men? adult men? women?)</p> <p>What is the percentage of HHs you can estimate with a family member that temporarily migrates to earn wages? % that have permanently migrated?</p>
9	Biggest Challenge	<p>What is the biggest challenge in relation to achieving food security households in this village face?</p>
10	Most proud of	<p>What are you most proud of about the people in this village?</p>
	Closing Question	<p>Are there any other issues we haven't covered that anyone would like to bring up?</p>
<p>Team Leader Closes the Interview: Thanks village leader/leaders. Express appreciation given the time taken away from their obligations.</p>		

GROUP INTERVIEW GUIDE FOR MALE AND FEMALE HHH

Guide for Group Interviews with Male Heads of Household (MHHH) and Group Interviews with Female Co-Heads of Household (FCo-HHH)
This data collection tool should be used for both male and female groups.

Composition of Participants per Group

MHHH: Adult men residing in the village who are the head of their households; and married or living with a partner they are not married to.

FCo-HHH: Adult women residing in the village, living with a husband or male partner who is the head of their HH. We use the term co-heads of household to distinguish this group from the group formed with women heads of household (WHHH). WHHH are women who are widowed, divorced, or abandoned.

Note: Exclude from the FCo-HHH Group all young women age 29 and under. Young women age 29 and under will be asked to volunteer to participate in a separate group called Young Mothers with Infants and/or Children Age 5 and under (MIC5.)

INTERVIEW DATA					
Implementing Partner		Date of Interview:	Team Leader:	Facilitator:	Start Time:
				Recorder:	End Time:
Region Tigray	Woreda	Kebele		Village	
PARTICIPANT DATA					
Type of Group (check one)		Consent to record interview (check one)		Number of Participants:	
Type of Participants in Group (check one)		Yes No			
Farmers Agro Pastoralists		Number of verbal agreements/signatures recorded on consent form			
Team Leader and Facilitator Instructions for Beginning the Group Interview					
<p>Introductions and purpose of the interview. Thank you for the opportunity to speak with you. My name is _____ and this is _____. We are from Green Professional Services, and we are working with the US-based company MEA. We are conducting individual/group discussions with people like you in communities across several regions to strengthen and improve the PNSP. These questions in total will take approximately two hours and your participation is entirely voluntary. If you agree to participate, you can choose to stop at any time or to skip any questions you do not want to answer. Your answers will be completely confidential; we will not share information that identifies you with any one.</p>					

If you choose not to participate it will not change any services or benefits that you receive now or in the future. You can stop participating at any time without penalty and without having to give any reason. You can also decline to answer any specific questions that you do not want to answer, also without penalty and without having to give any reason.

We are going to record this discussion only for the purpose of reviewing our notes to make sure the notes correctly capture the contributions of the group. We will destroy the recording after the notes have been checked and finalized.

Do you have any questions about what I have said?

Facilitator: Summarize the category of questions you will be asking. Inform the group that if there are any questions participants are uncomfortable with to let you know and you will skip to the next questions. Anyone in the group wishing to leave before the interview is over may do so. Explain how the interview will be run and inform participants the meeting will take approximately two hours once it begins.

Note on questions: Unless specified, each question can be used for agricultural, or agro-pastoralist villages. Extra questions are sometimes given for those villages where participants are also livestock owners for interviews in agro-pastoralist villages.

Agriculture and Livelihoods Topics

Facilitator: Introduce the topic of this set of questions on agriculture/livestock

1	<p><i>Household decision-making: What crops are planted for sale? For family consumption?</i></p>	<p>Do you own your own land or rent land?</p> <p>FACILITATOR NOTE: If some participants still haven't responded, ask if anyone sharecrops.</p> <p>IMPORTANT MESSAGE FOR TEAM RECORDER: Record the number of participants that say they own land, the number that rent land, and the number that sharecrop.</p> <p>What crops do most of households in this village plant?</p> <ul style="list-style-type: none"> • What crops do you plant for sale? What crops do you plant for feeding the family? <p>How do you decide what to plant? (alternative how do households decide what to plant?)</p> <p>(Prompt with examples as needed, such as: land ownership, location of the land, quality of land sharecropped, market prices, etc.)</p> <ul style="list-style-type: none"> • Who is involved in making the decision on what to plant? •
---	---	---

1a		<p>If some participants say <u>yes</u>, ask the following:</p> <ul style="list-style-type: none"> • What happens if husband and wife disagree on what to plant? How is the final decision made? <hr/> <p>What kind of livestock do households in this village own?</p> <p>Do they sell any products from their livestock?</p> <ul style="list-style-type: none"> • What kind? <p>Do you use some of the livestock as a source of food for the family?</p> <p>If some participants say <u>yes</u>, ask:</p> <ul style="list-style-type: none"> • What do you feed the family from your livestock (referring to first question)? Eggs, milk, meat, butter, etc.
2	<i>Environmental factors that affect agriculture and livestock productivity and household responses</i>	<p>How good was your crop yield from the last harvest of crops?</p> <ul style="list-style-type: none"> • Was the amount as expected? • How was it compared to the harvest from the last two years? • What accounts for the yield? <p>If some or all participants say <u>yield was good</u>, probe as necessary with examples (e.g., sufficient rain, using improved seeds, fertilizer, new soil management techniques, no outbreaks of pests/diseases?)</p> <p>If some participants say <u>yield was low</u>, bad compared to last year, etc., probe as necessary with examples (e.g., insufficient rain, delayed rain, drought, flooding, outbreak of pests/diseases, poor soil quality/erosion, interference from wildlife, lack of cash to buy inputs).</p>
3	<i>Sources of water: Rainfall variability and drought and HH responses</i>	<p>What is/are the source/s of water households use for growing crops (streams, well, river, lake, pond, rainfed)</p> <p>Is it accessible for use? Is it irrigated to your land?</p> <p>Is there sufficient water for crops (crops for sale and/or for consumption) from this source of water for the entire growing season?</p> <p>If some participants say <u>no</u>, ask the following questions:</p> <ul style="list-style-type: none"> • What is the reason there wasn't enough water during the entire growing season? Not enough rain? Rain stopped before rainy season?

		<p>Questions for the entire group:</p> <p>Have you noticed changes in rainfall in recent years?</p> <p>If the answer is <u>yes</u>, ask the following questions:</p> <ul style="list-style-type: none"> • What kind of changes do you notice? <p>(Prompt for responses giving these or other examples as appropriate: short rains come late, rain during the rainy season is lighter, rain comes at unexpected times than usual, etc.)</p> <ul style="list-style-type: none"> • How does this affect crops? The fact that you can't predict the short rains, not enough water for the whole growing season? • What do you do?
3a	<i>Livestock questions</i>	<p>What are the water sources (households in this village use) you use for livestock?</p> <p>a. Are these sources (or source) accessible for use of HHs in this village or nearby?</p> <p>If answer is no:</p> <ul style="list-style-type: none"> • Did it use to be? What has changed? b. Is there enough water year-round for each HH's livestock? If answer is yes, skip to Q 4 <p>If no:</p> <ul style="list-style-type: none"> • What is the reason? <p>(Prompt as necessary: Prohibited from using the water hole traditionally used? Dried up? Drought? Delayed short rains? Light rains?)</p> <ul style="list-style-type: none"> • How does this affect your livestock?
4	<i>Other challenges for planting crops (not</i>	<p>Besides water, what other major challenges do households face in planting and harvesting crops (either for sale or consumption)?</p> <p>Prompt to get a full range of all the challenges faced in planting crops using any of these examples as necessary. You are not expected to ask each one.</p>

	<i>related to water)</i>	<ul style="list-style-type: none"> • Poor soil quality, soil erosion? • No choice but to plant crops on ever steeper slopes? • Flooding, hail? • Lack of cash to buy improved seeds, fertilizer, or other inputs? • Outbreak of pests, disease? • Wildlife intrusion? • Do not own land, or sufficient land? Can't afford to rent enough land? • Sharecroppers- need to give a significant portion of the harvest or cash payment in exchange for lease of land? • Insufficient HH labor? • Security issues? <p>How long has this been a problem, gotten worse over time? Since when? (NOTE: IF MORE THAN ONE CHALLENGE NOTED, ASK THIS QUESTION FOR EACH MAJOR CHALLENGE)</p> <ul style="list-style-type: none"> • What changes have you made in response to these challenges? <p>Prompt: provide some examples if needed, e.g., plant in different locations if possible, plant different crops, use fertilizer for soil, take preventative measures for outbreak of pests/disease, use improved seeds, improve soil management practices, etc.)</p>
4a	Additional questions for livestock holders	<p>What major challenges do your households face managing their livestock and keeping them healthy and productive?</p> <p>Interviewer: Prompt to get a full range of all the challenges faced in keeping livestock healthy and productive using any of these examples as necessary. You are not expected to ask each one.</p> <ul style="list-style-type: none"> • Poor quality of grazing land? • Lack of access to grazing areas? • Conflict with farmers over grazing areas, access to fields? • Grazing areas taken over by farms? • Poor quality of fodder or insufficient fodder? • Outbreak of pests that affect grazing land? • Outbreak of diseases that affect livestock? • Lack of veterinary services, medicines, vaccinations, dry season fodder, etc.? <p>Follow up Questions:</p>

		<ul style="list-style-type: none"> • How long has this (have these) been a problem? • Since when? Has this (these) situations gotten worse over time? • What do livestock owners do in this village to respond to these challenges/Problems?
5	Availability and use of climate forecasts	<p>Where does the information come from on climate forecasts?</p> <p>(Prompt as necessary: TV, radio? Agriculture Extension Agent? Livestock Extension Agent?</p> <p>Do households use this information? A. Is no, B is Yes</p> <p>a. If no:</p> <ul style="list-style-type: none"> • Why not? <p>(Provide any of the following examples as needed: (use signs we traditionally use to tell if a drought, etc., will come and we trust it more, the forecasted information comes too far in advance or too late, crops already planted, cannot understand the information, the information is not reliable, believable, etc.)</p> <p>b. If yes:</p> <ul style="list-style-type: none"> • How do you use this information? What do you do to prepare? • Has this information helped you to minimize damage to your crops (or livestock)?
6	Early warning of pest and disease outbreaks	<p>Does this village receive early warning information for major crops pests and disease outbreaks? (or livestock diseases?)</p> <p>If response is no, skip to question 7. On INSURANCE</p> <p>If response is yes:</p> <ul style="list-style-type: none"> • Who provides the early warning information? Where does it come from? • Do HHs here use this information? A. If answer from some is no B. If answer from some is yes. <p>a. No answers</p> <ul style="list-style-type: none"> • Why don't they use this information? <p>(Prompt for reasons as necessary: e.g., not reliable, not accurate, use traditional signs, can't understand it, doesn't come in time, nothing can be done about it anyway, etc.)</p> <ul style="list-style-type: none"> • What do those households do when there is an outbreak of pests or diseases? Are they able to limit the damage to their

7	<p><i>Use of crop/livestock insurance</i></p>	<p>crops and livestock?</p> <p>b. Yes answers</p> <ul style="list-style-type: none"> • How do you use this early warning information? What do you do? <p>(Provide examples as necessary, e.g., buy crop insurance/livestock insurance, purchase pesticides, plant a different crop; for livestock, use fortified feeds to increase resilience to disease, isolate those livestock that become diseased)</p> <ul style="list-style-type: none"> • Were you able to save your crops or limit the damage? • Your livestock? <p>IF No INSURANCE AVAILABLE IN THIS AREA, SKIP to QUESTION 8</p> <p>Do HHs in this village ever buy crop/livestock insurance based on climate forecasts or early warning information on pest or disease outbreaks? A. No answers; B. yes answers</p> <p>a. No answers</p> <ul style="list-style-type: none"> • Why not? <p>Prompt for explanations as needed using some of these examples, e.g. cannot afford to pay for insurance, too complicated to apply for insurance, heard it is too hard to get insurance money when needed, etc.)</p> <p>b. Yes answers</p> <ul style="list-style-type: none"> • Where is the insurance from? • Did those households (or you) receive insurance money after crops were destroyed/livestock died? • Would you be willing to purchase insurance again? <p>No answers:</p> <ul style="list-style-type: none"> • Why not? What are the reasons?
---	---	---

<i>Facilitator introduces the topic on use of improved agricultural and/or livestock inputs/technologies/practices</i>		
8	<i>Knowledge of improved technologies and practices for crop production and livestock management</i>	<p>A. Crops How do HHs here learn about new ways to increase the yield of their crops? What type of products to increase yield have you learned about? (prompt as necessary: types of seeds, fertilizers, or pesticides to protect crops?) Have new practices for working the soil in different ways been suggested? For planting? Application of water? Or for harvesting crops?</p> <p>Livestock. How do HHs here learn about new technologies to improve the health or productivity of their livestock? Have new practices for improving the quality of grazing areas been suggested? Or for improving the quality of pasturage?</p>
9	<i>Experience with adopting new practices, inputs</i>	<p>Have <u>any of you</u> tried any of the (technologies, techniques, practices)? For improving crop yield or your livestock? A. No answers; B. Yes Answers</p> <p>A. No answers</p> <ul style="list-style-type: none"> • Why not? What are the reasons you have not tried any of them? <p>B. Yes answers Note: Ask first about crops, then follow up by asking about trying any new product, etc. for livestock</p> <ul style="list-style-type: none"> • Which ones have you tried? • What were the results? <p>Will you continue to use “x” technology or “y” practice for your crops (and/or livestock?) 1. If Yes: 2. If no</p> <p>1. Yes answers</p> <ul style="list-style-type: none"> • What are the reasons you will continue with this (technology, practice, etc.)? <p>2. No answers</p> <ul style="list-style-type: none"> • What are the reasons you WON'T continue using this (technology, practice)?

9	Experience with AEA/LEAs/ Agro-dealers	<p>Do you ever ask for services from agriculture extension agents, veterinary extension agents, or agro-dealers? 1. Yes Answers; 2. No answers</p> <ol style="list-style-type: none"> 1. Yes <ul style="list-style-type: none"> • Which kind of agent (or agro-dealers)? For what reason? • Was it helpful? How? • Who in your household usually seeks out these services? • Can women seek out services from agriculture extension agents (livestock extension agents, agro-dealers)? <p>Probe for reason if participants say women cannot do this.</p> <ol style="list-style-type: none"> 2. No <ul style="list-style-type: none"> • Why haven't you? <p>(Probe for reasons as necessary: don't believe they know what they are talking about, bad recommendations, receive services from their coop, distance, no transportation, poor roads, other physical barriers, financial, security issues, don't feel welcome or treated well, cultural issues related to appropriate gender roles)</p>
10	Experience with loans	<p>Have you ever applied for a loan for the purposes of buying agricultural inputs (seeds/fertilizer) or for livestock medicine, vitamins? 1. No Answers 2. Yes Answers</p> <ol style="list-style-type: none"> 1. No Answers <ul style="list-style-type: none"> • Why not, what are the reasons you haven't? <p>(Prompt using following examples as needed: can't afford to purchase without borrowing money, rates of interest, collateral requirements, terms of repayment, too difficult to pay back loan, prefer to use other sources, other)</p> 2. Yes Answers <ul style="list-style-type: none"> Where is your loan from? What kind of loan is it? • Was your loan application successful? • Would you apply for a loan again (to buy technologies, improved seeds, medicines, fertilizer, etc.)? <p>If some say no, they would not borrow again, ask:</p> <ul style="list-style-type: none"> • Why not? What are the reasons? <p>Probe using following prompts or others as needed: have not been able to repay last loan, were not able to get as much as</p>

	Storage Questions	<p>ATTENTION: SKIP QUESTION ON COMMUNITY STORAGE IF YOU LEARN FROM KABELLE THERE IS NONE: go to Q 12a</p> <p>What can you keep in the community storage facility? How long can you keep your crops (livestock products) in this facility before you have to sell them?</p> <p>Do any of you use it? 1. No answers 2. Yes Answers</p> <p>1. No answers</p> <ul style="list-style-type: none"> • Why not? What are the reasons you don't use the storage facility? <p>(Probe for reasons as necessary using examples: it's too difficult or costly to transport crops (or livestock products) to the facility, the storage facilities are in bad condition and don't keep harvested crops (and/or livestock products) fresh, a storage price is charged and some cannot afford it, they choose to sell immediately after harvest because they need the money right away, etc.).</p> <p>2. Yes answers</p> <ul style="list-style-type: none"> • Why do you use it? What benefit do you receive from storing your crops (or livestock products) after harvest? <p>(Probe for reasons: maintain freshness if there are problems in accessing markets, intermediary buyers due to road conditions, floods, security reasons, get a better price by being able to sell at a later time)</p>
12 a	<i>Selling livestock: for Agro-pastoralist and pastoralist villages</i>	<p>Do you ever go through times when you decide you must sell some or all of your livestock? If answer is no, Skip to Q 13</p> <p>1. Yes answers</p> <ul style="list-style-type: none"> • What was the reason? Why did you have to sell? <p>(Probe for reasons as necessary: insufficient resources for feeding and watering livestock, grazing area no longer accessible, useable, or must now pay to use, no accessible water sources, need for immediate cash, livestock is too old to produce anymore and are sold for skins, pay back debts on loans, etc.)</p>
13	<i>Household decision making on where to sell products (crop and livestock)</i>	<p>Where do HHs usually bring their farm produce and/or livestock or livestock products for sale?</p> <p>(Probe as necessary: to the coop they are members of to sell on their behalf? directly to buyers at the nearest market? To sell it themselves at the nearest market? Directly to intermediary buyers who then bring products to market for sale? Other locations, etc.)</p> <p>Do you have options on where to sell? 1. Ask question below; If yes, skip to 2.</p> <p>1. Answer is no:</p> <ul style="list-style-type: none"> • Does every household bring their crops (or livestock products) to sell there at the same time?

		<p>2. Yes answer</p> <ul style="list-style-type: none"> • How do you decide where to sell? <p>(Probe as necessary: always through the coop, transportation issues, road quality/accessibility, price, easy location for transportation, distance, etc.)</p> <ul style="list-style-type: none"> • Who in the household decides where to sell?
14	<i>Household decision-making: use of income from crop sales, sale of livestock products and other sources of income</i>	<p>How do you decide to use the money you earn from selling crops/livestock products?</p> <p>(Probe as necessary: food to feed the HH, invest in improving livestock condition, rent additional land, purchase improved seeds, fertilizers, purchase or rent additional land or yearly rent of same land, HH goods, school fees, uniforms, school books and supplies, medicine or other health costs, marriages, funerals, other religious ceremonies/events, loan repayment, etc.)</p> <ul style="list-style-type: none"> • Who in your household decides how to use the money? <p>(Probe if necessary: joint decision-making between adult male and female partners?)</p> <ul style="list-style-type: none"> • How do you decide how to use the money if husband and wife don't agree? <p>Do HH here have other sources of income? (list them in your notes) 1. If no, Skip to Question 15</p> <p>(Probe as necessary using examples, e.g.: cash transfers, selling part of the HH food allotment package, remittance from HH members who have migrated, selling firewood, charcoal, making/selling clothes, handicrafts, selling forest products, selling fish, chicken eggs)</p>
Employment Topics		
Facilitator explains the next section of questions is about wage earning opportunities		
15	<i>Wage earning opportunities, HH wage earners</i>	<p>Does anyone in your household earn wages? 1. Yes Answers If no, Skip to Question 16</p> <p>1. Yes Answers</p> <ul style="list-style-type: none"> • What members of the family? • Where do they go? • What kind of work is it? • Is it seasonal? Daily?

		<ul style="list-style-type: none"> • Can women earn wages too? Unmarried girls in the family? <p>Do some of your HH members migrate seasonally or long term? 1. Yes answers. If NO, Skip to Question 16</p> <p>1. Yes Answers</p> <ul style="list-style-type: none"> • Which household members? • Where do they go? • Do they send back money they earn to your household? • What are the reasons those family members migrate to earn wages (either seasonally or long-term)? <p>(Probe as necessary: lack of land or lack of money to rent land, poor conditions of soil and/or location of land they have for planting/grazing, no or limited access to grazing land for livestock, crop failure or disease/death of livestock from prolonged drought, flooding, pests, insufficient income from sales of crops/livestock products to meet household needs for food, etc.)</p>
Poverty and Food Security Topics		
Facilitator introduces the topics on HH meals, cost of food, and food from FFP/PSNP HH food allotment		
16	<i>Intra-household food allocation and distribution</i>	<p>a. What type of food does each member of the HH eat? If answer is all the same, skip to question 16b on amount</p> <ul style="list-style-type: none"> • What is the reason different members of the HH eat different types of food? <p>b. Does the amount of food each household member eats differ?</p> <ul style="list-style-type: none"> • What is the reason different members of the HH eat different amounts of food? <p>Is there an order of eating among household members during mealtimes?</p> <p>How do households decide what type of food and/or the amount of food each family member eats? Is it a joint decision between husband and wife?</p>
17	<i>Food for work and use of FFP/PSNP food, cash transfers</i>	<p>What type of community project do beneficiary members of this village do in return for your food allotment (or cash transfer)? Is the community project good for the village in your view? 1. Yes answer 2. No answer</p> <p>1. Yes Answer</p> <ul style="list-style-type: none"> • Why is it good for the village? What benefits does it bring? <p>2. No Answer</p> <ul style="list-style-type: none"> • Why don't you think it is good (or won't be good) for the households in this village? <p>CASH TRANSFER QUESTIONS</p> <p>How do households receive their cash transfers?</p> <ul style="list-style-type: none"> • Who does it come to?

