

End line Survey Report

Meeting Basic Needs livelihood, Enhancing Access to WASH and Improving Reproductive Health Services in Yemen, 2018-2020.

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ACRONYMS

ANC	Ante Natal Care
CFW	Cash for Work
CHW	Community Health Workers
CSI	Coping Strategy Index
CTP	Cash Transfer Programming
FCS	Food Consumption Score
FO	Field