		<ul style="list-style-type: none"> • How do you use it? <p>FOOD DISTRIBUTION/ALLOTMENT QUESTIONBS</p> <p>Who in the HH is eligible to pick up the family food allotment?</p> <ul style="list-style-type: none"> • How do you decide who will pick it up? <p>Do HHs ever sell any of the food items provided to buy other types of food available at the market? Or to buy anything else (e.g., or to repay loans, etc.)? If yes, ask questions below, if no, skip to Q 18</p> <ul style="list-style-type: none"> • Which items are usually sold? • Why sell those items?
18	<i>HH strategies during periods of food gaps</i>	<p>Do HHs in this village ever experience months when they have no food or too little food?</p> <ul style="list-style-type: none"> • How often does this happen? Does this happen certain times of year? • What are the reasons this happens? <p>(Probe for reasons, using prompts as necessary: ran out of food before the next food distribution, crop ruined, death of livestock, insufficient crops for harvesting, death or migration of a male member of the household, have to sell crops when prices are low to pay off debts, or because the money is needed right away for other reasons, etc.)</p> <ul style="list-style-type: none"> • What do you (or what do HHs in this village) do when you go through times when you don't have enough food for yourself and the family? <p>(Probe for reasons, using examples as necessary, e.g.: borrow from family neighbors in other households? Sell household items? Sell livestock? Sell land or rent land? Send some HH members out for wage employment to send back to the HH? Take children out of school to eliminate the need for paying school fees? Reduce the amount of food eaten or the number of meals eaten per day? Eat cheaper, less desirable food? Use FFP/PNSP cash distributions? Request additional food? Inform the IP (insert name), inform the village gott, the DA, HEW)</p>
19	<i>Household food purchasing decisions</i>	<p>What kinds of food do you buy for your household for family meals?</p> <p>Where do you buy the food?</p> <ul style="list-style-type: none"> • Are there any times when you don't or cannot buy those types of food you usually purchase? If answer is no, go to closing question • What is the reason that happens sometimes? <p>Prompts as necessary (e.g., the types of food usually purchased at the market is too high, not available based on time of year or</p>

	some other reason, only a small amount, food for sale is sometimes spoiled, etc.)
	<ul style="list-style-type: none"> • What do you do during the times you cannot buy those foods for your household?
<i>Closing Question</i>	Are there any other issues you would like to bring up before we close the interview?
Team Leader closes meeting. Thanks everyone for participating in the group. Expresses appreciation for the time they spent in the meeting.	

GUIDE FOR GROUP INTERVIEW with YOUNG MOTHERS with INFANTS and CHILDREN AGE FIVE AND UNDER (MIC5)

Group Composition: Young mothers age 29 and under with infants and children age 5 and under.

IMPORTANT INTERVIEWER NOTE: None of these women should be included as participants in the FCo-HHH Group or in the WHHH Group.

INTERVIEW DATA			
Implementing Partner	Facilitator:	Date of Interview	Start Time:
Team Leader	Recorder:		End Time:
Region:	Woreda:	Kebele:	Village:
PARTICIPANT INFORMATION			
Type of Participants in Group (check one)	Consent to record interview (check one)	Number of Participants	
Agro-Pastoralists	Consent to record not given		
<p>Facilitator Instructions for Beginning the Group Interview</p> <p>Introductions and purpose of the interview.</p> <p>Facilitator;</p> <p>Thank you for the opportunity to speak with you. My name is _____ and this is _____. We are from Green Professional Services, and we are working with the US-based company MEA. We are conducting individual/group discussions with people like you in communities across several regions to strengthen and improve the PNSP. These questions in total will take approximately two hours and your participation is entirely voluntary. If you agree to participate, you can choose to stop at any time or to skip any questions you do not want to answer. Your answers will be completely confidential; we will not share information that identifies you with any one. If you choose not to participate it will not change any services or benefits that you receive now or in the future. You can stop participating at any time without penalty and without having to give any reason. You can also decline to answer any specific questions that you do not want to answer, also without penalty and without having to give any reason.</p> <p>We are going to record this discussion only for the purpose of reviewing our notes to make sure the notes correctly capture the contributions of the group. Do we have your permission to record the session/interview?</p> <p>Do you have any questions about what I have said?</p> <p>Note Taker;</p>			

Please mark the received number of verbal agreements (or signatures) on the consent form

#	Question Sub- Category	MATERNAL and CHILD HEALTH and NUTRITION
FACILITATOR: Introduce topic on maternal and child health and nutrition, explain that we will begin with questions about feeding their infants and young children		
1	<i>Use of exclusive breast feeding practice for infants under 6 months</i>	<p>M: Do you exclusively breast feed your infant under 6 months of age.</p> <p>Follow-up for those who say <u>yes</u>:</p> <p>M: How often?</p> <p>M: What is the reason you breastfeed your infant exclusively?</p> <p>Follow up for those participants who <u>say no, they do not</u> breastfeed their infant exclusively</p> <ul style="list-style-type: none"> • What is the reason you don't breast feed your infant? • What do you feed your infant? <p>Follow-up for those participants who say they <u>do breastfeed exclusively</u>:</p> <p>M: Do you ever give your infants any other foods <u>in addition to breast feeding</u>?</p> <p>If some participants in the group say <u>yes</u>, for mothers who give their children other foods in addition to breast-feeding:</p> <ul style="list-style-type: none"> • What kinds of food do you give your infant? <p>(Prompt as needed with following and any other examples, e.g., water, juices, milk from livestock, porridge)</p> <ul style="list-style-type: none"> • What is the reason you give your infant other foods instead of just breast feeding them? <p>For those mothers who say <u>no</u>, they do not give their infants and other food, ask:</p> <ul style="list-style-type: none"> • What is the reason you don't give your infants any other food?
2		M: Are there any kinds of food that are prohibited to give infants that are under six months of age?

		<p>Follow-up if the answer is <u>yes</u>:</p> <p>M: What kinds of food are prohibited to give to infants?</p> <ul style="list-style-type: none"> • What are the reasons these foods are prohibited?
3		<p>M: Is the Health Extension <u>Worker</u> or the IP (insert the name of the partner: e.g., REST/CRS/FH-ETHIOPIA/World Vision) trying to encourage you to feed your infant through exclusive breast feeding?</p> <p>If some participants in the group say <u>yes</u>, ask the following:</p> <ul style="list-style-type: none"> • Do you know why? What is the reason? <p>Facilitator: <i>Urge participants to tell you what they know – from mothers who do practice exclusive breast feeding and, also, from mothers who do not practice exclusive breast-feeding. Check to see if their knowledge and understanding differ.</i></p>
<p>FACILITATOR: Now I would like to ask you some questions about what kinds of food you give to your children that are between six and 23 months old:</p>		
4	<p>Minimum acceptable diet: frequency of feeding and food diversity for infants and children between 6-23 months</p>	<p>M: What kinds of food do you give to your children in this age group between 6-23 months old?</p> <p>M: Why do you feed them these kinds of foods?</p> <p>M: Do you give the same kind of food to both girl and boy children?</p> <p>If some participants say <u>no</u>, ask the following:</p> <ul style="list-style-type: none"> • What is the reason you give different kinds of food to boys than to girls? • What kinds of food do you give to boys that you don't give to girls?
5		<p>M: Do you feed your children of this age (between 6-23 months) the types of foods that the Health Extension Worker or the IP encourages you to give them?</p> <p>M: What types of food does she want you to feed your children? Do you know why?</p> <ul style="list-style-type: none"> • Are there any types of food the Health Extension Worker (or the IP) wants you to give your children that you are not feeding them? <p>If the answer is <u>yes</u>, ask the following:</p>

		<p>M: What kind of food aren't you giving your children that she (or the IP) recommends?</p> <p>M: What is the reason you are not feeding your children x (insert the names of the actual food in the question)?</p>
6		<p>M: Are there any kinds of food that are prohibited to give to children in this age group?</p> <p>If the answer is <u>yes</u>, ask the following:</p> <p>M: What kinds of foods are prohibited? What is the reason?</p>
7		<p>M: At what age do you think it is important to have your children start eating meat? Probe for explanation.</p> <p>M: Is that the same for both boys and girls of this age? Probe for explanation.</p> <p>M: At what age do you think it is important to have your children start eating eggs? Probe for explanation.</p> <p>M: Is that the same for both boys and girls of this age? Probe for explanation.</p>
8		<p>M: Do men (husband, father, grandfather, uncle, brother) ever feed children between ages 6-23 months? If the answer is <u>yes</u>, ask the following:</p> <p>M: Do they feed those children different foods? (PROBE if the answer is yes)</p>
9		<p>M: Do any other family members (grandmothers, aunts, sisters, brothers, etc.) ever feed children between ages 6-23 months?</p> <p>M: Which family members feed your children in this age group?</p> <p>M: Do they feed those children different foods than you do? (probe if the answer is yes)</p>

10		<p>M: Who in the family decides what children between ages 6-23 months old will eat?</p> <p>Can you explain why?</p>
11	<p>Perception and knowledge of stunting, wasting and underweight children under age five</p> <p>INTERVIEWER NOTE: Please use terms for <u>acute and chronic malnutrition</u> that the health extension worker recommends when you interviewed her at the kebele</p>	<p>M: How do you know if your child is healthy? What should a healthy child under five years old look like? (probe for weight, height, other features)</p>
12		<p>M: How do you know if any of your children under five years of age have acute malnutrition? Do any of your children have chronic malnutrition? How do you know? (how can you tell?)</p> <p>What is chronic malnutrition?</p>
<p>Facilitator: Now I would like to ask you some questions about the types of food <u>you</u> eat. (This switches the topic to mother's health and nutritional practices)</p>		
13	<p><i>Women of reproductive age: knowledge and use of nutritious foods</i></p>	<p>M: What kinds of food do you eat? Why do you eat those foods?</p> <p>Probe for reasons</p> <p>M: Are these the same types of foods that the Health Extension Worker (and/or the IP) are encouraging you to eat?</p> <p>M: Are there any foods they would like you to eat that you are not eating? If some participants say <u>yes</u>, there are some recommended foods they are not eating, ask the following:</p> <p>M: What kinds of food are those?</p> <p>M: Why aren't you eating X (insert the name/s of the food that mothers are not eating as recommended) (Prompt using these or other examples, e.g., affordability, distaste, availability, cultural prohibition, cannot be grown)</p>
14	<p><i>Women's knowledge and use</i></p>	<p>M: Do you know where a family planning service is provided</p>

	<p><i>of family planning and reproductive services for pre- and post-natal care</i></p>	<p>M: Do you go there to get family planning services or products?</p> <p>Is there a clinic or health post nearby where you can go for family planning information and methods/technologies? FACILITATOR: Please use terms recommended by the Health Extension Worker</p> <p>If some participants say <u>no</u>, <u>they don't go there</u>, ask the following:</p> <ul style="list-style-type: none"> • Why don't you go there? What is the reason? <p>Facilitator: ask the following questions for the entire group:</p> <p>M: Do you use family planning products/methods? Probe for why and why not -- what for reasons some participants in the group say they DO use family planning products/methods? What are the reasons some in the group say they DO NOT use family planning?</p> <p>M: Do your husbands support the use of family planning?</p>
15		<p>M: Does the clinic/health post give you instructions on how to use it? (insert the term for family planning products) If some participants say <u>yes</u>, ask the following:</p> <p>M: Are the instructions understandable? If some mothers say <u>no</u>, they are not given instructions on how to use the family planning product, ask the following:</p> <p>M: Do you understand how to use it; when to use it?</p> <p>.</p>
16		<p>M: Did you go to the clinic/health post for nearby for medical services before your baby was born?</p> <p>M: For those who said yes, ask why they went. What was the purpose?</p> <p>For those who said no, they didn't go for services before their baby was born, ask why they did not. What are the reasons?</p>

		<p>For those participants who said <u>yes</u>, they went for pre-natal visits, ask the following:</p> <ul style="list-style-type: none"> • How many times did you go before your baby was born?
17		<p>M: Did you go to the clinic/facility for medical services after your baby was born?</p> <p>For participants who <u>say no, they did not go for (ante-natal) visits</u>, ask the following:</p> <ul style="list-style-type: none"> • Why didn't you go? • <p>For participants who <u>say yes, they did go for (ante-natal) visits</u>, ask the following:</p> <p>M: Why did you go?</p> <p>M: How many times did you go for services after your baby was born?</p>
WATER, HEALTH and SANITATION TOPICS		
Facilitator introduces the set of question on health of their children		
18	Prevalence of diarrhea among children: knowledge of causes and treatment practices; household hygiene and sanitation practices; access to water and soap	<p>M: Do any of your children suffer from frequent diarrhea?</p> <p>If some participants say <u>yes</u>, ask the following questions:</p> <ul style="list-style-type: none"> • Why do you think this happens so often? • What causes diarrhea?
19		<p>M: Is there anything you do to prevent your children from getting frequent diarrhea?</p> <p>If some participants say <u>yes</u>, ask the following:</p> <p>M: What are some of the things you do?</p> <p>If some participants say: <u>"washing hands"</u>, ask the following:</p> <p>M: Are there certain times when it is especially important to wash your hands?</p> <p>If some say <u>yes, they wash their hands</u>, ask the following:</p> <p>M: What are those times when it is important to wash hands?</p> <p>M: Why then?</p> <p>M: Where is your water source for washing hands? Where do you have to go?</p>

	<p>M: Do you have hand washing stands nearby? M: Do you use soap when you wash your hands?</p> <p>If washing hands with soap and water is <u>not mentioned</u> by anyone in the group, ask the following: What about washing your hands with soap and water? Do you wash your hands with soap and water all the time?</p> <p>If some say <u>no</u>, ask the following:</p> <ul style="list-style-type: none"> • Why not? What is the reason? <p>If some say yes, they do wash their hands, ask the following: M: Are there certain times when it is especially important to wash your hands?</p> <p>If some of those same mothers <u>say yes</u>, there are certain times when it is important to wash your hands, ask the following?</p> <p>M: What are those times when you do wash your hands? Why then?</p> <ul style="list-style-type: none"> • Where is your water source for washing hands? Where do you have to go? • Do you have hand washing stands nearby? • Do you have soap when you wash your hands
20	<p>M: Is there a community latrine here?</p> <p>M: Do you use it?</p> <p>Follow-on: Why? <u>And for those who participants who say no: Why not?</u></p> <p>M: Does your household have its own latrine nearby?</p> <p>M: Do some of your family members still defecate outside instead of using the community (or household) latrine? Follow-on if some participants say <u>yes, some members defecate outside:</u></p> <p>M: What are the reasons why some family members do not use the community (or household) latrine?</p> <p>M: Do you put a cover on top of the latrine hole after using it each time? Do other family members?</p>

		<p>Follow-on:</p> <p>M: Why? <u>And for those who participants who say no: Why not?</u></p> <p>M: Do you have a hand washing station near your community (or household) latrine?</p> <p><i>Follow-on if some participants say <u>yes</u>:</i></p> <p>M: Do you and other family members use it to wash hands with soap and water after going to the bathroom?</p>
21		<p>M: What do you do when your children have diarrhea?</p> <p>(Prompt as necessary e.g., bring the child to the nearest health facility for treatment, give the child ORS)</p> <p>If the mothers <u>don't mention ORS</u>, ask the following:</p> <ul style="list-style-type: none"> • Do you give your children ORS when they have diarrhea? <p>Follow-up:</p> <p>M: Why do you give (or don't give) your children ORS when they have diarrhea?</p>
	<i>Closing question</i>	M: Are there other issues anyone would like to bring up before we close this meeting?
<p>Team Leader Closing Remarks: Thanks all the mothers for agreeing to participate in the interview. Expresses appreciation for giving of their time.</p>		

Guide for Group Interview with Women-Headed Households (WHHH)

Composition of Group Participants: Households headed by women who are widowed, divorced, or abandoned; and have no male able-bodied labor living in the households. Some of the women may have young adult male children who have migrated for wage earning opportunities.

INTERVIEW DATA					
Implementing Partner		Date of Interview:	Team Leader:	Facilitator:	Start Time:
				Recorder:	End Time:
Region:	Woreda:	Kebele:		Village:	
PARTICIPANT DATA					
Type of Participants in Group (check one)		Consent to record interview (check one)		Number of Participants	
Farmers Agro-Pastoralists		Consent to record not given Consent given			

Introductions and purpose of the interview. Thank you for the opportunity to speak with you. My name is _____ and this is _____. We are from Green Professional Services, and we are working with the US-based company MEA. We are conducting individual/group discussions with people like you in communities across several regions to strengthen and improve the PNSP. These questions in total will take approximately two hours and your participation is entirely voluntary. If you agree to participate, you can choose to stop at any time or to skip any questions you do not want to answer. Your answers will be completely confidential; we will not share information that identifies you with any one.

If you choose not to participate it will not change any services or benefits that you receive now or in the future. You can stop participating at any time without penalty and without having to give any reason. You can also decline to answer any specific questions that you do not want to answer, also without penalty and without having to give any reason.

We are going to record this discussion only for the purpose of reviewing our notes to make sure the notes correctly capture the contributions of the group. We will destroy the recording after the notes have been checked and finalized.

Do you have any questions about what I have said?

Team Leader and Facilitator Instructions for Beginning the Group Interview

Team Leader: Introductions and purpose of the interview. Introduce yourself, what company you represent, and explain why you are here and for what purpose. Introduce the other two members of the team and their roles. Thank them for agreeing to participate. Asks participants to introduce themselves. Do **not** write down the names of participants as they introduce themselves.

Facilitator: summarize the category of questions you will be asking. Inform the group that if there are any questions participants are uncomfortable with and do not wish to discuss, be clear that you will respect that and move on to the next question. Explain how the interview will be run and inform participants the meeting will take approximately two hours once it begins.

Stress anonymity. You have not written down their names and won't do so during the interview. Explain why you will be taking notes and then request permission to record. If permission is granted, read consent form, and ask for signatures (or X mark) from each participant. Thank participants again, and begin recording after the consent letter is signed. If permission is **not granted**, explain that the recorder will take notes, and make it clear, once again, that names of individuals will not be included in the notes.

Note on questions: Unless specified, each question can be used for agricultural, agro-pastoralist, and pastoralist villages. Sometimes additional questions are added for livestock owners

Remember to get responses from those in the group who respond yes to a question and from those in the group who say no to a question. Rarely will there be a unified group response.

Land Ownership/Use/Agriculture and Livestock Topics		
Facilitator Introduces the topic of this set of questions on growing crops/raising agriculture		
1	Household decision-making: What crops are planted for sale? For family consumption?	<p>M: Do you own or rent land for growing crops? If some participants say they rent their land (sharecrop), ask the following:</p> <p>M: What arrangements do you make with the person who sharecrops your land? How do you get paid back?</p> <p>M: After harvest, do you usually receive the amount of money/and/or crops from the harvest as per your arrangement?</p> <p>If some participants say no, they neither own or rent land for growing crops, ask the following:</p>

		<p>M: Do you plant crops on land that other households own as a sharecropper? What crops do you plant?</p> <p>M: What crops do you plant for sale? What crops do you plant for family food?</p> <ul style="list-style-type: none"> • How do you decide what crops to plant? • <p>Do you have sons or any male relatives nearby that grow and harvest crops for you? (Alternatively, to graze and water your livestock?)</p> <p>M: What types of livestock do you raise?</p> <p>M: What types of livestock products you use for sale or food?</p>
2	<p>Environmental factors that affect agriculture and livestock productivity and household responses</p>	<p>M: How was your crop yield from the last harvest of crops?</p> <ul style="list-style-type: none"> • Was the amount as expected? • What accounts for the yield? <p>M: How does the yield compare to the last two or three years?</p> <p>M: What is the reason?</p>
3	<p>Sources of Water: Rainfall variability and drought and HH responses</p> <p>Additional</p>	<p>M: What is the source/s of water you use for growing crops (streams, well, river, lake, pond, rainfed, etc.)?</p> <p>M: Is there sufficient water for crops (crops for sale and/or for consumption) from this source of water all during the last growing season?</p> <p>If some participants say <u>no</u>, ask the following questions:</p> <p>M: What do you do when there isn't enough water?</p> <p>1. What do you do when there is a prolonged drought? Do you plant different types of crops?</p>

3a	questions for agro-pastoralists and pastoralists and for pastoralists that own livestock	<p>M: What is the source of water for your livestock?</p> <p>M: Is there sufficient water year-round to your livestock?</p> <p>M: What do you do if there is no water?</p>
4	Availability and use of climate forecasts	<p>M: Do you use information from climate forecasts? 1. No Answer 2. Yes Answer</p> <ol style="list-style-type: none"> 1. Why not 2. Why?
	<p>Availability and use of early warning information on pest and disease outbreaks</p> <p>Use of insurance for</p>	<p>M: Do you use the early warning information for major crops pests and disease outbreaks and livestock diseases?</p> <p>M: Why don't you use this information?</p> <p>M: What do you usually do when there is a major outbreak of crop/livestock pests or disease?</p> <p>M: Are there ways to prepare so that you won't lose all your crops/livestock?</p> <p>M: Were you able to save <u>your</u> crops (or livestock) or limit the damage?</p> <p>M: How do you use this information? How did you prepare?</p>

	crops/livestock	<p>M: Have you ever bought crop (or livestock) insurance based on climate forecasts or early warning information on upcoming outbreaks of pests or diseases? 1. No 2. Yes</p> <ul style="list-style-type: none"> • What are the reasons? <p>Prompt for explanations as needed using some of these examples, e.g. cannot afford to pay for insurance, too complicated to apply for insurance, heard it is too hard to get insurance money when needed, etc.)</p> <p>a. Yes answers</p> <p>M: Where is the insurance from?</p> <ul style="list-style-type: none"> • Did you receive insurance money after crops were destroyed/livestock died? <p>M: Would you be willing to purchase insurance again?</p> <p>No answers:</p> <ul style="list-style-type: none"> • Why not? What are the reasons?
6	Adoption and use of improved technologies and practices for crop production and livestock management	<p>1. Crops</p> <p>M: How do you learn about ways to improve the yield of your crops?</p> <p>M: What type of products to increase yield have you learned about? (prompt as necessary: types of seeds, fertilizers, or pesticides to protect crops?)</p> <p>2. Livestock.</p> <p>M: How do HHs here learn about new technologies to improve the health or productivity of their livestock?</p> <p>M: Have new practices for improving the quality of grazing areas been suggested? Or for improving the quality of pasturage?</p>

		<p>M: Have you tried any of the new technologies or practices to improve your crop or livestock? 1. No 2. Yes Was it helpful?</p> <p>No answers</p> <ul style="list-style-type: none"> • Why not? • What are the reasons you have not tried any of them? <p>Will you continue to use x technology or y practice for your crops? For your livestock?</p>
7	Experience with AEA/VEAs Agro-dealers	<p>M: Do you ever ask for services from agriculture extension agents (or livestock extension agents), or agro-dealers? 1. Yes 2. No</p> <p>M: What services do you ever ask for?</p> <p>M: Was it helpful?</p>
8	Experience with and use of agricultural loans for buying improved technologies	<p>M: Have you ever applied for a loan for the purposes of buying agricultural inputs (seeds/fertilizer) or for livestock medicines/vaccines?</p> <p>M: Where is your loan from?</p> <p>M: What kind of loan is it?</p> <p>M: Was your loan application successful?</p> <p>M: Would you apply for a loan again (to buy technologies, seeds, medicines, fertilizer, etc.)</p> <p>Is it difficult for most households to repay these loans?</p>

Market Information and Sales		
Facilitator introduces the topic of use of market information on sale prices, sale locations, selling decisions, use of available storage		

9	<i>Availability and use of market information</i>	<p>NOTE: IF YOU LEARN IN ADVANCE NO PRICE INFORMATION IS AVAILABLE, Skip to Q 10 on storage</p> <p>For which products you sell do you receive price information on the amount of money that will be paid? (crops or livestock)</p> <ul style="list-style-type: none"> • Where does the price information on crops (or livestock products) you sell come from? <p>Do you use the information? 1. No 2. Yes</p> <ul style="list-style-type: none"> • No answers • Why don't you use this information? What are the reasons • Yes answers • How do you use this information? • Was the information reliable/correct when you went to sell your crops/livestock/livestock? • Have you been able to earn more income from selling your crops/livestock by using this information?
10	<i>Household Decisions on use of storage and timing of sales for crops and livestock products</i> <i>Community Storage</i>	<p>After harvest, do you store the crops (livestock products you intend to sell)? 1. Yes. If no, skip to question below on community storage.</p> <p>M: What kind of containers are used for storage? What do you store in it/them? How many days can you store x, y, z before it goes bad?</p> <p>ATTENTION: SKIP THESE QUESTIONS ON COMMUNITY STORAGE IF YOU FIND THERE IS NONE IN THE AREAS Skip to Question 10a.</p> <p>What can you keep in the community storage facility? How long can you keep your crops (and/or livestock products) in this facility before you have to sell them? Do you use it? 1. No 2. Yes</p> <p>1, No answers</p> <p>b. Why not? What are the reasons you don't use the storage facility?</p>
10a	<i>Events triggering sale of livestock</i>	<p>Have there ever been any times when you have had to sell most or all of your livestock? What was the reason? Have you bought any replacement livestock since you had to sell all your livestock?</p>

11	<p><i>Household decision making on where to sell products (crop and livestock)</i></p> <p><i>Household decision-making: use of income from crop sales, sale of livestock products and other sources of income</i></p>	<p>M: Where do you usually bring your farm produce and/or livestock or livestock products for sale?</p> <p>(Probe as necessary: to the coop where you are a member? directly to buyers at the nearest market? To sell themselves at the nearest market? Directly to intermediary buyers who then bring products to market for sale? Give to sharecroppers or others to sell, etc.)</p> <p>M: Do you have options on where to sell? 1. Yes 2. No</p> <p>How do you decide where to sell?</p> <p>(Probe as necessary: transportation issues, road quality/accessibility, price, easy location for transportation, distance, etc.)</p>
----	---	---

12		<p>M: Where do you go to bring your products for sale?</p> <p>M: How do you decide to use the money you earn from selling crops/livestock products? (Probe as necessary: food to feed the HH, invest in improving livestock condition, rent additional land, purchase of improved seeds, fertilizers, purchase or rent of additional land or yearly rent of same land, HH goods, school fees, loan repayment, etc.)</p> <p>M: Do you have other sources of income? If the answer is no, skip to Question 13 (Probe as necessary using examples, e.g.: cash transfers, remittances, making/selling clothes, handicrafts, selling forest products, selling fish, honey, chicken eggs)</p>
WAGE EARNING OPPORTUNITIES		
		Facilitator describes next Section of questions is about wage earning opportunities
13	Wage earning opportunities	<p>M: Do you or does anyone else in your household earn wages? 1. Yes. If no, continue below on question about migrating for work</p> <ul style="list-style-type: none"> • What members of the family? • Where do they go? • What kind of work is it? • Is it seasonal? Daily? <p>M: Do some of your members of your household migrate seasonally or long term? 1. Yes If no, skip to Question 14</p> <ul style="list-style-type: none"> • Yes answers <p>M: Which household members?</p> <p>M: Where do they go?</p> <p>M: Do they send back money to you?</p>

		M: What are the reasons those family members migrate to earn wages (either seasonally or long-term)?
Poverty and Food Security Topics		
Team Leader introduction for topics on HH Meals, Cost of Food, and food from FFP/PSNP distribution		
14	<i>Intra-household food allocation and distribution</i>	<p>M: What type of food does each member of the HH eat? NOTE: If answer is all the same, skip to next question on AMOUNT of food</p> <p>M: Does the amount of food each member of the HH eats differ?</p> <ul style="list-style-type: none"> • What is the reason different family members eat different amounts of food? <p>M: Is there an order of eating among member of your household during mealtimes?</p>
15	<i>Food for Work and Use of FFP/PSNP food</i>	<p>M: Do you or any members of your household work in return for cash (or cash and food) 1. No 2. Yes</p> <p>M: What type of community project do beneficiary members of this village do in return for your food allotment (or cash transfer)?</p> <p>M: Which household members? How do you receive your transfer?</p> <p>M: Where do you receive your payment from?</p> <p>M: How do you use it?</p> <p>FOOD ALLOTMENT</p> <p>M: Do you pick up your own food allotment?</p>

		M: Do you ever sell any of the food items provided to buy other types of food available at the market? 1. Yes, If no, skip to the next question
16	<i>HH strategies during periods of food gaps</i>	<p>M: Does your household ever have months when there is no food or too little food?</p> <p>M: How often does this happen? Are there any times during the year when it usually happens?</p> <p>M: What are the reasons this happens?</p> <p>M: What do you do when you go through those times when there is not enough food for you and your family?</p>
17	<i>Household food purchasing decisions</i>	<p>M: What kinds of food do you usually buy for yourself or for your household for family meals?</p> <p>M: Where do you usually buy it?</p> <p>Are there any times when you don't or can't buy those types of food from the market? NOTE: If answer is NO, skip to closing questions</p> <ul style="list-style-type: none"> • What is the reason that happens sometimes? <p>M: What do you do during the times you cannot buy those foods you usually purchase?</p>
18	<i>Closing Question</i>	Team leader asks if there are any other issues participants would like to bring up before the interview ends.
Closing Remarks. Team leader thanks everyone for participating in the interview. Expresses appreciation for spending the time to do so.		

ANNEX 8a
Tabular Summary of Endline Indicator
Estimates

**Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - Combined Project Areas
Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]**

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
FOOD SECURITY INDICATORS								
Average Household Dietary Diversity Score (HDDS)	4.9	4.8	5.0	4,936	652,080	1.7	0.05	2.1
<i>Prevalence of moderate or severe food insecurity based on 30 day recall (FIES)</i>	36.9	35.1	38.8	5,224	693,937	39.8	0.93	1.7
<i>Male and female adults</i>	35.3	33.4	37.1	4,170	545,246	39.7	0.94	1.5
<i>Adult female, no adult male</i>	44.7	41.2	48.1	857	123,088	39.0	1.75	1.3
<i>Adult male, no adult female</i>	33.9	28.2	39.6	187	24,351	39.9	2.88	1.0
<i>Child, no adults</i>				10	1,251			
<i>Prevalence of moderate or severe food insecurity based on 12 month recall (FIES)</i>	53.5	51.5	55.4	5,224	693,937	41.5	0.97	1.7
<i>Male and female adults</i>	51.8	49.7	53.8	4,170	545,246	41.9	1.03	1.6
<i>Adult female, no adult male</i>	61.8	58.6	65.0	857	123,088	38.0	1.60	1.2
<i>Adult male, no adult female</i>	48.4	41.2	55.6	187	24,351	43.8	3.64	1.1
<i>Child, no adults</i>				10	1,251			
POVERTY INDICATORS								
Per capita (adults only) expenditures (as a proxy for income) of USG-assisted areas	\$2.40	\$2.33	\$2.47	11,655	1,544,933	1.3	0.03	2.0
Male and female adults	\$2.37	\$2.30	\$2.44	10,411	1,368,794	1.2	0.04	1.9
Adult female, no adult male	\$2.54	\$2.42	\$2.66	1,022	147,021	1.8	0.06	1.0
Adult male, no adult female	\$2.79	\$2.54	\$3.03	222	29,108	2.1	0.13	0.8
Child, no adults								
Prevalence of poverty: Percentage of people (adults only) living on less than \$1.25/day	21.1	19.1	23.1	11,655	1,544,933	40.8	1.00	1.8
Male and female adults	21.2	19.1	23.4	10,411	1,368,794	38.8	1.08	1.8
Adult female, no adult male	20.4	16.9	24.0	1,022	147,021	52.9	1.80	1.0
Adult male, no adult female	18.2	11.4	25.0	222	29,108	53.2	3.45	0.9
Child, no adults								
Depth of Poverty: Mean percentage shortfall relative to the \$1.25 poverty line	5.4	4.6	6.2	11,655	1,544,933	13.2	0.40	2.2
Male and female adults	5.4	4.5	6.2	10,411	1,368,794	12.5	0.43	2.2
Adult female, no adult male	5.7	4.4	7.0	1,022	147,021	18.4	0.65	1.0
Adult male, no adult female	3.5	2.1	4.8	222	29,108	13.1	0.68	0.7
Child, no adults								
WASH INDICATORS								
Percentage of households using an improved drinking water source	43.1	39.0	47.3	5,227	694,492	49.5	2.12	3.1
Percentage of households practicing correct use of recommended household water treatment technologies	11.8	9.8	13.9	5,227	694,492	32.3	1.05	2.3
Chlorination	6.9	5.3	8.5	5,227	694,492	25.4	0.81	2.3
<i>Flocculent/Disinfectant</i>	2.9	2.1	3.7	5,227	694,492	16.7	0.42	1.8
Filtration	1.1	0.6	1.6	5,227	694,492	10.4	0.23	1.6
Solar	0.0	0.0	0.0	5,227	694,492	1.2	0.01	0.9
Boiling	1.2	0.9	1.6	5,227	694,492	11.1	0.19	1.2
Percentage of households that can obtain drinking water in less than 30 minutes (round trip)	23.5	20.9	26.1	5,227	694,492	42.4	1.32	2.3
Percentage of households using a basic sanitation facility	7.3	5.8	8.8	5,227	694,492	26.0	0.76	2.1
Percentage of households in target areas practicing open defecation	53.7	50.0	57.3	5,227	694,492	49.9	1.87	2.7

**Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - Combined Project Areas
Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]**

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
Percentage of households with soap and water at a handwashing station commonly used by family members	1.1	0.6	1.5	5,227	694,492	10.4	0.23	1.6
AGRICULTURAL INDICATORS								
Percentage of farmers who used financial services (savings, agricultural credit and/or agricultural insurance in the past 12 months)	37.5	35.1	39.8	6,764	911,377	48.4	1.21	2.0
Male	40.3	37.7	42.9	4,104	531,976	50.0	1.31	1.7
Female	33.5	30.5	36.5	2,660	379,401	45.9	1.52	1.7
Percentage of farmers who practiced value chain activities promoted by the project in the past 12 months	85.8	83.9	87.7	3,354	430,626	34.9	0.96	1.6
Male	87.8	86.1	89.5	2,219	274,502	34.1	0.87	1.2
Female	82.3	79.3	85.3	1,135	156,124	37.3	1.53	1.4
Percentage of farmers who used at least three sustainable agriculture (crop, livestock, and NRM) practices and/or technologies in the past 12 months	94.7	93.9	95.6	6,764	911,377	22.3	0.43	1.6
Male	97.6	96.9	98.2	4,104	531,976	15.8	0.33	1.3
Female	90.8	89.1	92.4	2,660	379,401	28.1	0.84	1.5
Percentage of farmers who used at least three sustainable crop practices and/or technologies in the past 12 months	92.1	91.1	93.2	6,418	860,889	26.9	0.53	1.6
Male	94.1	93.1	95.2	4,005	520,157	23.9	0.54	1.4
Female	89.0	87.3	90.7	2,413	340,731	30.4	0.86	1.4
Percentage of farmers who used at least three sustainable livestock practices and/or technologies in the past 12 months	71.5	69.5	73.6	5,943	808,967	45.1	1.04	1.8
Male	75.2	73.0	77.3	3,640	477,728	44.0	1.08	1.5
Female	66.3	63.5	69.2	2,303	331,239	45.7	1.44	1.5
Percentage of farmers who used at least three sustainable NRM practices and/or technologies in the past 12 months	44.1	41.9	46.3	6,764	911,377	49.7	1.11	1.8
Male	51.9	49.6	54.3	4,104	531,976	50.9	1.18	1.5
Female	33.2	30.5	35.9	2,660	379,401	45.8	1.37	1.5
Percentage of farmers who used improved storage practices in the past 12 months	26.1	23.3	28.8	6,452	865,906	43.9	1.38	2.5
Male	27.0	24.4	29.5	4,017	521,814	45.2	1.30	1.8
Female	24.7	21.3	28.0	2,435	344,092	42.0	1.70	2.0
WOMEN'S HEALTH AND NUTRITION INDICATORS								
Prevalence of underweight women	36.2	34.1	38.2	4,494	608,899	48.1	1.06	1.5
Prevalence of women of reproductive age who are consuming a minimum dietary diversity (MDD-W)	7.9	6.6	9.1	4,937	676,503	26.9	0.65	1.7
Contraceptive Prevalence Rate	37.3	34.8	39.8	2,812	377,633	48.4	1.27	1.4
<i>Modern methods</i>	36.2	33.7	38.7	2,812	377,633	48.1	1.26	1.4
<i>Traditional methods</i>	1.1	0.7	1.6	2,812	377,633	10.6	0.22	1.1
Percentage of births in the past 2 years receiving at least four antenatal care (ANC) visits during pregnancy	42.1	38.5	45.7	1,303	177,853	49.4	1.81	1.3
CHILDREN'S HEALTH AND NUTRITION INDICATORS								
Prevalence of underweight children under 5 years of age	26.9	25.1	28.8	3,381	450,575	44.4	0.93	1.2

**Table xxx. FFP/EVELYN Ethiopia ENDLIN Indicators - Combined Project Areas
Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]**

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
Male	28.2	25.8	30.6	1,760	239,734	44.5	1.23	1.2
Female	25.5	22.7	28.3	1,621	210,842	44.1	1.41	1.3
Prevalence of stunted children under 5 years of age	45.9	43.6	48.2	3,370	448,998	49.8	1.15	1.3
Male	48.1	45.0	51.3	1,756	238,938	49.4	1.61	1.4
Female	43.4	40.6	46.2	1,614	210,060	50.2	1.41	1.1
Prevalence of wasted children under 5 years of age	6.6	5.6	7.6	3,371	449,373	24.8	0.52	1.2
Male	6.5	5.1	7.9	1,757	239,409	24.4	0.70	1.2
Female	6.6	5.2	8.0	1,614	209,964	25.2	0.71	1.1
Percentage of children 0-23 months of age who had diarrhea in the last two weeks	22.5	19.8	25.2	1320	176,585	41.8	1.35	1.2
Male	24.3	21.0	27.7	693	93,696	42.4	1.70	1.1
Female	20.5	16.8	24.2	627	82,889	40.8	1.87	1.1
Percentage of children 0-23 months of age with diarrhea treated with ORT	34.8	28.1	41.4	275	39,763	47.7	3.35	1.2
Male	33.6	25.5	41.7	154	22,802	44.5	4.09	1.1
Female	36.4	27.1	45.6	121	16,961	47.5	4.69	1.1
Prevalence of exclusive breast-feeding of children under six months of age	76.6	71.9	81.2	380	50,682	42.4	2.36	1.1
Male	74.2	67.5	80.8	195	26,204	43.2	3.36	1.1
Female	79.1	73.2	85.0	185	24,478	41.2	2.99	1.0
Prevalence of children 6-23 months of age receiving a minimum acceptable diet (MAD)	9.2	7.0	11.3	940	125,903	28.9	1.10	1.2
Male	10.8	7.7	14.0	498	67,491	30.6	1.57	1.1
Female	7.2	4.7	9.7	442	58,412	26.2	1.27	1.0
GENDER INDICATORS								
Percentage of men and women who earned cash in the past 12 months	54.6	53.1	56.1	13,407	1,775,031	49.8	0.75	1.7
Male	65.2	63.9	66.5	6,553	860,685	47.7	0.65	1.1
Female	44.6	42.3	47.0	6,854	914,346	49.5	1.18	2.0
Percentage of men in union and earning cash who make decisions alone about the use of self-earned cash	33.1	31.0	35.1	3,424	457,274	47.3	1.03	1.3
Percentage of women in union and earning cash who make decisions alone about the use of self-earned cash	26.1	23.2	29.1	1,771	245,303	43.5	1.48	1.4
Percentage of men in union and earning cash who make decisions jointly with spouse/partner about the use of self-earned cash	57.6	55.5	59.7	3,424	457,274	49.7	1.05	1.2
Percentage of women in union and earning cash who make decisions jointly with spouse/partner about the use of self-earned cash	55.1	52.4	57.8	1,771	245,303	49.2	1.37	1.2
Percentage of men and women with children under two who have knowledge of maternal and child health and nutrition (MCHN) practices	77.7	75.0	80.4	2,339	322,251	41.7	1.37	1.6
Male	71.2	67.9	74.5	1,051	144,749	45.0	1.69	1.2
Female	82.9	79.8	86.0	1,288	177,502	37.3	1.57	1.5
Percentage of men in union with children under two who make maternal health and nutrition decisions alone	23.9	20.9	26.8	1,049	144,538	42.3	1.50	1.1
Percentage of women in union with children under two who make maternal health and nutrition decisions alone	56.6	53.7	59.5	1,176	161,221	49.3	1.46	1.0

**Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - Combined Project Areas
Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]**

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
Percentage of men in union with children under two who make maternal health and nutrition decisions jointly with spouse/partner	30.5	27.4	33.6	1,049	144,538	45.7	1.55	1.1
Percentage of women in union with children under two who make maternal health and nutrition decisions jointly with spouse/partner	27.2	24.4	29.9	1,176	161,221	44.2	1.40	1.1
Percentage of men in union with children under two who make child health and nutrition decisions alone	13.2	11.0	15.4	1,049	144,538	33.6	1.11	1.1
Percentage of women in union with children under two who make child health and nutrition decisions alone	59.4	56.2	62.5	1,176	161,221	48.8	1.59	1.1
Percentage of men in union with children under two who make child health and nutrition decisions jointly with spouse/partner	32.7	29.6	35.8	1,049	144,538	46.6	1.58	1.1
Percentage of women in union with children under two who make child health and nutrition decisions jointly with spouse/partner	29.3	26.3	32.3	1,176	161,221	45.3	1.50	1.1

NA = Not available

Items both highlighted in gray and italicized do not appear in the SAPQ

**Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - CRS Project Area
Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]**

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
FOOD SECURITY INDICATORS								
Average Household Dietary Diversity Score (HDDS)	4.8	4.6	5.0	1,463	128,812	1.8	0.12	2.5
<i>Prevalence of moderate or severe food insecurity based on 30 day recall (FIES)</i>	63.7	60.1	67.3	1,497	131,721	41.8	1.79	1.7
<i>Male and female adults</i>	62.6	59.0	66.3	1,244	109,709	42.1	1.80	1.5
<i>Adult female, no adult male</i>	72.4	65.4	79.3	187	16,407	38.5	3.46	1.2
<i>Adult male, no adult female</i>	59.7	48.5	70.9	64	5,456	43.4	5.54	1.0
<i>Child, no adults</i>				2	149			
<i>Prevalence of moderate or severe food insecurity based on 12 month recall (FIES)</i>	76.7	73.6	79.9	1,497	131,721	37.1	1.57	1.6
<i>Male and female adults</i>	76.2	72.9	79.5	1,244	109,709	37.4	1.64	1.5
<i>Adult female, no adult male</i>	80.7	74.5	86.8	187	16,407	34.5	3.06	1.2
<i>Adult male, no adult female</i>	75.6	64.6	86.5	64	5,456	37.9	5.42	1.1
<i>Child, no adults</i>				2	149			
POVERTY INDICATORS								
Per capita (adults only) expenditures (as a proxy for income) of USG-assisted areas	\$2.80	\$2.62	\$2.98	3,277	287,946	1.5	0.09	2.4
Male and female adults	\$2.76	\$2.58	\$2.95	2,992	263,137	1.4	0.09	2.3
Adult female, no adult male	\$3.08	\$2.79	\$3.37	213	18,713	2.2	0.15	0.9
Adult male, no adult female	\$3.48	\$2.98	\$3.98	72	6,094	2.4	0.25	0.8
Child, no adults								
Prevalence of poverty: Percentage of people (adults only) living on less than \$1.25/day	14.4	11.0	17.9	3,277	287,946	35.2	1.70	1.9
Male and female adults	14.8	11.4	18.3	2,992	263,137	33.9	1.71	1.8
Adult female, no adult male	13.2	6.1	20.2	213	18,713	46.9	3.48	1.0
Adult male, no adult female	1.3	-1.0	3.6	72	6,094	15.9	1.14	0.6
Child, no adults								
Depth of Poverty: Mean percentage shortfall relative to the \$1.25 poverty line	3.9	2.9	4.8	3,277	287,946	11.7	0.48	1.6
Male and female adults	3.9	2.9	4.9	2,992	263,137	11.2	0.50	1.6
Adult female, no adult male	3.8	1.7	6.0	213	18,713	16.3	1.06	0.9
Adult male, no adult female	0.4	-0.3	1.1	72	6,094	5.0	0.36	0.6
Child, no adults								
WASH INDICATORS								
Percentage of households using an improved drinking water source	25.8	19.8	31.8	1,498	131,835	43.8	2.98	2.6
Percentage of households practicing correct use of recommended household water treatment technologies	9.4	5.4	13.4	1,498	131,835	29.2	1.98	2.6
Chlorination	4.1	1.6	6.6	1,498	131,835	19.8	1.24	2.4
<i>Flocculent/Disinfectant</i>	2.0	0.8	3.3	1,498	131,835	14.1	0.61	1.7
Filtration	2.6	0.7	4.5	1,498	131,835	15.9	0.93	2.3
Solar	0.0			1,498	131,835	0.0		0.0
Boiling	1.2	0.6	1.8	1,498	131,835	10.7	0.30	1.1
Percentage of households that can obtain drinking water in less than 30 minutes (round trip)	20.4	14.3	26.5	1,498	131,835	40.3	3.02	2.9
Percentage of households using a basic sanitation facility	6.8	3.7	9.9	1,498	131,835	25.2	1.53	2.4
Percentage of households in target areas practicing open defecation	47.5	39.9	55.2	1,498	131,835	50.0	3.78	2.9

**Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - CRS Project Area
Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]**

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
Percentage of households with soap and water at a handwashing station commonly used by family members	0.9	0.4	1.4	1,498	131,835	9.5	0.24	1.0
AGRICULTURAL INDICATORS								
Percentage of farmers who used financial services (savings, agricultural credit and/or agricultural insurance in the past 12 months)	17.3	14.1	20.5	1,750	153,829	37.8	1.58	1.8
Male	18.6	14.9	22.3	1,268	112,161	38.8	1.84	1.7
Female	13.8	9.9	17.7	482	41,668	34.8	1.95	1.2
Percentage of farmers who practiced value chain activities promoted by the project in the past 12 months	81.7	78.1	85.2	938	85,231	38.7	1.77	1.4
Male	83.3	79.8	86.8	726	66,133	36.9	1.75	1.3
Female	76.0	69.3	82.8	212	19,098	42.4	3.36	1.2
Percentage of farmers who used at least three sustainable agriculture (crop, livestock, and NRM) practices and/or technologies in the past 12 months	94.7	93.3	96.1	1,750	153,829	22.4	0.67	1.3
Male	96.7	95.3	98.1	1,268	112,161	17.8	0.68	1.4
Female	89.3	85.9	92.7	482	41,668	31.2	1.68	1.2
Percentage of farmers who used at least three sustainable crop practices and/or technologies in the past 12 months	87.3	84.6	90.0	1,668	146,839	33.3	1.33	1.6
Male	88.7	85.7	91.8	1,245	110,350	31.5	1.53	1.7
Female	83.1	78.4	87.8	423	36,489	37.8	2.34	1.3
Percentage of farmers who used at least three sustainable livestock practices and/or technologies in the past 12 months	45.9	41.7	50.2	1,390	121,876	49.9	2.11	1.6
Male	47.6	42.2	53.1	1,003	88,476	49.8	2.71	1.7
Female	41.4	36.6	46.2	387	33,400	49.7	2.38	0.9
Percentage of farmers who used at least three sustainable NRM practices and/or technologies in the past 12 months	30.2	25.8	34.5	1,750	153,829	45.9	2.17	2.0
Male	33.4	28.5	38.3	1,268	112,161	47.0	2.43	1.8
Female	21.5	15.6	27.4	482	41,668	41.5	2.93	1.6
Percentage of farmers who used improved storage practices in the past 12 months	26.9	20.8	33.0	1,679	147,765	44.4	3.01	2.8
Male	28.4	22.4	34.5	1,251	110,841	45.0	3.00	2.4
Female	22.4	14.5	30.2	428	36,924	42.1	3.89	1.9
WOMEN'S HEALTH AND NUTRITION INDICATORS								
Prevalence of underweight women	32.2	28.8	35.6	1,253	110,945	46.7	1.69	1.3
Prevalence of women of reproductive age who are consuming a minimum dietary diversity (MDD-W)	7.5	5.2	9.8	1,418	127,802	26.4	1.15	1.6
Contraceptive Prevalence Rate	30.1	26.2	33.9	845	76,082	45.9	1.91	1.2
<i>Modern methods</i>	27.8	24.1	31.4	845	76,082	44.8	1.80	1.2
<i>Traditional methods</i>	2.3	1.0	3.6	845	76,082	15.0	0.66	1.3
Percentage of births in the past 2 years receiving at least four antenatal care (ANC) visits during pregnancy	33.9	28.4	39.4	427	39,144	47.4	2.72	1.2
CHILDREN'S HEALTH AND NUTRITION INDICATORS								
Prevalence of underweight children under 5 years of age	23.0	20.2	25.9	1,212	107,931	42.1	1.42	1.2

**Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - CRS Project Area
Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]**

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
Male	23.6	20.4	26.7	608	54,296	42.4	1.56	0.9
Female	22.5	18.7	26.3	604	53,635	41.8	1.90	1.1
Prevalence of stunted children under 5 years of age	36.5	32.9	40.2	1,208	107,563	48.2	1.81	1.3
Male	37.2	32.7	41.6	607	54,196	48.3	2.19	1.1
Female	35.9	31.2	40.7	601	53,368	48.1	2.37	1.2
Prevalence of wasted children under 5 years of age	9.1	6.7	11.5	1,210	107,755	28.7	1.19	1.4
Male	9.7	6.6	12.9	608	54,296	29.6	1.58	1.3
Female	8.4	5.2	11.6	602	53,459	27.8	1.59	1.4
Percentage of children 0-23 months of age who had diarrhea in the last two weeks	18.7	13.2	24.2	432	38,886	39.1	2.73	1.5
Male	19.7	12.3	27.2	222	19,934	39.7	3.71	1.4
Female	17.7	11.9	23.5	210	18,952	38.0	2.89	1.1
Percentage of children 0-23 months of age with diarrhea treated with ORT	60.7	48.6	72.8	76	7,286	49.2	5.92	1.1
Male	59.1	39.7	78.4	41	3,937	47.4	9.60	1.3
Female	62.7	44.7	80.7	35	3,349	46.8	8.92	1.1
Prevalence of exclusive breast-feeding of children under six months of age	67.5	57.7	77.3	132	11,558	47.0	4.85	1.2
Male	63.4	51.4	75.5	72	6,466	48.0	5.96	1.1
Female	72.7	60.1	85.4	60	5,092	45.6	6.28	1.1
Prevalence of children 6-23 months of age receiving a minimum acceptable diet (MAD)	6.9	3.8	9.9	300	27,328	25.3	1.52	1.0
Male	5.4	1.7	9.2	150	13,468	22.6	1.87	1.0
Female	8.2	3.5	13.0	150	13,860	27.1	2.34	1.1
GENDER INDICATORS								
Percentage of men and women who earned cash in the past 12 months	52.1	49.0	55.1	3,795	333,087	50.0	1.51	1.9
Male	67.8	65.2	70.3	1,893	165,796	46.8	1.27	1.2
Female	36.5	31.4	41.7	1,902	167,291	48.2	2.55	2.3
Percentage of men in union and earning cash who make decisions alone about the use of self-earned cash	40.8	36.4	45.3	1,028	94,518	49.0	2.21	1.4
Percentage of women in union and earning cash who make decisions alone about the use of self-earned cash	31.0	25.9	36.0	431	37,589	47.2	2.51	1.1
Percentage of men in union and earning cash who make decisions jointly with spouse/partner about the use of self-earned cash	36.9	33.3	40.5	1,028	94,518	48.1	1.80	1.2
Percentage of women in union and earning cash who make decisions jointly with spouse/partner about the use of self-earned cash	44.0	38.8	49.2	431	37,589	50.7	2.59	1.1
Percentage of men and women with children under two who have knowledge of maternal and child health and nutrition (MCHN) practices	77.4	72.8	82.0	759	70,765	41.8	2.29	1.5
Male	76.2	70.4	82.0	343	32,268	41.9	2.89	1.3
Female	78.4	73.3	83.6	416	38,498	40.8	2.56	1.3
Percentage of men in union with children under two who make maternal health and nutrition decisions alone	27.9	21.4	34.3	343	32,268	44.1	3.20	1.3
Percentage of women in union with children under two who make maternal health and nutrition decisions alone	50.5	46.3	54.7	388	35,960	49.5	2.09	0.8

**Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - CRS Project Area
Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]**

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
Percentage of men in union with children under two who make maternal health and nutrition decisions jointly with spouse/partner	20.3	14.9	25.7	343	32,268	39.5	2.69	1.3
Percentage of women in union with children under two who make maternal health and nutrition decisions jointly with spouse/partner	20.7	16.8	24.7	388	35,960	40.2	1.97	1.0
Percentage of men in union with children under two who make child health and nutrition decisions alone	18.6	13.9	23.4	343	32,268	38.3	2.35	1.1
Percentage of women in union with children under two who make child health and nutrition decisions alone	54.6	48.7	60.5	388	35,960	49.3	2.94	1.2
Percentage of men in union with children under two who make child health and nutrition decisions jointly with spouse/partner	22.8	18.2	27.4	343	32,268	41.3	2.28	1.0
Percentage of women in union with children under two who make child health and nutrition decisions jointly with spouse/partner	23.3	18.8	27.8	388	35,960	41.9	2.24	1.1

NA = Not available

Items both highlighted in gray and italicized do not appear in the SAPQ

**Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - FH Project Area
Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]**

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
FOOD SECURITY INDICATORS								
Average Household Dietary Diversity Score (HDDS)	4.3	4.2	4.5	1,984	246,547	1.4	0.08	2.5
<i>Prevalence of moderate or severe food insecurity based on 30 day recall (FIES)</i>	30.4	27.6	33.3	2,139	267,804	37.0	1.42	1.8
<i>Male and female adults</i>	28.6	25.8	31.4	1,688	206,205	36.5	1.40	1.6
<i>Adult female, no adult male</i>	39.4	34.6	44.2	361	49,291	38.1	2.40	1.2
<i>Adult male, no adult female</i>	24.1	16.0	32.2	87	12,060	31.8	4.06	1.2
<i>Child, no adults</i>				3	249			
<i>Prevalence of moderate or severe food insecurity based on 12 month recall (FIES)</i>	50.2	46.7	53.6	2,139	267,804	41.0	1.72	1.9
<i>Male and female adults</i>	48.4	44.8	51.9	1,688	206,205	41.3	1.80	1.8
<i>Adult female, no adult male</i>	60.1	55.9	64.4	361	49,291	37.8	2.13	1.1
<i>Adult male, no adult female</i>	40.0	29.1	51.0	87	12,060	40.6	5.49	1.3
<i>Child, no adults</i>				3	249			
POVERTY INDICATORS								
Per capita (adults only) expenditures (as a proxy for income) of USG-assisted areas	\$2.26	\$2.17	\$2.34	4,707	578,215	1.2	0.04	1.7
Male and female adults	\$2.24	\$2.16	\$2.33	4,176	505,863	1.1	0.04	1.5
Adult female, no adult male	\$2.22	\$2.06	\$2.39	432	58,684	1.6	0.08	1.0
Adult male, no adult female	\$2.92	\$2.53	\$3.30	99	13,666	1.9	0.19	0.9
Child, no adults								
Prevalence of poverty: Percentage of people (adults only) living on less than \$1.25/day	24.0	21.9	26.1	4,707	578,215	42.7	1.06	1.1
Male and female adults	23.6	21.3	25.9	4,176	505,863	40.3	1.15	1.2
Adult female, no adult male	29.3	23.3	35.2	432	58,684	58.7	2.97	1.0
Adult male, no adult female	17.0	8.9	25.1	99	13,666	49.3	4.05	0.8
Child, no adults								
Depth of Poverty: Mean percentage shortfall relative to the \$1.25 poverty line	6.3	5.3	7.3	4,707	578,215	14.4	0.48	1.5
Male and female adults	6.2	5.2	7.1	4,176	505,863	13.4	0.46	1.4
Adult female, no adult male	8.1	5.7	10.5	432	58,684	21.6	1.21	1.1
Adult male, no adult female	4.1	1.9	6.3	99	13,666	15.2	1.10	0.7
Child, no adults								
WASH INDICATORS								
Percentage of households using an improved drinking water source	49.8	44.4	55.2	2,141	268,245	50.0	2.70	2.5
Percentage of households practicing correct use of recommended household water treatment technologies	9.0	5.7	12.2	2,141	268,245	28.6	1.61	2.6
Chlorination	6.0	3.0	9.1	2,141	268,245	23.8	1.54	3.0
<i>Flocculent/Disinfectant</i>	0.9	0.4	1.4	2,141	268,245	9.7	0.25	1.2
Filtration	0.9	0.4	1.4	2,141	268,245	9.6	0.26	1.3
Solar	0.0	0.0	0.1	2,141	268,245	1.9	0.04	0.9
Boiling	1.5	0.8	2.2	2,141	268,245	12.0	0.35	1.3
Percentage of households that can obtain drinking water in less than 30 minutes (round trip)	30.2	25.5	34.9	2,141	268,245	45.9	2.36	2.4
Percentage of households using a basic sanitation facility	6.6	4.8	8.3	2,141	268,245	24.8	0.87	1.6
Percentage of households in target areas practicing open defecation	44.4	37.2	51.6	2,141	268,245	49.7	3.61	3.4

**Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - FH Project Area
Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]**

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
Percentage of households with soap and water at a handwashing station commonly used by family members	2.0	0.9	3.1	2,141	268,245	14.0	0.56	1.9
AGRICULTURAL INDICATORS								
Percentage of farmers who used financial services (savings, agricultural credit and/or agricultural insurance in the past 12 months)	46.9	42.6	51.3	2,679	323,695	49.9	2.19	2.3
Male	49.6	45.3	53.8	1,668	203,563	49.8	2.11	1.7
Female	42.5	36.7	48.3	1,011	120,132	49.9	2.90	1.9
Percentage of farmers who practiced value chain activities promoted by the project in the past 12 months	87.7	84.5	90.8	1,421	169,389	32.9	1.58	1.8
Male	89.8	87.2	92.4	960	114,457	30.3	1.31	1.3
Female	83.3	78.1	88.4	461	54,932	37.7	2.58	1.5
Percentage of farmers who used at least three sustainable agriculture (crop, livestock, and NRM) practices and/or technologies in the past 12 months	94.0	92.5	95.5	2,679	323,695	23.7	0.74	1.6
Male	97.5	96.3	98.6	1,668	203,563	15.6	0.57	1.5
Female	88.1	84.7	91.5	1,011	120,132	32.7	1.68	1.6
Percentage of farmers who used at least three sustainable crop practices and/or technologies in the past 12 months	91.9	90.2	93.7	2,571	309,905	27.2	0.89	1.7
Male	95.2	93.5	96.8	1,621	198,548	21.4	0.84	1.6
Female	86.2	83.0	89.5	950	111,357	34.9	1.64	1.4
Percentage of farmers who used at least three sustainable livestock practices and/or technologies in the past 12 months	71.1	67.8	74.5	2,435	293,552	45.3	1.67	1.8
Male	76.2	72.6	79.8	1,556	189,248	42.4	1.81	1.7
Female	61.9	57.4	66.5	879	104,303	49.0	2.29	1.4
Percentage of farmers who used at least three sustainable NRM practices and/or technologies in the past 12 months	43.9	40.5	47.3	2,679	323,695	49.6	1.70	1.8
Male	53.8	50.3	57.4	1,668	203,563	49.6	1.80	1.5
Female	27.0	22.1	31.9	1,011	120,132	44.8	2.45	1.7
Percentage of farmers who used improved storage practices in the past 12 months	23.2	20.0	26.4	2,576	310,556	42.2	1.62	1.9
Male	23.8	20.6	26.9	1,623	199,014	42.3	1.58	1.5
Female	22.1	17.6	26.6	953	111,542	42.1	2.24	1.6
WOMEN'S HEALTH AND NUTRITION INDICATORS								
Prevalence of underweight women	29.5	26.5	32.4	1,785	228,520	45.6	1.49	1.4
Prevalence of women of reproductive age who are consuming a minimum dietary diversity (MDD-W)	3.1	1.8	4.3	1,941	250,554	17.2	0.63	1.6
Contraceptive Prevalence Rate	40.4	36.2	44.5	1,132	144,321	49.1	2.08	1.4
<i>Modern methods</i>	39.9	35.8	43.9	1,132	144,321	49.0	2.03	1.4
<i>Traditional methods</i>	0.5	0.0	1.0	1,132	144,321	7.2	0.26	1.2
Percentage of births in the past 2 years receiving at least four antenatal care (ANC) visits during pregnancy	31.1	26.1	36.1	488	63,928	46.3	2.50	1.2
CHILDREN'S HEALTH AND NUTRITION INDICATORS								
Prevalence of underweight children under 5 years of age	32.0	28.2	35.7	1,164	152,781	46.7	1.87	1.4

Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - FH Project Area Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
Male	34.7	30.1	39.3	614	81,880	47.2	2.31	1.2
Female	28.8	23.3	34.3	550	70,900	45.7	2.74	1.4
Prevalence of stunted children under 5 years of age	54.5	50.2	58.8	1,159	152,066	49.8	2.16	1.5
Male	57.6	52.8	62.3	613	81,678	49.1	2.38	1.2
Female	50.9	45.0	56.9	546	70,388	50.4	2.97	1.4
Prevalence of wasted children under 5 years of age	7.0	5.3	8.8	1,157	151,944	25.6	0.87	1.2
Male	7.5	5.0	10.0	612	81,745	26.1	1.26	1.2
Female	6.5	4.2	8.8	545	70,199	24.8	1.16	1.1
Percentage of children 0-23 months of age who had diarrhea in the last two weeks	26.7	22.5	30.8	494	63,314	44.3	2.09	1.0
Male	30.7	25.4	36.0	257	33,229	46.1	2.66	0.9
Female	22.2	16.0	28.5	237	30,085	42.3	3.13	1.1
Percentage of children 0-23 months of age with diarrhea treated with ORT	24.1	13.8	34.3	117	16,887	42.9	5.09	1.3
Male	26.7	14.7	38.6	68	10,207	41.4	5.99	1.2
Female	20.1	7.9	32.2	49	6,680	39.6	6.09	1.1
Prevalence of exclusive breast-feeding of children under six months of age	87.9	81.7	94.1	137	19,040	32.8	3.08	1.1
Male	86.2	78.3	94.1	69	9,860	32.9	3.94	1.0
Female	89.7	81.7	97.7	68	9,180	30.3	4.01	1.1
Prevalence of children 6-23 months of age receiving a minimum acceptable diet (MAD)	6.6	3.7	9.4	357	44,273	24.8	1.42	1.1
Male	8.3	3.9	12.7	188	23,368	28.0	2.19	1.1
Female	4.7	1.5	7.8	169	20,905	21.7	1.58	0.9
GENDER INDICATORS								
Percentage of men and women who earned cash in the past 12 months	50.6	48.3	52.9	5,373	659,803	50.0	1.17	1.7
Male	63.7	61.5	65.8	2,629	320,152	48.5	1.09	1.2
Female	38.3	34.6	42.0	2,744	339,651	48.5	1.86	2.0
Percentage of men in union and earning cash who make decisions alone about the use of self-earned cash	23.4	20.6	26.3	1,409	175,577	42.8	1.44	1.3
Percentage of women in union and earning cash who make decisions alone about the use of self-earned cash	22.0	18.0	26.0	648	76,411	42.6	2.02	1.2
Percentage of men in union and earning cash who make decisions jointly with spouse/partner about the use of self-earned cash	71.7	68.7	74.7	1,409	175,577	45.5	1.52	1.3
Percentage of women in union and earning cash who make decisions jointly with spouse/partner about the use of self-earned cash	67.9	63.2	72.5	648	76,411	48.1	2.33	1.2
Percentage of men and women with children under two who have knowledge of maternal and child health and nutrition (MCHN) practices	70.7	66.0	75.4	887	116,659	45.6	2.36	1.5
Male	64.0	58.9	69.1	404	53,429	47.2	2.56	1.1
Female	76.3	70.4	82.2	483	63,230	41.8	2.96	1.6
Percentage of men in union with children under two who make maternal health and nutrition decisions alone	21.3	16.1	26.5	403	53,355	40.2	2.61	1.3
Percentage of women in union with children under two who make maternal health and nutrition decisions alone	52.8	47.0	58.6	435	56,522	49.2	2.90	1.2

**Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - FH Project Area
Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]**

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
Percentage of men in union with children under two who make maternal health and nutrition decisions jointly with spouse/partner	40.2	34.9	45.5	403	53,355	48.2	2.64	1.1
Percentage of women in union with children under two who make maternal health and nutrition decisions jointly with spouse/partner	33.7	27.7	39.7	435	56,522	46.6	3.02	1.4
Percentage of men in union with children under two who make child health and nutrition decisions alone	10.0	6.6	13.4	403	53,355	29.5	1.72	1.2
Percentage of women in union with children under two who make child health and nutrition decisions alone	51.8	46.0	57.6	435	56,522	49.2	2.91	1.2
Percentage of men in union with children under two who make child health and nutrition decisions jointly with spouse/partner	42.1	36.6	47.5	403	53,355	48.6	2.74	1.1
Percentage of women in union with children under two who make child health and nutrition decisions jointly with spouse/partner	38.1	32.3	44.0	435	56,522	47.9	2.92	1.3

NA = Not available

Items both highlighted in gray and italicized do not appear in the SAPQ

Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - REST Project Area Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
FOOD SECURITY INDICATORS								
Average Household Dietary Diversity Score (HDDS)	5.5	5.4	5.7	1,489	276,722	1.6	0.08	1.8
<i>Prevalence of moderate or severe food insecurity based on 30 day recall (FIES)</i>	30.9	27.7	34.0	1,588	294,412	36.1	1.55	1.7
<i>Male and female adults</i>	28.2	24.9	31.5	1,238	229,332	34.9	1.65	1.7
<i>Adult female, no adult male</i>	41.3	35.7	46.9	309	57,390	38.7	2.79	1.3
<i>Adult male, no adult female</i>	30.6	19.2	42.0	36	6,836	37.3	5.65	0.9
<i>Child, no adults</i>				5	854			
<i>Prevalence of moderate or severe food insecurity based on 12 month recall (FIES)</i>	46.0	43.1	49.0	1,588	294,412	40.1	1.48	1.5
<i>Male and female adults</i>	43.2	39.8	46.5	1,238	229,332	39.8	1.66	1.5
<i>Adult female, no adult male</i>	57.8	52.3	63.4	309	57,390	39.4	2.75	1.2
<i>Adult male, no adult female</i>	41.4	28.4	54.4	36	6,836	39.7	6.44	1.0
<i>Child, no adults</i>				5	854			
POVERTY INDICATORS								
Per capita (adults only) expenditures (as a proxy for income) of USG-assisted areas	\$2.35	\$2.23	\$2.46	3,671	678,772	1.2	0.06	1.9
Male and female adults	\$2.31	\$2.19	\$2.43	3,243	599,795	1.1	0.06	1.9
Adult female, no adult male	\$2.66	\$2.48	\$2.85	377	69,624	1.8	0.09	0.9
Adult male, no adult female	\$2.14	\$1.77	\$2.52	51	9,348	1.6	0.19	0.7
Child, no adults								
Prevalence of poverty: Percentage of people (adults only) living on less than \$1.25/day	21.5	17.5	25.5	3,671	678,772	41.1	1.97	1.9
Male and female adults	22.1	17.8	26.4	3,243	599,795	39.0	2.13	1.9
Adult female, no adult male	15.0	9.8	20.2	377	69,624	49.2	2.57	0.9
Adult male, no adult female	30.9	13.1	48.8	51	9,348	59.3	8.82	0.9
Child, no adults								
Depth of Poverty: Mean percentage shortfall relative to the \$1.25 poverty line	5.2	3.6	6.8	3,671	678,772	12.7	0.78	2.5
Male and female adults	5.4	3.6	7.1	3,243	599,795	12.1	0.87	2.5
Adult female, no adult male	4.1	2.4	5.8	377	69,624	16.0	0.83	0.9
Adult male, no adult female	4.6	1.8	7.4	51	9,348	10.9	1.39	0.8
Child, no adults								
WASH INDICATORS								
Percentage of households using an improved drinking water source	44.9	36.6	53.2	1,588	294,412	49.8	4.13	3.3
Percentage of households practicing correct use of recommended household water treatment technologies	15.6	12.1	19.1	1,588	294,412	36.3	1.75	1.9
Chlorination	9.0	6.7	11.3	1,588	294,412	28.6	1.14	1.6
<i>Flocculent/Disinfectant</i>	5.0	3.2	6.9	1,588	294,412	21.9	0.92	1.7
Filtration	0.6	0.1	1.1	1,588	294,412	7.6	0.23	1.2
Solar	0.0			1,588	294,412	0.0		0.0
Boiling	1.1	0.5	1.7	1,588	294,412	10.3	0.29	1.1
Percentage of households that can obtain drinking water in less than 30 minutes (round trip)	18.8	15.1	22.5	1,588	294,412	39.1	1.83	1.9
Percentage of households using a basic sanitation facility	8.2	5.3	11.1	1,588	294,412	27.4	1.44	2.1
Percentage of households in target areas practicing open defecation	64.8	60.1	69.5	1,588	294,412	47.8	2.33	1.9

Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - REST Project Area Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
Percentage of households with soap and water at a handwashing station commonly used by family members	0.3	0.0	0.7	1,588	294,412	5.9	0.15	1.0
AGRICULTURAL INDICATORS								
Percentage of farmers who used financial services (savings, agricultural credit and/or agricultural insurance in the past 12 months)	37.5	33.9	41.2	2,335	433,854	48.4	1.81	1.8
Male	42.8	38.2	47.5	1,168	216,252	49.6	2.29	1.6
Female	32.3	28.3	36.3	1,167	217,601	46.7	1.98	1.4
Percentage of farmers who practiced value chain activities promoted by the project in the past 12 months	86.0	82.8	89.3	995	176,007	34.7	1.60	1.5
Male	88.6	85.4	91.8	533	93,912	32.4	1.56	1.1
Female	83.1	78.5	87.6	462	82,095	38.1	2.25	1.3
Percentage of farmers who used at least three sustainable agriculture (crop, livestock, and NRM) practices and/or technologies in the past 12 months	95.3	93.9	96.6	2,335	433,854	21.2	0.67	1.5
Male	98.0	97.1	99.0	1,168	216,252	13.9	0.49	1.2
Female	92.5	90.3	94.8	1,167	217,601	26.2	1.11	1.4
Percentage of farmers who used at least three sustainable crop practices and/or technologies in the past 12 months	94.0	92.4	95.6	2,179	404,145	23.7	0.78	1.5
Male	96.0	94.7	97.4	1,139	211,260	19.6	0.68	1.2
Female	91.8	89.5	94.1	1,040	192,885	27.5	1.15	1.3
Percentage of farmers who used at least three sustainable livestock practices and/or technologies in the past 12 months	79.8	76.8	82.8	2,118	393,540	40.2	1.50	1.7
Male	86.3	83.7	88.9	1,081	200,004	34.4	1.29	1.2
Female	73.0	68.9	77.0	1,037	193,536	44.3	2.01	1.5
Percentage of farmers who used at least three sustainable NRM practices and/or technologies in the past 12 months	49.3	45.6	52.9	2,335	433,854	50.0	1.82	1.8
Male	59.7	55.8	63.7	1,168	216,252	49.1	1.96	1.4
Female	38.9	35.0	42.8	1,167	217,601	48.7	1.94	1.4
Percentage of farmers who used improved storage practices in the past 12 months	27.9	23.1	32.8	2,197	407,585	44.9	2.41	2.5
Male	29.2	24.5	33.9	1,143	211,959	45.5	2.34	1.7
Female	26.6	21.3	31.8	1,054	195,626	44.1	2.60	1.9
WOMEN'S HEALTH AND NUTRITION INDICATORS								
Prevalence of underweight women	43.5	39.7	47.2	1,456	269,434	49.6	1.86	1.4
Prevalence of women of reproductive age who are consuming a minimum dietary diversity (MDD-W)	12.1	9.5	14.6	1,578	298,148	32.6	1.28	1.6
Contraceptive Prevalence Rate	38.0	33.6	42.4	835	157,230	48.6	2.18	1.3
<i>Modern methods</i>	37.0	32.5	41.5	835	157,230	48.3	2.22	1.3
<i>Traditional methods</i>	1.1	0.5	1.8	835	157,230	10.5	0.33	0.9
Percentage of births in the past 2 years receiving at least four antenatal care (ANC) visits during pregnancy	55.8	48.7	62.8	388	74,782	49.7	3.49	1.4
CHILDREN'S HEALTH AND NUTRITION INDICATORS								
Prevalence of underweight children under 5 years of age	25.1	22.3	27.9	1,005	189,864	43.4	1.37	1.0

**Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - REST Project Area
Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]**

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
Male	25.4	21.5	29.4	538	103,557	43.1	1.96	1.1
Female	24.7	20.0	29.4	467	86,306	43.6	2.33	1.2
Prevalence of stunted children under 5 years of age	44.3	40.6	48.1	1,003	189,369	49.7	1.84	1.2
Male	46.4	40.4	52.5	536	103,065	49.4	3.01	1.4
Female	41.8	37.9	45.7	467	86,304	49.9	1.93	0.8
Prevalence of wasted children under 5 years of age	4.8	3.3	6.3	1,004	189,674	21.4	0.74	1.1
Male	4.1	2.1	6.0	537	103,368	19.6	0.96	1.1
Female	5.7	3.5	7.8	467	86,306	23.4	1.08	1.0
Percentage of children 0-23 months of age who had diarrhea in the last two weeks	21.0	16.3	25.6	394	74,385	40.8	2.30	1.1
Male	21.4	15.7	27.0	214	40,533	40.7	2.80	1.0
Female	20.5	14.0	27.0	180	33,852	40.7	3.21	1.1
Percentage of children 0-23 months of age with diarrhea treated with ORT	34.2	24.1	44.4	82	15,589	47.7	4.94	0.9
Male	30.1	17.9	42.3	45	8,658	45.1	6.05	0.9
Female	39.4	24.2	54.6	37	6,931	49.6	7.53	0.9
Prevalence of exclusive breast-feeding of children under six months of age	71.0	62.5	79.5	111	20,083	45.6	4.17	1.0
Male	69.2	55.9	82.4	54	9,877	46.4	6.55	1.0
Female	72.8	62.5	83.2	57	10,206	46.0	5.15	0.8
Prevalence of children 6-23 months of age receiving a minimum acceptable diet (MAD)	12.4	8.1	16.7	283	54,302	33.1	2.13	1.1
Male	15.2	9.1	21.3	160	30,655	35.4	3.03	1.1
Female	8.9	4.1	13.7	123	23,646	28.5	2.39	0.9
GENDER INDICATORS								
Percentage of men and women who earned cash in the past 12 months	59.1	56.7	61.4	4,239	782,142	49.2	1.17	1.6
Male	65.4	63.3	67.5	2,031	374,737	47.6	1.03	1.0
Female	53.2	49.6	56.8	2,208	407,405	50.0	1.78	1.7
Percentage of men in union and earning cash who make decisions alone about the use of self-earned cash	38.2	34.6	41.8	987	187,178	48.6	1.78	1.2
Percentage of women in union and earning cash who make decisions alone about the use of self-earned cash	27.2	22.4	32.0	692	131,303	44.6	2.38	1.4
Percentage of men in union and earning cash who make decisions jointly with spouse/partner about the use of self-earned cash	54.8	51.1	58.5	987	187,178	49.8	1.84	1.2
Percentage of women in union and earning cash who make decisions jointly with spouse/partner about the use of self-earned cash	50.8	47.0	54.7	692	131,303	50.2	1.91	1.0
Percentage of men and women with children under two who have knowledge of maternal and child health and nutrition (MCHN) practices	83.8	79.3	88.3	693	134,827	36.8	2.22	1.6
Male	74.9	68.9	81.0	304	59,052	43.0	3.01	1.2
Female	90.8	86.0	95.6	389	75,775	28.8	2.38	1.6
Percentage of men in union with children under two who make maternal health and nutrition decisions alone	24.0	19.6	28.4	303	58,915	42.4	2.19	0.9
Percentage of women in union with children under two who make maternal health and nutrition decisions alone	63.0	58.6	67.4	353	68,739	48.0	2.19	0.9

Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - REST Project Area Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]

	Indicator Value	Confidence Interval		Number of Records	Weighted Population	Standard Deviation	Standard Error	DEFT
		Lower	Upper					
Percentage of men in union with children under two who make maternal health and nutrition decisions jointly with spouse/partner	27.3	22.4	32.2	303	58,915	44.2	2.45	1.0
Percentage of women in union with children under two who make maternal health and nutrition decisions jointly with spouse/partner	25.1	21.4	28.8	353	68,739	43.2	1.83	0.8
Percentage of men in union with children under two who make child health and nutrition decisions alone	13.1	9.4	16.8	303	58,915	33.5	1.82	0.9
Percentage of women in union with children under two who make child health and nutrition decisions alone	68.1	63.2	73.0	353	68,739	46.4	2.43	1.0
Percentage of men in union with children under two who make child health and nutrition decisions jointly with spouse/partner	29.6	24.5	34.7	303	58,915	45.2	2.53	1.0
Percentage of women in union with children under two who make child health and nutrition decisions jointly with spouse/partner	25.2	20.5	29.9	353	68,739	43.2	2.33	1.0

NA = Not available

Items both highlighted in gray and italicized do not appear in the SAPQ

Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - Comparison Across Project Areas
Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]

	END-LINE INDICATOR VALUES			
	ALL	CRS	FH	REST
FOOD SECURITY INDICATORS				
Average Household Dietary Diversity Score (HDDS)	4.9	4.8	4.3	5.5
<i>Prevalence of moderate or severe food insecurity based on 30 day recall (FIES)</i>	36.9	63.7	30.4	30.9
<i>Male and female adults</i>	35.3	62.6	28.6	28.2
<i>Adult female, no adult male</i>	44.7	72.4	39.4	41.3
<i>Adult male, no adult female</i>	33.9	59.7	24.1	30.6
<i>Child, no adults</i>	NA	0.0	0.0	0.0
<i>Prevalence of moderate or severe food insecurity based on 12 month recall (FIES)</i>	53.5	76.7	50.2	46.0
<i>Male and female adults</i>	51.8	76.2	48.4	43.2
<i>Adult female, no adult male</i>	61.8	80.7	60.1	57.8
<i>Adult male, no adult female</i>	48.4	75.6	40.0	41.4
<i>Child, no adults</i>	NA	NA	NA	NA
POVERTY INDICATORS				
Per capita (adults only) expenditures (as a proxy for income) of USG-assisted areas	\$2.40	\$2.80	\$2.26	\$2.35
Male and female adults	\$2.37	\$2.76	\$2.24	\$2.31
Adult female, no adult male	\$2.54	\$3.08	\$2.22	\$2.66
Adult male, no adult female	\$2.79	\$3.48	\$2.92	\$2.14
Child, no adults				
Prevalence of poverty: Percentage of people (adults only) living on less than \$1.25/day	21.1	14.4	24.0	21.5
Male and female adults	21.2	14.8	23.6	22.1
Adult female, no adult male	20.4	13.2	29.3	15.0
Adult male, no adult female	18.2	1.3	17.0	30.9
Child, no adults				
Depth of Poverty: Mean percentage shortfall relative to the \$1.25 poverty line	5.4	3.9	6.3	5.2
Male and female adults	5.4	3.9	6.2	5.4
Adult female, no adult male	5.7	3.8	8.1	4.1
Adult male, no adult female	3.5	0.4	4.1	4.6
Child, no adults				
WASH INDICATORS				
Percentage of households using an improved drinking water source	43.1	25.8	49.8	44.9
Percentage of households practicing correct use of recommended household water treatment technologies	11.8	9.4	9.0	15.6
Chlorination	6.9	4.1	6.0	9.0
<i>Flocculent/Disinfectant</i>	2.9	2.0	0.9	5.0
Filtration	1.1	2.6	0.9	0.6
Solar	0.0	0.0	0.0	0.0
Boiling	1.2	1.2	1.5	1.1
Percentage of households that can obtain drinking water in less than 30 minutes (round trip)	23.5	20.4	30.2	18.8
Percentage of households using a basic sanitation facility	7.3	6.8	6.6	8.2
Percentage of households in target areas practicing open defecation	53.7	47.5	44.4	64.8
Percentage of households with soap and water at a handwashing station commonly used by family members	1.1	0.9	2.0	0.3
AGRICULTURAL INDICATORS				
Percentage of farmers who used financial services (savings, agricultural credit and/or agricultural insurance in the past 12 months)	37.5	17.3	46.9	37.5
Male	40.3	18.6	49.6	42.8
Female	33.5	13.8	42.5	32.3
Percentage of farmers who practiced value chain activities promoted by the project in the past 12 months	85.8	81.7	87.7	86.0
Male	87.8	83.3	89.8	88.6

Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - Comparison Across Project Areas
Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]

	END-LINE INDICATOR VALUES			
	ALL	CRS	FH	REST
Female	82.3	76.0	83.3	83.1
Percentage of farmers who used at least three sustainable agriculture (crop, livestock, and NRM) practices and/or technologies in the past 12 months	94.7	94.7	94.0	95.3
Male	97.6	96.7	97.5	98.0
Female	90.8	89.3	88.1	92.5
Percentage of farmers who used at least three sustainable crop practices and/or technologies in the past 12 months	92.1	87.3	91.9	94.0
Male	94.1	88.7	95.2	96.0
Female	89.0	83.1	86.2	91.8
Percentage of farmers who used at least three sustainable livestock practices and/or technologies in the past 12 months	71.5	45.9	71.1	79.8
Male	75.2	47.6	76.2	86.3
Female	66.3	41.4	61.9	73.0
Percentage of farmers who used at least three sustainable NRM practices and/or technologies in the past 12 months	44.1	30.2	43.9	49.3
Male	51.9	33.4	53.8	59.7
Female	33.2	21.5	27.0	38.9
Percentage of farmers who used improved storage practices in the past 12 months	26.1	26.9	23.2	27.9
Male	27.0	28.4	23.8	29.2
Female	24.7	22.4	22.1	26.6
WOMEN'S HEALTH AND NUTRITION INDICATORS				
Prevalence of underweight women	36.2	32.2	29.5	43.5
Prevalence of women of reproductive age who are consuming a minimum dietary diversity (MDD-W)	7.9	7.5	3.1	12.1
Contraceptive Prevalence Rate	37.3	30.1	40.4	38.0
<i>Modern methods</i>	36.2	27.8	39.9	37.0
<i>Traditional methods</i>	1.1	2.3	0.5	1.1
Percentage of births in the past 2 years receiving at least four antenatal care (ANC) visits during pregnancy	42.1	33.9	31.1	55.8
CHILDREN'S HEALTH AND NUTRITION INDICATORS				
Prevalence of underweight children under 5 years of age	26.9	23.0	32.0	25.1
Male	28.2	23.6	34.7	25.4
Female	25.5	22.5	28.8	24.7
Prevalence of stunted children under 5 years of age	45.9	36.5	54.5	44.3
Male	48.1	37.2	57.6	46.4
Female	43.4	35.9	50.9	41.8
Prevalence of wasted children under 5 years of age	6.6	9.1	7.0	4.8
Male	6.5	9.7	7.5	4.1
Female	6.6	8.4	6.5	5.7
Percentage of children 0-23 months of age who had diarrhea in the last two weeks	22.5	18.7	26.7	21.0
Male	24.3	19.7	30.7	21.4
Female	20.5	17.7	22.2	20.5
Percentage of children 0-23 months of age with diarrhea treated with ORT	34.8	60.7	24.1	34.2
Male	33.6	59.1	26.7	30.1
Female	36.4	62.7	20.1	39.4
Prevalence of exclusive breast-feeding of children under six months of age	76.6	67.5	87.9	71.0
Male	74.2	63.4	86.2	69.2
Female	79.1	72.7	89.7	72.8
Prevalence of children 6-23 months of age receiving a minimum acceptable diet (MAD)	9.2	6.9	6.6	12.4
Male	10.8	5.4	8.3	15.2
Female	7.2	8.2	4.7	8.9

**Table xxx. FFP/EVELYN Ethiopia ENDLINE Indicators - Comparison Across Project Areas
Indicators, 95% Confidence Intervals and Base Population [Ethiopia, 2017]**

	END-LINE INDICATOR VALUES			
	ALL	CRS	FH	REST
GENDER INDICATORS				
Percentage of men and women who earned cash in the past 12 months	54.6	52.1	50.6	59.1
Male	65.2	67.8	63.7	65.4
Female	44.6	36.5	38.3	53.2
Percentage of men in union and earning cash who make decisions alone about the use of self-earned cash	33.1	40.8	23.4	38.2
Percentage of women in union and earning cash who make decisions alone about the use of self-earned cash	26.1	31.0	22.0	27.2
Percentage of men in union and earning cash who make decisions jointly with spouse/partner about the use of self-earned cash	57.6	36.9	71.7	54.8
Percentage of women in union and earning cash who make decisions jointly with spouse/partner about the use of self-earned cash	55.1	44.0	67.9	50.8
Percentage of men and women with children under two who have knowledge of maternal and child health and nutrition (MCHN) practices	77.7	77.4	70.7	83.8
Male	71.2	76.2	64.0	74.9
Female	82.9	78.4	76.3	90.8
Percentage of men in union with children under two who make maternal health and nutrition decisions alone	23.9	27.9	21.3	24.0
Percentage of women in union with children under two who make maternal health and nutrition decisions alone	56.6	50.5	52.8	63.0
Percentage of men in union with children under two who make maternal health and nutrition decisions jointly with spouse/partner	30.5	20.3	40.2	27.3
Percentage of women in union with children under two who make maternal health and nutrition decisions jointly with spouse/partner	27.2	20.7	33.7	25.1
Percentage of men in union with children under two who make child health and nutrition decisions alone	13.2	18.6	10.0	13.1
Percentage of women in union with children under two who make child health and nutrition decisions alone	59.4	54.6	51.8	68.1
Percentage of men in union with children under two who make child health and nutrition decisions jointly with spouse/partner	32.7	22.8	42.1	29.6
Percentage of women in union with children under two who make child health and nutrition decisions jointly with spouse/partner	29.3	23.3	38.1	25.2
NA = Not available				
<i>Items both highlighted in gray and italicized do not appear in the SAPQ</i>				

ANNEX 8b
Comparison of Baseline and
Endline Indicator Estimates

Ethiopia FFP Development Food Assistance Programs
Comparison of 2012 Baseline and 2017 End-line Indicators in the CRS Project Area

	Baseline (BL)	End-line (EL)	Raw Difference (EL - BL)	Significance Level ¹	BL (N)	EL (N)
FOOD SECURITY INDICATORS						
Average Household Dietary Diversity Score (HDDS)	3.9	4.8	0.9	***	1,524	1,463
WASH INDICATORS						
Percentage of households using an improved source of drinking water	23.6	25.8	2.2		1,467	1,498
Percentage of households using improved sanitation facilities	41.7	6.8	-34.9	***	1,520	1,498
Percentage of households practicing open defecation	38.3	47.5	9.2		1,517	1,498
Percentage of households with soap and water at a handwashing station commonly used by family members						
WOMEN'S HEALTH AND NUTRITION INDICATORS						
Percentage of births in the past 2 years receiving at least four antenatal care (ANC) visits during pregnancy						
CHILDREN'S HEALTH AND NUTRITION INDICATORS						
Prevalence of underweight children under 5 years of age	27.1	23.0	-4.1	*	1,491	1,212
Male	25.0	23.6	-1.4		1,034	608
Female	32.0	22.5	-9.5	**	457	604
Prevalence of stunted children under 5 years of age	44.6	36.5	-8.0	*	1,489	1,208
Male	43.8	37.2	-6.6	*	1,032	607
Female	46.3	35.9	-10.4	*	457	601
Prevalence of wasted children under 5 years of age	12.8	9.1	-3.8	*	1,481	1,210
Male	12.2	9.7	-2.5		1,028	608
Female	14.2	8.4	-5.8	*	453	602
Percentage of children 0-23 months of age who had diarrhea in the last two weeks						
Male						
Female						
Percentage of children 0-23 months of age with diarrhea treated with ORT						
Male						
Female						
Prevalence of exclusive breast-feeding of children under six months of age	24.9	67.5	42.6	***	144	132
Male	21.2	63.4	42.3	***	80	72
Female	29.5	72.7	43.2	***	64	60
Prevalence of children 6-23 months of age receiving a minimum acceptable diet (MAD)	2.8	6.9	4.1	*	463	300
Male	2.6	5.4	2.8		229	150
Female	3.0	8.2	5.3	*	234	150

¹ ns = not significant, † p<0.1, * p<0.05, ** p<0.01, *** p<0.001

NA : Not available

Ethiopia FFP Development Food Assistance Programs
Comparison of 2012 Baseline and 2017 End-line Indicators in the FH Project Area

	Baseline (BL)	End-line (EL)	Raw Difference (EL - BL)	Significance Level ¹	BL (N)	EL (N)
FOOD SECURITY INDICATORS						
Average Household Dietary Diversity Score (HDDS)	3.1	4.3	1.3	***	1,519	1,984
WASH INDICATORS						
Percentage of households using an improved source of drinking water	47.9	49.8	1.9		1,312	2,141
Percentage of households using improved sanitation facilities	23.0	6.6	-16.4	***	1,530	2,141
Percentage of households practicing open defecation	29.2	44.4	15.2	**	1,527	2,141
Percentage of households with soap and water at a handwashing station commonly used by family members	8.2	2.0	-6.2	***	1,502	2,141
WOMEN'S HEALTH AND NUTRITION INDICATORS						
Percentage of births in the past 2 years receiving at least four antenatal care (ANC) visits during pregnancy	34.0	31.1	-2.8		289	488
CHILDREN'S HEALTH AND NUTRITION INDICATORS						
Prevalence of underweight children under 5 years of age	50.2	32.0	-18.3	***	679	1,164
Male	48.8	34.7	-14.0	***	523	614
Female	55.3	28.8	-26.5	***	156	550
Prevalence of stunted children under 5 years of age	63.1	54.5	-8.6	**	679	1,159
Male	62.1	57.6	-4.5		523	613
Female	66.2	50.9	-15.3	**	156	546
Prevalence of wasted children under 5 years of age	20.4	7.0	-13.3	***	664	1,157
Male	19.2	7.5	-11.7	***	514	612
Female	24.5	6.5	-18.0	***	150	545
Percentage of children 0-23 months of age who had diarrhea in the last two weeks	26.1	26.7	0.6		261	494
Male	23.9	30.7	6.8		109	257
Female	27.7	22.2	-5.5		152	237
Percentage of children 0-23 months of age with diarrhea treated with ORT	23.6	24.1	0.4		68	117
Male	NA				26	68
Female	14.4	20.1	5.6		42	49
Prevalence of exclusive breast-feeding of children under six months of age	40.0	87.9	47.9	***	95	137
Male	28.5	86.2	57.7	***	42	69
Female	49.1	89.7	40.5	***	53	68
Prevalence of children 6-23 months of age receiving a minimum acceptable diet (MAD)	0.5	6.6	6.0	***	188	357
Male	1.2	8.3	7.0	**	80	188
Female	0.0	4.7	4.7	**	108	169

¹ ns = not significant, † p<0.1, * p<0.05, ** p<0.01, *** p<0.001

NA : Not available

Ethiopia FFP Development Food Assistance Programs
Comparison of 2012 Baseline and 2017 End-line Indicators in the REST Project Area

	Baseline (BL)	End-line (EL)	Raw Difference (EL - BL)	Significance Level ¹	BL (N)	EL (N)
FOOD SECURITY INDICATORS						
Average Household Dietary Diversity Score (HDDS)	4.8	5.5	0.7	***	1,539	1,489
WASH INDICATORS						
Percentage of households using an improved source of drinking water						
Percentage of households using improved sanitation facilities						
Percentage of households practicing open defecation						
Percentage of households with soap and water at a handwashing station commonly used by family members	7.6	0.3	-7.3	***	1,531	1,588
WOMEN'S HEALTH AND NUTRITION INDICATORS						
Percentage of births in the past 2 years receiving at least four antenatal care (ANC) visits during pregnancy	72.4	55.8	-16.6		40	388
CHILDREN'S HEALTH AND NUTRITION INDICATORS						
Prevalence of underweight children under 5 years of age	29.4	25.1	-4.3	†	849	1,005
Male	28.0	25.4	-2.6		593	538
Female	32.6	24.7	-7.9	+	256	467
Prevalence of stunted children under 5 years of age	51.0	44.3	-6.6	*	848	1,003
Male	51.2	46.4	-4.7		592	536
Female	50.5	41.8	-8.7	*	256	467
Prevalence of wasted children under 5 years of age	8.4	4.8	-3.6	**	847	1,004
Male	7.3	4.1	-3.3	*	591	537
Female	11.0	5.7	-5.4	*	256	467
Percentage of children 0-23 months of age who had diarrhea in the last two weeks	68.9	21.0	-48.0	***	42	394
Male					16	214
Female					26	180
Percentage of children 0-23 months of age with diarrhea treated with ORT					29	82
Male					8	45
Female					21	37
Prevalence of exclusive breast-feeding of children under six months of age	66.4	71.0	4.6		104	111
Male	75.9	69.2	-6.8		50	54
Female	57.6	72.8	15.3		54	57
(MAD)	5.1	12.4	7.3	**	233	283
Male	8.0	15.2	7.1	+	87	160
Female	3.4	8.9	5.5	+	146	123

¹ ns = not significant, † p<0.1, * p<0.05, ** p<0.01, *** p<0.001

NA : Not available

ANNEX 9
Descriptive and Bivariate
Analyses

Table A9.1. Percentage of farmers by types of crops planted during the past 12 months and sex [Endline Study, Ethiopia, 2017]

	CRS				FH				REST			
	All	Male farmer	Female farmer	Sig.	All	Male farmer	Female farmer	Sig.	All	Male farmer	Female farmer	Sig.
Teff	15.1	15.3	14.4		63.2	64.9	60.1	*	73.7	77.3	69.8	***
Maize	75.9	74.9	78.8		35	34.4	36.2		60.5	63.4	57.3	**
Wheat	18.0	17.7	19.0		73.7	77.6	66.8	***	54.7	54.9	54.4	
Millet	24.4	26.1	19.4	*	5.1	6.2	3.2		39.4	42	36.7	**
Barely	8.7	8.9	8.4		61.4	64.5	55.8	***	51.3	51.8	50.8	
Sorghum	46.1	45.3	48.6		44.5	43.9	45.5		53.7	56.9	50.1	***
Soybean	3.9	4.0	3.8		13.1	13.5	12.2		1	1.2	0.9	
Legumes (bean, lentils)	10.9	10.0	13.6	*	57.9	63.4	48.1	***	29.1	30.1	28	
Oilseed (sunflower, mustard, sesame)	1.1	1.2	0.8		21.6	22	20.8		9.8	10.8	8.8	***
Fruits	8.4	8.8	7.1		2.5	3.2	1.2	**	10	10.5	9.4	
Potato	10.1	11.4	6.4	**	34.8	33.9	36.6		2.7	2.8	2.6	
Chat	49.4	51.0	44.5	*	1	1.1	0.6		0.7	0.7	0.7	
Coffee	11.5	11.1	12.5		1.3	1.3	1.4		2.3	2.5	2	
Groundnuts	2.8	2.5	3.5		0.2	0.2	0.2		1.7	2.1	1.2	***
Spices	0.2	0.1	0.6	*	10.1	11	8.6		9.4	9.7	9.2	
Vegetables	19.1	20.3	15.5	*	23.8	24.7	22.3		23.2	23.9	22.5	
Others	10.4	10.7	9.4		19.6	21.9	15.4	**	21.6	21.4	21.8	
Number of farmers	1,668	1,245	423		2,571	1,621	950		2,179	1,139	1,040	

*p<0.05 **p<0.01 *** p<0.001

A9.2 Percentage of households owning livestock (at least one) by project area, FFP Endline Study [Ethiopia, 2017]

	<i>CRS</i>	<i>FH</i>	<i>REST</i>
Cattle	65.8	57.2	57.6
Goats	54.1	23.4	30.5
Poultry	54.1	63.8	75.3
Donkey or mule	38.4	45.5	49.9
Oxen	32.2	53.4	64.2
Sheep	30.3	36.9	25.9
Honey bees (hives)	7.0	9.3	15.0
Camels	2.7	0.2	2.4
Horse	1.6	6.1	0.4
Any livestock	90.7	86.4	90.4
Number of households	1,498	2,141	1,588

Table A9.3. Percentage of farmers using financial services by sex and type of financial services [Endline Study, Ethiopia 2017]

	Overall			CRS			FH			REST		
	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female
Credit	15.4	17.0	13.1	9.5	10.2	7.7	21.5	24.1	17.1	12.9	14.0	11.9
Savings	31.6	34.3	27.9	10.3	11.3	7.5	42.4	44.7	38.4	31.1	36.3	26.0
Insurance	1.8	1.8	1.6	0.8	0.6	1.3	0.6	0.9	0.1	3.0	3.4	2.6
None	62.5	59.7	66.5	82.7	81.4	86.2	53.1	50.4	57.5	62.5	57.2	67.7
Number of farmers	6,764	4,104	2,660	1,750	1,268	482	2,679	1,668	1,011	2,335	1,168	1,167

Table A9.4a. Proportion of farmers that plant crops or raise/buy livestock with the specific intention to sell or resell

	<i>CRS</i>	<i>FH</i>	<i>REST</i>
Male	59.0 **	56.2 ***	43.4 ***
Female	45.8	45.7	37.7
All	55.4	52.3	40.6
Number of responding farmers	1,750	2,679	2,335

*p<0.05 **p<0.01 *** p<0.001

Table A9.4b. Percentage of Farmers by Type of Value Chain Activity and Sex of Farmer

	Overall			CRS			FH			REST		
	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female
Purchase of inputs through agro-dealers and/or community associations	64.2	64.5	63.4	45.2	46.7	40.1	65.4	68.9	58.4	80.2	81.1	79.2
Use of mobile financial services	0.1	0.1	0.1	0.2	0.3	0.0	0.1	0.1	0.2	...	...	...
Use of financial services other than mobile (excluding insurance)	2.1	2.5	1.2	0.4	0.6	0.0	3.0	3.5	2.0	2.2	3.2	1.1
Use of training and extension services	29.5	32.3	23.9	21.2	23.7	12.7	32.7	34.9	28.0	32.7	39.4	24.9
Contract farming	0.9	1.1	0.5	1.0	1.2	0.0	1.4	1.6	1.1	0.1	0.0	0.2
Use of feed lots or pen feeding	34.3	37.3	28.6	34.4	35.3	31.6	52.5	53.5	50.3	8.3	10.7	5.6
Drying, processing and packaging for selling/storage	6.9	8.2	4.2	9.7	11.3	4.2	7.1	7.7	5.9	3.9	5.1	2.6
Trading or marketing produce through agro-vets, community associations and/or cooperatives	6.9	7.3	6.3	5.4	4.7	8.0	12.5	12.9	11.7	0.3	0.6	0.0
Use of formal marketing systems for livestock and/or vegetables and/or fruits, spices, honey, organic coffee, etc.	21.8	23.1	19.2	33.2	32.8	34.4	27.3	26.7	28.6	3.2	3.6	2.8
Did not practice any of these activities	13.0	11.4	16.0	18.1	16.4	24.1	9.2	7.7	12.4	13.5	11.3	16.0
Number of responding farmers	3,354	2,219	1,135	938	726	212	1,421	960	461	995	533	462

Table A9.5. Percentage of farmers by type of sustainable agricultural practice and sex of farmer [Endline Study, Ethiopia 2017]

	<i>Overall</i>			<i>CRS</i>			<i>FH</i>			<i>REST</i>		
	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female
Crops												
A. Micro dosing	14.5	15.8	12.4	17.9	18.4	16.3	15.2	15.9	13.8	12.7	14.3	10.9
B. Manure	68.6	70.2	66.2	71.4	70.3	74.6	62.8	65.7	57.6	72.1	74.4	69.6
C. Compost	46.5	49.6	41.9	27.7	30.1	20.4	52.8	57.6	44.1	48.6	52.2	44.7
D. Planting basins	5.5	6.2	4.4	9.2	9.8	7.2	4.8	5.3	4.0	4.6	5.1	4.0
E. Mulching	7.7	9.3	5.3	11.0	11.1	10.8	8.3	9.6	6.0	6.1	8.1	3.8
F. Weed control	81.0	82.3	79.0	78.3	80.1	72.8	84.9	86.0	82.8	79.0	79.8	78.0
G. Dry planting	31.1	32.8	28.6	16.3	17.0	14.2	31.1	34.9	24.4	36.5	39.1	33.7
H. Ripping into residues	5.2	6.0	3.9	7.5	7.7	6.8	7.5	8.7	5.2	2.6	2.5	2.6
I. Clean ripping	16.4	17.4	14.8	25.6	25.0	27.7	15.5	15.5	15.4	13.8	15.3	12.1
J. Tied ridges	28.1	30.7	24.2	24.7	25.6	21.9	28.1	31.9	21.4	29.3	32.1	26.2
K. Pot-holing	3.0	3.6	2.0	2.7	3.1	1.7	4.2	5.0	2.8	2.1	2.6	1.5
L. Crop rotations	77.2	77.2	77.2	36.9	37.5	35.0	86.5	89.6	81.0	84.8	86.3	83.1
M. Intercropping	24.2	28.2	18.0	45.0	45.8	42.5	31.2	34.9	24.6	11.2	12.7	9.6
N. Integrated Pest Management (IPM)	14.8	15.7	13.3	13.2	14.2	10.0	12.5	13.9	9.9	17.1	18.2	15.8
O. Early planting or planting with first rains	45.3	49.4	39.1	41.3	42.3	38.6	55.3	60.4	46.1	39.1	42.7	35.2
P. Use of improved crop varieties	30.0	30.6	29.1	17.3	17.3	17.2	20.3	22.6	16.2	42.1	45.1	38.9
Q. Contour planting	12.1	13.2	10.4	5.1	5.4	4.3	13.7	14.9	11.5	13.4	15.7	10.9
R. Terracing	52.2	58.0	43.4	49.5	52.6	40.0	66.1	73.8	52.3	42.6	46.0	38.9
S. Land leveling	31.9	34.9	27.5	19.4	20.0	17.5	38.0	41.7	31.2	31.9	36.1	27.3
U. Micro-irrigation technology (MIT)	7.7	8.5	6.3	3.6	4.2	1.8	7.1	8.3	5.1	9.5	10.9	7.9
V. Crop thinning	24.4	27.4	19.7	32.7	34.0	28.9	17.9	20.0	14.2	26.3	30.9	21.2
W. Row Planting	28.5	31.5	23.8	43.1	44.5	38.7	30.2	32.4	26.2	21.9	23.9	19.7
X. Sequential or double cropping	7.8	8.9	6.2	4.5	4.9	3.2	8.8	10.5	5.9	8.3	9.6	6.9
Z. Improved fertilizer	65.8	65.4	66.5	27.9	28.4	26.5	60.7	64.8	53.4	83.5	85.3	81.6
Y. Did not use any of these practices in the past 12 months	1.0	0.4	1.9	0.4	0.4	0.4	1.2	0.3	2.8	1.1	0.6	1.6
Number of responding farmers	6,418	4,005	2,413	1,668	1,245	423	2,571	1,621	950	2,179	1,139	1,040
Livestock												
A. Improved animal shelters	8.5	9.8	6.6	10.1	11.2	7.0	12.8	13.1	12.1	4.8	6.0	3.6
B. Vaccinations	70.8	73.0	67.5	61.6	61.5	62.1	65.3	69.0	58.6	77.7	82.0	73.2
C. Deworming	45.3	46.7	43.4	35.5	34.9	37.1	29.5	32.4	24.2	60.2	65.4	54.7
D. Castration	11.5	13.9	8.1	4.4	4.3	4.8	12.0	14.7	6.9	13.4	17.3	9.4
E. Dehorning	0.4	0.6	0.1	0.0	0.0	0.0	0.8	1.2	0.1	0.2	0.2	0.2
F. Homemade animal feeds made of locally available products	48.3	50.5	45.2	26.5	26.0	27.7	59.0	62.4	52.8	47.1	50.0	44.1
G. Animal feed supplied by stockfeed manufacturer	8.7	9.0	8.2	11.6	11.9	11.0	6.0	6.7	4.9	9.7	10.0	9.4
H. Artificial insemination	5.2	5.8	4.4	1.1	1.2	0.7	3.5	4.5	1.6	7.8	9.0	6.5
I. Pen feeding	15.2	18.4	10.8	22.9	24.9	17.5	27.9	29.8	24.5	3.4	4.6	2.2
J. Fodder production	11.7	13.1	9.7	11.1	12.0	8.6	14.3	16.1	11.1	10.0	10.9	9.2

Table A9.5. Percentage of farmers by type of sustainable agricultural practice and sex of farmer [Endline Study, Ethiopia 2017]

	<i>Overall</i>			<i>CRS</i>			<i>FH</i>			<i>REST</i>		
	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female
K. Used the services of community animal health workers/paravets	35.9	38.9	31.5	8.5	9.0	7.4	40.7	45.4	32.2	40.8	46.1	35.3
L. Emergency feed reserve	52.4	55.3	48.3	21.5	22.4	19.2	53.7	58.9	44.3	61.1	66.5	55.4
M. Cut and carry system	63.6	66.5	59.4	45.6	46.9	42.2	58.5	62.4	51.5	73.0	79.0	66.7
N. Controlled grazing	27.7	29.3	25.4	3.6	3.8	2.9	28.1	31.0	22.8	34.9	39.0	30.7
O. improved bee keeping	3.1	3.6	2.4	1.0	1.3	0.0	2.2	2.9	1.0	4.4	5.2	3.5
Y. Did not use any of these practices in the past 12 months	9.3	6.0	14.0	13.1	12.7	14.1	8.8	4.4	16.7	8.4	4.5	12.5
Number of responding farmers	5,943	3,640	2,303	1,390	1,003	387	2,435	1,556	879	2,118	1,081	1,037
Natural resource management												
A. Management or protection of watersheds or water catchments	57.3	58.8	57.5	59.9	61.3	59.0	60.0	61.3	60.5	54.4	56.1	54.8
B. Agro-forestry	6.6	6.8	6.7	14.0	14.6	15.5	5.4	5.5	5.4	4.8	4.9	4.9
C. Management of forest plantation	45.9	47.1	46.5	27.1	27.6	27.8	48.0	49.3	47.9	51.0	52.4	51.3
D. Regeneration of natural landscapes	48.4	49.8	49.0	33.1	34.1	33.0	40.7	41.9	41.3	59.5	61.2	59.7
E. Sustainable harvesting of forest products	11.7	12.0	12.0	3.5	3.6	3.9	13.4	13.7	13.4	13.3	13.6	13.4
F. Rotational grazing or trans-humane system of livestock feeding	11.8	12.4	12.4	1.6	1.6	1.8	21.8	22.7	22.3	8.0	8.4	8.3
G. Hedge-row planting	25.4	26.1	25.6	17.0	17.3	16.7	25.6	26.4	25.8	28.3	29.1	28.2
H. Water resource management	18.7	19.4	19.3	7.5	7.8	7.4	23.3	24.2	23.6	19.3	19.9	19.7
Y. Did not use any of these practices in the past 12 months	25.7	23.9	25.4	32.1	30.7	33.4	26.1	24.6	25.8	23.0	21.0	22.6
Number of responding farmers	6,766	4,104	2,662	1,750	1,268	482	2,681	1,668	1,013	2,335	1,168	1,167

Table A9.6. Percentage of farmers by type of storage practice [Endline Sutdy, Ethiopia 2017]

	Overall			CRS			FH			REST		
	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female
Hermatic storage	8.4	9.9	6.0	23.9	25.4	19.2	9.0	9.6	7.9	2.3	2.2	2.4
Improved granary	1.5	1.5	1.5	0.5	0.6	0.3	1.4	1.6	1.2	2.0	1.9	2.0
Warehousing or cereal banks	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.3
Use of trap for mice	9.8	9.8	9.9	0.5	0.6	0.3	7.0	7.3	6.4	15.4	17.0	13.7
Grain bags with bio-pesticides	5.9	5.3	6.8	2.0	1.8	2.5	3.0	2.9	3.1	9.6	9.5	9.7
Diffused light storage	3.6	3.7	3.6	0.1	0.1	0.2	9.9	9.4	10.7	0.2	0.2	0.1
Didn't use any of the above methods	58.6	57.3	60.4	35.5	34.6	38.1	68.0	68.0	68.0	59.7	59.2	60.3
Number of responding farmers	6,452	4,017	2,435	1,679	1,251	428	2,576	1,623	953	2,197	1,143	1,054

Table A9.7. Household Sanitation and Drinking Water

Sanitation facility, source of drinking water and treatment for drinking water [Endline Study, Ethiopia 2017]

	<i>Overall</i>	<i>CRS</i>	<i>FH</i>	<i>REST</i>
Improved, not shared sanitation facility				
Flush to septic tank	0.0	...	0.1	...
Flush to pit latrine	0.2	0.9	...	...
Ventilated improved pit latrine	0.4	0.0	0.2	0.7
Pit latrine with slab	6.7	5.7	6.3	7.4
Composting toilet	0.0	0.1	...	0.1
Improved, shared sanitation facility				
Flush to piped sewer system	...	...	...	...
Flush to septic tank	...	...	...	...
Flush to pit latrine	0.1	1.8	0.1	0.1
Ventilated improved pit latrine	0.1	...	0.1	0.0
Pit latrine with slab	2.6	...	3.7	2.0
Composting toilet	0.0	...	0.0	...
Non-improved sanitation facility				
Flush to somewhere else	...	...	...	...
Flush to don't know where	...	...	...	...
Latrine Without Slab/Open Pit	36.1	43.4	45.0	24.8
Bucket toilet	0.0	...	...	0.0
Hanging toilet/latrine	0.0	0.2	...	...
No Facility/Bush/Field	53.7	47.5	44.4	64.8
Other	0.1	0.3	0.1	0.1
Improved source of drinking water				
Piped into home	0.1	...	...	0.2
Piped into yard/plot	0.3	0.5	0.1	0.3
Piped to neighbor	1.5	5.0	0.1	1.2
Piped to public tap/standpipe	20.8	28.9	22.9	15.3
Tubewell or borehole	29.1	8.2	23.4	43.6
Protected well	3.4	0.2	8.2	0.5
Protected spring	8.5	6.1	15.3	3.5
Rainwater	1.4	1.7	0.1	2.4
Bottled water	0.0	0.1	...	...
Non-improved source of drinking water				
Unprotected/dug well	1.8	0.2	1.1	3.1
Unprotected spring	24.8	41.3	17.9	23.6
Tanker truck	...	...	...	...
Cart with small tank	0.1	0.1	0.0	0.1
Surface water (river/dam/ lake/ponds/stream/canal/irrigation channel)	8.3	7.6	10.8	6.3
Other	0.1	0.1	0.2	...
Water availability				
Water is generally available year round (% yes)	70.7	68.1	71.9	70.8
Water is generally unavailable for a day or more during the last 2 weeks (% no)	87.3	80.2	92.5	85.7
Number of responding households	5,227	1,498	2,141	1,588

Table A9.8. Height and BMI levels of non-pregnant women 15-49 years of age [Endline Study, Ethiopia 2017]

	Overall	CRS	FH	REST
BMI				
Percent less than 145 cm	3.3	2.0	4.3	3.1
Mean Body Mass Index (BMI)	19.5	19.7	19.7	19.2
Normal (%)				
18.5-24.9 (total normal)	61.3	63.5	68.5	54.2
Underweight (%)				
<18.5 (total underweight)	36.1	32.2	29.4	43.5
17.0-18.4 (mildly underweight)	21.7	20.7	18.9	24.6
<17 (moderately and severely underweight)	14.4	11.5	10.5	18.9
Overweight/obese (%)				
≥25 (total overweight or obese)	2.6	4.3	2.0	2.3
25.0-29.9 (overweight)	2.3	4.0	1.8	1.9
≥30.0 (obese)	0.3	0.3	0.2	0.4
Number of non-pregnant women of reproductive age	4,494	1,253	1,785	1,456

Table A9.9. Percentage of food groups consumed by women 15-49 years of age [Endline Study, Ethiopia 2017]

	CRS		FH		REST
	Baseline	Endline	Baseline	Endline	Endline
	2012	2017	2012	2017	2017
Grains, roots and tubers	97.0	98.1	92.2	99.7	99.8
Legumes, beans, nuts and seeds ¹	34.9	32.1	61.1	88.0	65.2
Dairy products (milk, yogurt, cheese)	32.2	40.8	4.2	6.4	12.8
Eggs	6.8	5.4	1.7	6.9	13.9
Flesh foods, including organ meat and misc. small animal protein ¹	4.5	1.4	3.4	8.9	13.9
Vitamin A dark green leafy vegetables	16.0	10.2	5.8	0.9	22.3
Other Vitamin A rich vegetables and fruits	29.0	10.5	5.7	3.7	6.5
Other fruits and vegetables ²	30.2	49.7	3.4	20.8	62.9
Number of responding women 15-49 years	366	1,418	76	1,941	1,578

NOTE: The baseline report provided information on women's food consumption patterns in CRS and FH only, therefore baseline data is provided for those project areas only. Additionally, the baseline estimates are unweighted, but the endline estimates are weighted. The baseline report uses the nine food groups that comprise the women's dietary diversity score (WDDS) while the endline report used the 10 groups that comprise the indicator for minimum dietary diversity (MDD-W). The WDDS combines beans, legumes, nuts, and seeds in one category, while the MDD-W distinguishes between legumes and beans on one hand, and nuts and seeds on the other. (2) The MDD-W combines organ meat and flesh foods into one group, while the WDDS distinguishes between organ meat as one group and flesh foods as another. (3) The MDD-W treats other fruits and other vegetables as two separate categories, while the WDDS combines them into one food group.

¹ The baseline report combines beans, legumes, nuts, and seeds in one category, while the endline distinguishes between legumes and beans on one hand, and nuts and seeds on the other. To facilitate comparison the endline estimates for the percent of women consuming nuts and seeds and the endline estimate for the consumption of legumes and beans were summed together. The endline estimate for the consumption of legumes and beans was 29.1 percent in CRS, 87.4 percent in FH and 64.7 percent in REST. The endline estimate for the consumption of nuts and seeds was 3 percent in CRS, 0.6 percent in FH and 0.5 percent in REST.

² The baseline report provides the estimates for the consumption of flesh foods and organ meat separately. In order to facilitate comparison with the endline the baseline estimates for the two categories were summed.

³ The baseline report provides a combined average for the consumption of fruits and vegetables. The endline distinguishes between these two groups. To facilitate comparison, the endline estimate for other fruits and other vegetables are combined. At endline 44.6 percent of women in CRS consumed other fruits and 5.1 percent consumed other vegetables. In FH, 17.2 percent consumed other fruits and 3.6 percent consumed other vegetables at endline.

Table A9.10 Percentage of women 15-49 years who are married or in a union and using a contraceptive method by type of contraceptive method [Endline Study, Ethiopia 2017]

	Overall	CRS	FH	REST
Female sterilization	0.8	0.4	0.4	1.5
Male sterilization	0.0	0.0	0.0	0.0
Inter-uterine device	3.9	3.0	0.4	7.6
Injectables	76.0	70.7	85.2	69.1
Implants	15.0	14.2	11.7	18.6
Pill	2.3	4.6	1.2	2.6
Condom	0.0	0.0	0.0	0.0
Female condom	0.0	0.0	0.0	0.0
Emergency contraception	0.0	0.0	0.0	0.0
Standard days method	0.2	0.6	0.0	0.3
Lactational amen. Method	0.9	2.8	0.9	0.3
Rhythm	1.1	4.3	0.0	0.8
Withdrawal	0.1	0.0	0.0	0.3
Other modern methods	0.0	0.0	0.1	0.0
Other traditional methods	0.7	0.0	0.4	1.3
Number of women using any contraceptive method	1,069	251	497	321
Prevalence of women 15-49 years married or in a union using any contraceptive method	37.3	30.1	40.4	38.0
Number of women 15-49 years married or in a union				

Table A9.11. Components of MAD indicator for children 6-23 months by breastfeeding status [Endline Study, Ethiopia 2017]

	Overall	CRS	FH	REST
Breastfed children 6-8 months of age				
Percentage with minimum meal frequency (2 or more)	48.7	53.8	45.6	48.9
Percentage with minimum dietary diversity (4 or more)	2.6	6.5	0.0	2.9
Percentage consuming the following food groups:				
Grains, roots, and tubers	57.9	57.8	51.2	65.9
Legumes and nuts	23.3	8.8	36.8	17.3
Dairy products (milk, yogurt, cheese)	16.1	48.0	5.9	6.9
Flesh foods (meat, fish, poultry, and liver/organ meats)	2.0	1.2	1.7	2.9
Eggs	9.2	12.8	5.4	11.2
Vitamin A-rich fruits and vegetables	5.7	14.7	0.0	6.3
Other fruits and vegetables	3.9	3.9	4.3	3.4
Number of children	139	46	59	34
Breastfed children 9-23 months of age				
Percentage with minimum meal frequency (3 or more)	60.2	48.8	62.1	63.6
Percentage with minimum dietary diversity (4 or more)	13.8	10.1	11.3	17.5
Percentage consuming the following food groups:				
Grains, roots, and tubers	89.6	92.4	91.8	86.5
Legumes and nuts	54.9	17.3	75.9	54.5
Dairy products (milk, yogurt, cheese)	23.3	38.8	17.5	21.1
Flesh foods (meat, fish, poultry, and liver/organ meats)	6.1	0.0	6.1	8.9
Eggs	16.5	6.6	12.6	24.1
Vitamin A-rich fruits and vegetables	10.3	15.3	4.7	12.7
Other fruits and vegetables	22.1	22.6	12.2	29.8
Number of children	734	215	289	230
Non-breastfed children 6-23 months of age				
Percentage with minimum meal frequency (4 or more + 2 milk)	15.7	24.6	20.1	6.1
Percent with minimum dietary diversity (4 or more)	9.9	0.0	14.7	17.9
Percentage consuming the following food groups:				
Grains, roots, and tubers	91.7	100.0	93.2	83.5
Legumes and nuts	42.3	14.7	93.2	53.8
Dairy products (milk, yogurt, cheese)	32.5	52.5	26.9	15.2
Flesh foods (meat, fish, poultry, and liver/organ meats)	10.4	0.0	20.1	17.4
Eggs	17.1	9.0	56.4	13.5
Vitamin A-rich fruits and vegetables	3.7	8.7	0.0	0.0
Other fruits and vegetables	30.1	18.4	0.0	49.9
Number of children	67	39	9	19

NOTE: The results for these subgroup analyses are based on small sample sizes and may be unreliable.

Table A9.12. Breastfeeding status for children 0-23 months by age in months [Endline Study, Ethiopia 2017]

	<i>Overall</i>	<i>CRS</i>	<i>FH</i>	<i>REST</i>
	(%)	(%)	(%)	(%)
Not breastfeeding				
<2	0.9	0.0	2.4	0.0
2-3	0.0	0.0	0.0	0.0
4-5	1.2	0.0	0.0	2.6
6-8	1.5	4.6	0.9	0.0
9-11	0.3	1.3	0.0	0.0
12-17	5.0	8.4	1.1	5.8
18-23	13.6	28.3	5.6	13.4
Exclusively breastfed				
<2	90.5	84.8	96.2	88.5
2-3	82.9	72.4	92.5	80.2
4-5	54.5	32.1	73.1	48.4
6-8	14.9	9.0	21.8	10.7
9-11	0.4	0.0	0.9	0.0
12-17	0.3	1.2	0.0	0.0
18-23	0.9	1.1	1.9	0.0
Breastfed and plain water only				
<2	4.6	13.4	0.0	3.2
2-3	9.2	10.2	6.9	10.8
4-5	26.9	29.7	20.4	31.0
6-8	18.0	12.0	21.9	17.5
9-11	6.2	3.7	6.7	6.9
12-17	2.6	0.9	5.3	1.8
18-23	0.5	2.3	0.0	0.0
Breastfed and non-milk liquids				
<2	1.0	0.0	0.0	2.8
2-3	2.8	1.9	0.0	6.2
4-5	2.1	3.8	4.1	0.0
6-8	2.0	4.7	2.2	0.0
9-11	1.2	0.0	0.8	2.3
12-17	0.4	0.0	1.5	0.0
18-23	0.0	0.0	0.0	0.0
Breastfed and other milk				
<2	2.0	0.0	0.0	5.6
2-3	2.1	8.5	0.0	0.0
4-5	4.2	8.3	0.0	6.0
6-8	0.8	3.5	0.0	0.0
9-11	0.5	0.0	1.2	0.0
12-17	0.3	1.1	0.0	0.0
18-23	0.0	0.0	0.0	0.0

Table A9.12. Breastfeeding status for children 0-23 months by age in months [Endline Study, Ethiopia 2017]

	<i>Overall</i>	<i>CRS</i>	<i>FH</i>	<i>REST</i>
	(%)	(%)	(%)	(%)
Breastfed and complementary foods				
<2	1.0	1.9	1.4	0.0
2-3	3.0	7.0	0.6	2.8
4-5	11.0	26.0	2.4	12.0
6-8	62.8	66.2	53.1	71.8
9-11	91.5	94.9	90.4	90.8
12-17	91.4	88.4	92.1	92.4
18-23	85.1	68.3	92.5	86.6
Number of children 0-23 months				
<2	140	53	51	36
2-3	121	47	41	33
4-5	119	32	45	42
6-8	142	48	60	34
9-11	146	45	62	39
12-17	342	117	113	112
18-23	310	90	122	98

NOTE: The results for these subgroup analyses are based on small sample sizes and may be unreliable.

Breastfeeding status refers to a 24 hour period (yesterday during the day or night). Children who are categorized as breastfeeding and consuming water only consumed no liquid or solid supplements. The categories are mutually exclusive and their percentages sum to 100 percent of children 0-23 months. Children who received breastmilk and non-milk liquids but did not receive other milk or complimentary food are categorized in the non-milk category, though they may have received plain water. Non-milk liquids include juice, juice drinks, porridge, and other liquids such as glucose water or sugar water.

Table A9.13. Prevalence of diarrhea among children under two by household WASH status [Endline Study, Ethiopia 2017]

	Overall			CRS			FH			REST		
	Number of children	%	P -value	Number of children	%	P -value	Number of children	%	P -value	Number of children	%	P -value
Basic drinking water source			ns			ns			ns			ns
Household does not use a basic drinking water	800	22.4		324	19.3		266	29.7		210	18.9	
Household uses a basic drinking water source	520	22.6		108	17.1		228	23.5		184	23.5	
Correct use of recommended water treatment			***			*			*			*
Household does not use a correct water treatment practice	1,162	24.2		392	19.8		449	27.8		321	23.3	
Household uses a correct water treatment practice	158	11.2		40	8.6		45	13.9		73	10.9	
Improved sanitation facility			ns			ns			ns			ns
Household does not use an improved sanitation facility	1,227	23.1		401	19.6		453	27.1		373	21.5	
Household uses an improved sanitation facility	93	15.2		31	6.5		41	21.5		21	12.6	
Handwashing station with water and soap or another cleansing agent			ns			n/a			n/a			n/a
Household does not have a handwashing station with water and soap or another cleansing agent	1,307	22.7		429	18.9		484	27.2		394	21.0	
Household has a handwashing station with water and soap or another cleansing agent	13	0.0		3	n/a		10	n/a		0	n/a	
All households	1,320	22.5		432	18.7		494	26.7		394	21.0	

* p<0.05, ** p<0.01, ***0.001

N/A: Not applicable; results not reported due to small sample size (n<30).

NOTE: Chi squared tests were used to examine the statistical significance of the relationship between the prevalence of diarrhea and household WASH status.

Table A9.14. Self-earned cash decision-making among males and females married or in union who work and are usually paid in cash or a combination of cash and in-kind [Endline Study, Ethiopia 2017]

	Overall			CRS			FH			REST		
	Males	Females	P-value	Males	Females	P-value	Males	Females	P-value	Males	Females	P-value
Self-earned cash decisionmaking			***			*			**			***
Respondent alone	33.1	26.3		40.8	31.0		23.5	22.2		38.2	27.4	
Spouse alone	8.9	17.6		21.9	24.8		4.4	8.9		6.6	20.5	
Respondent with spouse	57.7	55.5		36.9	44.1		71.8	68.5		54.9	51.2	
Respondent with someone else	0.3	0.4		0.3	0.0		0.3	0.2		0.2	0.6	
Other	0.1	0.3		...	...		0	0.2		0.1	0.4	
Number of responding males/females	3,422	1,762		1,028	430		1,408	645		986	687	

† p<0.1, * p<0.05, ** p<0.01, ***0.001

NOTE: Includes all household members who are 15 years or older, have worked in the past 12 months and were usually paid in cash or a combination of cash and in-kind for this work during the 12-month period.

Chi squared tests were used to examine the statistical significance of the difference between male and females perceptions of self earned cash decisionmaking.

Table A9.15. Maternal health and nutrition decision-making among males and females married or in union with children under the age of two by sex of respondent [Baseline Study, Ethiopia 2017]

	Overall				CRS					FH				REST						
	Males		Females		P-value	Males		Females		P-value	Males		Females		P-value	Males		Females		
	Number	%	Number	%		Number	%	Number	%		Number	%	Number	%		Number	%	Number	%	Number
Maternal health and nutrition decision making					***					***					***					***
Respondent alone	246	23.9	659	56.6		98	27.9	197	50.5		79	21.3	236	52.8		69	24.0	226	63.0	
Spouse alone	481	45.3	199	15.9		175	51.8	111	28.8		152	38.0	49	13.2		154	48.4	39	11.4	
Respondent with spouse	320	30.5	315	27.2		70	20.3	80	20.7		171	40.2	149	33.7		79	27.3	86	25.1	
Respondent with someone else	0	0.0	1	0.1		...	...	...	...		0	0.0	1	0.3		1	0.3	2	0.5	
Other	2	0.3	2	0.2		...	...	...	...		1	0.5	0	0.0		...	...	...	...
Number of responding males/females	1,049	100.0	1,176	100.0		343	100.0	388	100.0		403	100	435	100.0		303	100.0	353	100.0	

† p<0.1, * p<0.05, ** p<0.01, ***0.001

NOTE: Chi squared tests were used to examine the statistical significance of the difference between male and females perceptions of maternal health and nutrition decision making.

Table A9.16. Child health and nutrition decision-making among males and females married or in union with children under the age of two by sex of respondent [Baseline Study, Ethiopia 2017]

	Overall				CRS					FH					REST					
	Males		Females		P-value	Males		Females		P-value	Males		Females		P-value	Males		Females		P-value
	Number	%	Number	%		Number	%	Number	(%)		Number	%	Number	%		Number	%	Number	(%)	
Child health and nutrition decision making					***					***					***					***
Respondent alone	141	13.2	685	59.4		67	18.6	213	54.6		38	10.0	227	51.8		36	13.1	245	68.1	
Spouse alone	562	54.0	136	10.5		198	58.6	86	22.1		185	47.9	30	8.6		179	57.1	20	6.1	
Respondent with spouse	345	32.7	347	29.3		78	22.8	89	23.3		180	42.1	172	38.1		87	29.6	86	25.2	
Respondent with someone else	0	0.0	4	0.3		...	...	...	...		0	0	4	1		...	...	...	...
Other	1	0.1	4	0.4		...	...	...	...		0	0	2	1		1	0.2	2	1.0	
Number of responding males/females	1,049	100.0	1,176	100.0		343	100.0	388	100.0		403	100.0	435	100.0		303	100.0	353	100.0	

† p<0.1, * p<0.05, ** p<0.01, ***0.001

NOTE: Chi squared tests were used to examine the statistical significance of the difference between males and females perceptions of child health and nutrition decision making.

ANNEX 10
Multivariate Analysis for Stunting

ANNEX

Methodology and Results of the Bivariate and Multivariate Analyses Of Moderate-to-Severe Stunting

Additional analyses were performed to assess the correlates of the prevalence of moderate-to-severe stunting among children under five in the three FY 2012 Food for Peace (FFP) development food assistance projects (DFAP) in Ethiopia: 1) the Ethiopian Livelihoods & Resilience Project (ELRP) in the Oromia Region and Dire Dawa Administrative Unit, implemented by CRS; 2) Targeted Response for Agriculture, Income and Nutrition (TRAIN) Project in the Amhara Region implemented by FH and its partners; and 3) Development Food Security Activity in the Tigray Region implemented by REST and its partners. Multivariate analyses controlling for key child and mother-level factors, socioeconomic characteristics, and household agriculture status and water, hygiene and sanitation practices as covariates was used to explore the factors that are associated with stunting to help inform learning on a key impact indicator that improved over the project lifetime.

Data Used in the Analysis

The data used in these analyses come from population-based household surveys (PBS) implemented at project baseline and endline (2017). The survey collected standard information on household and respondent characteristics; food security and poverty; agricultural practices; children's health and nutrition; and women's health and nutrition. The analyses is restricted to the most recent birth in the household to avoid intrahousehold correlation and to cases with nonmissing information on the dependent and explanatory variables. The final sample size for the analyses of children's stunting is 2,117 children under five (CRS, 709; FH, 797; and REST, 611).

Definitions of Variables

Dependent variables

The main outcome of interest is the prevalence of moderate-to-severe stunting. Stunting is an indicator of severe linear growth retardation and chronic undernutrition among children under age 5. Stunting reflects the effects of a systematic lack of adequate nutrition over a number of years and recurrent and chronic illness. It is, therefore, a measure of the long-term effects of malnutrition and does not vary significantly according to the season of data collection.

The survey collected anthropometric data (weight and height) for all children under five in the household. Recumbent length is measured for children under age 2 years; standing height is measured for all other children. Height-for-age z-scores based on the 2006 WHO Child Growth standards population are assigned to each child based on sex, age in days, and height in centimeters. Children whose height-for-age z-scores are less than -6 SD below the median or more $+6$ SD above the median are flagged and excluded from the computation of the prevalence of stunting. Children whose height was not measured or responses with missing height information are excluded from the numerator and denominator. Children whose day of month of birth is missing or unknown are assigned day 15. Children missing valid month and year of birth are excluded from the numerator and denominator. Cases with out-of-range or invalid z-scores are excluded from the numerator and denominator.

Explanatory variables

The analyses included a number of child, mother, household and project-related factors that can influence the prevalence of stunting. The selection of covariates is based on the projects' goals and availability of data collected at endline. The common goal across the three DFAPs is that food security will be enhanced

among targeted chronically food insecure households. If access to diverse and nutritious food by vulnerable households is increased and vulnerability to food security shocks is decreased and community resilience is increased; and the status of women is improved; then improvements in food security and nutrition among poor households should be achieved. Variables considered in the analyses of stunting included child's age, sex, and birth order; mother's characteristics; household sociodemographic characteristics; household food security status; household poverty status and economic wellbeing; household water and sanitation status; and household agriculture status.

The sex, age, and birth order of children can influence their likelihood of being stunted. In cultures where boys receive preferential treatment in food and health care, this may lead to higher percentages of stunting among females. Sex differentials in child malnutrition are more common in South East Asia and generally not observed in the African context. Because stunting is a measure of chronic or long-term malnutrition it may be higher among older children. Children's nutritional may be poorer among higher order births because of the distribution of household resources among other older children. Mothers' characteristics are important predictors of children's nutrition. Children born to older mothers may have lower birth weight. Mother's educational attainment impacts their knowledge of critical child health practices and health-seeking behavior. Illiterate mothers may be less likely to obtain and understand basic health information, and to access basic health services. Mother's participation in paid work results with income for the household, and assuming mothers have some participation in self-earned cash decision making this can translate into better health outcomes because mothers may choose to allocate greater resources to children's nutrition and health care.

Children's nutrition is closely related to and can be influenced by the sociodemographic characteristics of their households. The following household sociodemographic characteristics were included: age, sex and educational attainment of the household head, number of adult males, number of adult females, number of children 0-4, number of children 5-17. Households with working age males and male-headed households, compared to adult female only households or female-headed households, may be more likely to engage in income generating opportunities and may be more likely to access credit to purchase productivity-enhancing agricultural inputs and equipment, make investments in household water and sanitation infrastructure, and purchase food items that cannot be home grown, and this can indirectly open up pathways to better health outcomes for children. The size and composition of the household may also impact the food intake and health of children; children in larger families may be fed less or less often or both.

Household food security status can influence the prevalence of stunting because children living in food insecure households are likely to receive less food, eat less frequently, or both. Therefore the household dietary diversity score (HDDS) and whether or not the household experienced hunger are included in the analysis. Household socioeconomic status was captured using daily per capita consumption expenditures. Since daily per capita consumption expenditures is skewed it was transformed by taking its natural logarithm to avoid the influence of outliers on the outcome.

Households' water and sanitation status can influence nutritional status since the use of unhygienic practices can lead to diarrheal disease and loss of important minerals and vitamins and contribute to weight loss. The following variables were considered: use of a basic water service, correct water treatment, improved sanitation facility and a proper handwashing station.

The analyses also included a number of household agriculture status variables because several key activities promoted by the DFAPs, and undertaken by farmers in the household, aimed to increase household food security through increased food production, food availability, and economic resources. These variables included: farm size; use of credit; use sustainable crop practices; use sustainable livestock practices; use of improved storage methods; and use of a value chain activity. The underlying aim for the inclusion of such variables is to better understand their potential role in eliciting improvements in food security and children's nutritional status.

Region dummies are added to capture variations in agro-ecological zones and other unobserved regional factors. The models also include project dummies in order to capture the relationship between potential differences in program implementation and the outcomes. The DFAP activities were designed to align with and support the Government of Ethiopia Protective Safety Net Program (PSNP). The endline survey did not collect information on whether or not households were direct beneficiaries of the PSNP interventions, but households were asked about receipt of cash or food emergency assistance so this variable is included in the analysis.

Statistical Methods

The analyses used logistic regression models to analyze the correlates of the prevalence moderate-to-severe stunting. The analyses accounts for the two-stage stratified cluster sampling design. All analyses were conducted using STATA 14.

Results

Tables 10.1, 10.2 and 10.3 show the results of the bivariate analyses of the prevalence of hunger and the prevalence of underweight women, respectively. The results are presented for the combined sample and by project area. Generally, the associations between the covariates and the outcomes were similar across areas with a few exceptions described below.

Child's characteristics and the prevalence of stunting: As illustrated in table 10.1, the sex of the child was related to the prevalence of stunting only in FH; 46.9 percent of females were stunted compared to 53.7 percent of males. In all three project areas the age of the child was significantly related with the prevalence of stunting and followed a somewhat inverted U-shape. In FH the prevalence of stunting decreased with higher order births but in CRS and REST the association was statistically nonsignificant.

Mother's characteristics: Mother's marital status, age, educational attainment and whether she achieved an MDD-W were not related to the prevalence of stunting in any of the project areas (Table 10.1). In CRS the prevalence of stunting of children whose mothers' engaged in paid work (29.3 percent) was lower than that of children whose mothers did not work (36.1 percent) or whose mother's worked in-kind (40.6 percent).¹

Household sociodemographic characteristics: In all three project areas the prevalence of stunting was not related to the age of the household head. In FH the prevalence of stunting differed markedly by the sex of the household head – 30.5 percent of children in female-headed households were stunted compared to 52.5 percent of children in male-headed households. The prevalence of stunting increased with the number of adult males and number of adult females only in FH but was otherwise unrelated to the prevalence of stunting in CRS and REST. There was a positive association between number of children under five and the prevalence of stunting only in FH. The prevalence of stunting did not vary by the number of children 5 -17 in all of the DFAPs.

Household poverty status: There was no association between the prevalence of hunger and the daily per capita consumption expenditures except in REST (Table 10.2); children who were not stunted

¹ Work includes jobs in the formal and/or informal sector, full time, part time, or seasonal work that is done within and/or outside the home. It includes, but is not limited to agricultural daily wage labor, off-farm daily wage labor, income generation activities, sale of goods produced or processed outside the home or at the home, homestead garden or farm (e.g., vegetables, eggs, fish, livestock, artisanal goods), or petty trading. For this indicator, work does not include participating in cash for work, food for work, or conditional transfers and/or productive safety net programs. It does not include either caring for own children, cooking, cleaning or doing other routine chores for own household (e.g., fetching water, collecting firewood) or being involved in agricultural production solely for household consumption.

reside in households with higher average daily per capita consumption expenditures (\$1.19) compared to children who are stunted (\$1.04).

Household food security status: There was no association between the prevalence of hunger and the prevalence of stunting in any of the project areas. HDDS, an indicator of food security but also a proxy for socio economic status was associated with the prevalence of stunting only in REST (Table 10.3); children who were not stunted reside in households with a higher HDDS (5.93) compared to children who are stunted (5.52).

Household WASH status: Bivariate analyses explored the prevalence of stunting in relation to households' use of a basic water service, correct water treatment, improved sanitation facility and a proper handwashing station. The results indicated that the difference in the prevalence of stunting by households' WASH status was statistically nonsignificant across the three DFAPs (Table 10.1).

Household agriculture practices: In all three project areas the prevalence of stunting did not differ statistically between households that did not plant any crops, that planted crops but did not use at least three sustainable crop practices, and households that used three or more crop practices. Similarly, there was no difference in the prevalence of stunting for children among households that did not raise livestock, households that raised livestock but did not use at least three sustainable livestock practices, and those that used at least three sustainable livestock practices. The prevalence of stunting was also compared among households that planted crops and/or raised livestock with the intention of selling, households that did not use a value chain activity and households that used at least one value chain activity and no statistically significant difference was detected. Similarly, there was no statistical significance observed for the relationship of stunting with use of improved storage, use of credit, and farm size.

Receipt of cash and/or food assistance and savings: The prevalence of stunting did not differ statistically between households that relied on cash and/or food assistance as a source of income in the 12 months prior to the survey and those that did not. There was no difference in the prevalence of stunting between households that save regularly and those that do not.

Region and project: The prevalence of stunting differs statistically by region and project area. It is highest in Amahara (50.4 percent) followed by Tigray (43 percent) and lowest in Oromoi (34.3 percent) and Dire Diwa (35.5 percent). The prevalence of stunting is highest in FH (50.4 percent) followed by REST (43 percent) and lowest in CRS (34.5 percent).

Table 10.4 shows the results of the multivariate analysis of the prevalence of children's stunting. For the purposes of parsimony only variables that showed a statistical significant bivariate association were included. The baseline model (Model 1) controls for the project to illustrate any differences between DFAPs in the prevalence of children's stunting. Model 2 control for child and mother's characteristics, Model 3 controls for household sociodemographic and economic characteristics. The full model (Model 4) controls for region to account agro-ecological differences and unobserved differences by region factors. As shown in Model 4, after controlling for a number of child, mother, household, region and project factors, the odds of being stunted are about lower for children living in female-head-households compared to male-headed households (AOR = 0.47, CI = 0.237 – 0.931, $p < 0.05$). Net of other factors, children living in households whose head has a little as a primary education or some primary education are less likely to be stunted compared to children in households headed by someone who never attended any school (AOR= 0.8, 95% CI = 0.656 – 0.976, $p < 0.05$). As shown in Model 2, mother's participation in paid work is associated with lower odds of stunting compared to children whose mothers do not engage in an economic activities (AOR= 0.742, 95% CI = 0.587 – 0.939, $p < 0.05$). But

the effect of mother's paid work washes out when the model controls for the sociodemographic and economic characteristics of the household (Model 3). Regional differences in the prevalence of stunting that were observed in the bivariate analyses wash out in the full model (Model 4). Child's age remains a statistically significant correlate of stunting even after controlling for a host of mother, household, region and project variables. The odds of stunting of children who are two years old are about six times that of children under one (AOR = 6.487, 95% CI = 4.785 -8.796, $p < 0.001$). The odds of stunting of children who are 4 years old and just under five are about three times that of children under one (AOR = 3.173, 95% CI = 2.151-4.680, $p < 0.001$). After controlling for other factors, including region, the association between project and the prevalence of stunting is statistically significant. The odds of a child under five being stunted are twice as high in FH compared to CRS (AOR = 2.141, 95% CI = 1.555-2.948, $p < 0.001$). Children living in REST are more likely to be stunted than children in CRS (AOR = 1.556, 95% CI = 1.148-2.109, $p < 0.01$).

Post-estimation model specification and goodness of fit tests were conducted and the results did not indicate any model misspecification and indicated that the model fit the data.

Discussion and Conclusions

The objective of the multivariate analyses was to better understand the correlates of stunting in the DFAP implementation areas. The results of these additional analyses may help inform learning for future programming by identifying potential correlates that are associated with improvements in stunting, which may subsequently help shape future programming of project activities and/or beneficiary targeting on the basis of household demographic and socioeconomic factors.

The odds of stunting of children who are two years old are about six times that of children under one, underscoring the importance of the first 2 years (1000 day window) in determining the long-term nutritional trajectory of children. Mother's participation in paid work is no longer statistically significant after the model controls for household socioeconomic and demographic factors. The addition of HDDS and daily per capita consumption expenditures is likely to have washed out the income effect of mother's work on stunting. The finding that children living in female-headed households are less likely to be stunted suggests differences in decision making and resource allocation for households where women are the sole decision makers. The relationship between stunting and women's paid work and female-headed households suggest a need to continue to support women's engagement in cash-earning opportunities and support for enhancing women's participation in household decision making. The relationship between level of education of the household head and stunting underscores the importance of making investments in eradicating illiteracy and improving school enrolment, and for future programming to consider different approaches for effective behavior and social change communication that include oral messaging, for example. The results show a statistically significant effect of project even after the inclusion of region dummies which are intended to control for agro-ecological differences, as well as other unobserved regional factors that can impact food security and livelihood opportunities. However, the study is unable to assess the association of program design because of the pre-post design of data collection which does not allow statements to be made about attribution or causation relating to project impact.

Table A10.1. Percentage of children under five stunted by child characteristics, mother's characteristics, household sociodemographic characteristics, and household WASH and agriculture status [Endline Study, Ethiopia 2017]

	Overall			CRS		FH		REST		
	%	N	Chi2	%	N	%	N	%	N	
Child's characteristics										
Sex			Pr = 0.110			Pr = 0.892		Pr = 0.045		Pr = 0.499
Male	45.6	1,103		34.8	361		406	44.4	336	
Female	41.7	1,014		34.3	348		392	41.2	275	
Child's age (years)			Pr = 0.000			Pr = 0.000		Pr = 0.000		Pr = 0.000
0	21.6	568		14.3	206		220	16.9	142	
1	49.6	551		38.5	185		195	50.6	171	
2	59.1	471		50.1	162		171	58.1	138	
3	50.7	302		42.2	98		113	53.3	91	
4	42.6	225		35.8	58		99	32.2	69	
Birth order			Pr = 0.000			Pr = 0.245		Pr = 0.018		Pr = 0.139
1st	46.3	1,407		36.3	379		620	44.2	409	
2nd	39.9	646		33.4	286		173	41.6	187	
3rd	20.7	62		23.8	43		5	20.9	14	
4th	100	2		100	1		...	100	1	
Mother's characteristics										
Marital status			Pr = 0.869			Pr = 0.808		Pr = 0.196		Pr = 0.755
Married/Living Together	44.1	1,945		34.7	658		733	42.8	554	
Divorced/Separated	40.6	121		35.2	35		50	45.1	36	
Widowed	39.5	34		27	16		8	58.8	10	
Never Married/Lived Together	39	18					7	33.2	11	
Educational attainment			Pr = 0.305			Pr = 0.982		Pr = 0.282		Pr = 0.309
Never attended school	45	1,403		34.7	479		559	45.7	365	
Primary or less	40.7	637		34.1	219		211	38.9	207	
Secondary, vocational, or higher	45.6	78		35.1	11		28	38.1	39	
Age (years)			Pr = 0.704			Pr = 0.095		Pr = 0.704		Pr = 0.897
15-19	42.7	107		30.9	37		45	36.2	25	
20-24	41.2	357		37.7	130		119	39.7	108	
25-29	41.8	529		27.2	209		189	43.4	131	
30/34	44.9	578		38.5	202		211	45.7	165	
35-39	46.6	268		43.6	70		109	44.5	89	
40-49	46	279		32	61		125	42	93	
Work participation			Pr = 0.393			Pr = 0.049		Pr = 0.086		Pr = 0.162
Not working	46.4	594		36.1	266		224	43.9	104	
Paid work	42.5	1,005		29.3	281		355	45.3	369	
Unpaid work	43.3	519		40.6	162		219	35.8	138	
Minimum dietary diversity (MDD-W)			Pr = 0.037			Pr = 0.159		Pr = 0.192		Pr = 0.384
Mother does not achieve a MDD-W	44.4	1,984		35.2	662		774	43.5	548	
Mother achieves a MDD-W	34.4	134		24.8	47		24	37.7	63	
Household sociodemographic characteristics										
Household head age (years)			Pr = 0.125			Pr = 0.317		Pr = 0.295		Pr = 0.582
15-19	29.9	5		0	3		1	100	1	
20-29	40.4	375		31.2	164		130	43.5	81	
30-39	41.9	749		34	292		246	42.8	211	
40-49	44.4	613		35.3	170		268	39.7	175	
50+	49.4	376		43.4	80		153	46.5	143	

Table A10.1. Percentage of children under five stunted by child characteristics, mother's characteristics, household sociodemographic characteristics, and household WASH and agriculture status [Endline Study, Ethiopia 2017]

	Overall			CRS		FH		REST		Pr =
	%	N	Chi2	%	N	%	N	%	N	
Household head sex			Pr = 0.018			Pr = 0.264		Pr = 0.010		Pr = 0.599
Male	44.8	1,927		35.3	646		733	43.4	548	
Female	33.7	191		27.3	63		65	39.4	63	
Household head educational attainment			Pr = 0.035			Pr = 0.781		Pr = 0.768		Pr = 0.030
Never attended school	46.6	1,140		33.6	326		508	49.1	306	
Primary or less	40.3	851		35.7	337		247	37.2	267	
Secondary, vocational, or higher	40.1	127		33.3	46		43	33.4	38	
Number of working age males (15+ years)			Pr = 0.166			Pr = 0.329		Pr = 0.019		Pr = 0.597
No Adult males	35.5	124		31.6	37		43	40.1	44	
One adult male	43.9	1,681		33.8	588		650	44.1	443	
More than one adult male	46.4	313		41.3	84		105	39.9	124	
Number of adult females (15+ years)			Pr = 0.428			Pr = 0.036		Pr = 0.390		Pr = 0.730
No Adult females	24.3	10		0	3		5	50	2	
One adult female	43.6	1,783		33	611		685	42.6	487	
More than one adult female	45.3	325		45.8	95		108	44.2	122	
Number of children under five			Pr = 0.002			Pr = 0.522		Pr = 0.033		Pr = 0.302
One	46.2	1,401		35.9	376		617	44.3	408	
More than 2	38.8	716		33	333		180	40.5	203	
Number of children 5 -17 years			Pr = 0.491			Pr = 0.233		Pr = 0.743		Pr = 0.577
None	44	382		35.5	132		150	40.8	100	
1	44.9	387		34.7	114		162	46.6	111	
2	43.2	459		27.9	136		198	43.3	125	
3	40	448		32.7	136		186	37.2	126	
More than 3	46.7	442		40	191		102	46.4	149	
Household food security status										
HH experiencing moderate or severe food insecurity based on 12 months recall			Pr = 0.419			Pr = 0.514		Pr = 0.528		Pr = 0.687
0	46	244		34.6	57		91	47.7	96	
0.0083056	44.6	137		29.2	17		70	41.9	50	
0.0485599	43.8	207		37.3	36		99	37.9	72	
0.2640326	41	272		38.3	40		123	38.2	109	
0.6843159	46.5	320		37.3	61		146	46.7	113	
0.9502408	44	298		41.1	75		122	39.9	101	
0.9968399	41.5	184		35.8	99		51	45.2	34	
0.9996385	47.4	275		36.7	176		73	53.9	26	
0.9999726	33.6	181		25.5	148		23	44.9	10	
Household water, sanitation and hygiene status										
Access to basic water services			Pr = 0.497			Pr = 0.455		Pr = 0.614		Pr = 0.155
No	44.4	1,296		35.4	538		425	45.8	333	
Yes	42.8	822		32	171		373	39.4	278	
Use of correct water treatment technologies			Pr = 0.972			Pr = 0.765		Pr = 0.364		Pr = 0.800
No	43.7	1,869		34.7	640		721	43.3	508	
Yes	43.9	249		32.9	69		77	41.6	103	
Use of an improved sanitation facility			Pr = 0.597			Pr = 0.551		Pr = 0.994		Pr = 0.653
No	43.9	1,960		34.8	653		734	43.2	573	
Yes	41.5	158		31.1	56		64	39.6	38	

Table A10.1. Percentage of children under five stunted by child characteristics, mother's characteristics, household sociodemographic characteristics, and household WASH and agriculture status [Endline Study, Ethiopia 2017]

	Overall			CRS		FH		REST		Chi2	Pr
	%	N		%	N	%	N	%	N		
Has soap and water at a handwashing station			Pr = 0.520			Pr = 0.271		Pr = 0.118			Pr = 0.380
No	43.7	2,096		34.7	703		783		43.1	610	
Yes	50.5	22		14.2	6		15		0	1	
Household Agriculture Practices Status											
Household owns any livestock			Pr = 0.008			Pr = 0.435		Pr = 0.239			Pr = 0.032
No	30.2	105		29.8	49		35		19.7	21	
Yes	44.4	2,012		34.9	660		762		43.8	590	
Household owns shoats (sheep or goats)			Pr = 0.923			Pr = 0.160		Pr=0.794			Pr=0.595
No	43.6	832		30.6	223		311		43.8	298	
Yes	43.8	1,285		36.3	486		486		42.2	313	
Use of sustainable crop practices			Pr = 0.351			Pr = 0.110		Pr = 0.182			Pr = 0.543
Did not plant any crops	100	1		...	...		...		100	1	
Planted crops but did not use at least 3 sustainable crop practices	40.2	135		39.7	85		29		43.3	21	
Planted crops and used at least 3 sustainable crop practices	43.9	1,982		33.8	624		769		42.9	589	
Use of sustainable livestock practices			Pr = 0.027			Pr = 0.264		Pr = 0.344			Pr = 0.803
Did not raise any livestock	34	217		29.3	143		46		38.2	28	
Raised livestock but did not use at least 3 sustainable livestock practices	43.4	507		36.8	298		123		44.8	86	
Raised livestock and used at least 3 sustainable livestock practices	45.1	1,394		34.9	268		629		42.9	497	
Use of an improved storage practice			Pr = 0.242			Pr = 0.075		Pr = 0.382			Pr = 0.381
Did not store any crops	40.1	405		31	273		59		44.2	73	
Stored crops but did not use an improved method	43.7	1,070		32.3	232		471		40.9	367	
Stored crops and used an improved method	46.1	643		41.5	204		268		46.8	171	
Use of a value chain activity			Pr = 0.401			Pr = 0.247		Pr = 0.130			Pr = 0.612
Did not grow crops or raise livestock with the intention of selling	43	952		32.9	315		324		44.1	313	
Did not use at least one value chain activity	38.9	127		44.8	65		27		36.3	35	
Used at least one value chain activity	45.1	1,039		34	329		447		42.4	263	
Use of credit			Pr = 0.932			Pr = 0.234		Pr = 0.810			Pr = 0.370
No	43.7	1,674		35.4	623		550		43.8	501	
Yes	44	444		27.5	86		248		39.1	110	
Farm size (hectares)			Pr = 0.268			Pr = 0.202		Pr = 0.161			Pr = 0.268
Less than 0.5 hectares	38	140		38.3	345		104		38	140	
0.5 hectares to less than 1 hectare	43.2	283		30.7	254		305		43.2	283	
1 hectare and above	46.3	188		31.1	110		389		46.3	188	
Household resilience-related factors											
Household relied on food and/or cash assistance (12 months)			Pr=0.905			Pr = 0.733		Pr = 0.476			Pr = 0.942
No	43.8	1,307		34.9	524		477		43.2	306	
Yes	43.5	810		33.5	185		320		42.8	305	
Do you or any other household member regularly save cash?			Pr = 0.657			Pr = 0.194		Pr = 0.794			Pr = 0.249
No	44.4	778		28.1	100		466		39.5	212	
Yes	43.3	1,339		35.7	609		331		44.8	399	
Region and Project variables											
Region			Pr = 0.000			Pr = 0.819					
Amhara	50.4	798		n/a	n/a		798		n/a	n/a	
Dire Dawa	35.5	147		35.5	147		n/a		n/a	n/a	
Oromia	34.3	562		34.3	562		n/a		n/a	n/a	

Table A10.1. Percentage of children under five stunted by child characteristics, mother's characteristics, household sociodemographic characteristics, and household WASH and agriculture status [Endline Study, Ethiopia 2017]

	<i>Overall</i>			<i>CRS</i>		<i>FH</i>		<i>REST</i>	
	%	N	Chi2	%	N	%	N	%	N
Tigray	43	611	Pr = 0.000	n/a	n/a	n/a	n/a	43	611
Project									
CRS	34.5	709		n/a	n/a	n/a	n/a	n/a	n/a
FH	50.4	798		n/a	n/a	n/a	n/a	n/a	n/a
REST	43	611	n/a	n/a	n/a	n/a	n/a	n/a	
Total	43.7	2,117		34.5	709	50.4	797	43	611

Table A10.2. Relationship between prevalence of stunting and average daily per capita consumption expenditures
[Endline Study, Ethiopia, 2017]

	Overall		Pr=0.0037	CRS		Pr=0.2868	FH		Pr=0.9099	REST		Pr=0.0012
	Not stunted	Stunted		Not stunted	Stunted		Not stunted	Stunted		Not stunted	Stunted	
Average daily per capita consumption expenditures (constant 2010 USD)	\$1.21	\$1.12		\$1.33	\$1.28		\$1.13	\$1.13		\$1.19	\$1.04	

Table A10.3. Relationship between the prevalence of stunting and average household dietary diversity score (HDDS)
 [Endline Study, Ethiopia 2017]

	Overall			CRS			FH			REST		
	Not stunted	Stunted	Pr	Not stunted	Stunted	Pr	Not stunted	Stunted	Pr	Not stunted	Stunted	Pr
HDDS	5.19	4.94	Pr=0.0025	4.89	4.71	Pr=0.1986	4.47	4.46	Pr=0.9568	5.93	5.52	Pr=0.0037

Table A10.4. Results of logistic regression of the prevalence of moderate-to-severe stunting [Endline Study, Ethiopia 2017]

	Model 1		Model 2		Model 3		Model 4	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Project (ref.: CRS)								
FH	1.925***	1.481 - 2.501	2.232***	1.657 - 3.007	2.068***	1.537 - 2.782	2.141***	1.555 - 2.948
REST	1.429**	1.108 - 1.843	1.484**	1.133 - 1.945	1.503**	1.138 - 1.985	1.556**	1.148 - 2.109
Child's sex (ref.:male)								
Female			0.836+	0.683 - 1.023	0.837+	0.683 - 1.027	0.835+	0.680 - 1.024
Child's age in years (ref. less than 1)								
1			4.003***	3.108 - 5.156	4.111***	3.172 - 5.328	4.116***	3.177 - 5.333
2			6.181***	4.576 - 8.350	6.486***	4.785 - 8.791	6.487***	4.785 - 8.796
3			4.505***	3.136 - 6.471	4.553***	3.151 - 6.578	4.538***	3.144 - 6.551
4			3.070***	2.091 - 4.506	3.172***	2.150 - 4.679	3.173***	2.151 - 4.680
Child's birth order (ref.: 1st born)								
2nd			1.239	0.941 - 1.630	1.187	0.906 - 1.555	1.186	0.905 - 1.554
3rd			0.860	0.414 - 1.788	0.842	0.403 - 1.758	0.840	0.403 - 1.752
4th			-	-	-	-	-	-
Mother's work participation (ref.: not currently working)								
Paid work			0.742*	0.587 - 0.939	0.817+	0.642 - 1.039	0.813+	0.640 - 1.034
Unpaid work			0.759+	0.573 - 1.006	0.774+	0.576 - 1.042	0.763+	0.565 - 1.031
Household head sex (ref. male)								
Female					0.469*	0.237 - 0.929	0.470*	0.237 - 0.931
Household head educational attainment (ref. never attended school)								
Primary or less					0.797*	0.653 - 0.972	0.800*	0.656 - 0.976
Secondary, vocational/technical or higher					0.763	0.476 - 1.224	0.766	0.477 - 1.231
Number of adult males (ref. none)								
One adult male					0.877	0.389 - 1.978	0.875	0.387 - 1.977
Two or more adult males					0.968	0.438 - 2.138	0.968	0.438 - 2.141
Average household dietary diversity score					0.939	0.865 - 1.019	0.939	0.865 - 1.019
Natural logarithm of daily per capita consumption expenditures in constant 2010 USD					0.888	0.705 - 1.119	0.884	0.700 - 1.115
Region (ref. Amhara)								
Dire Dawa							1.178	0.766 - 1.811
Oromia							-	-
Tigray							-	-
	0.528***	0.436 - 0.639	0.196***	0.134 - 0.286	0.344*	0.130 - 0.910	0.336*	0.126 - 0.891
Constant								
N	2,117		2,115		2,115		2,115	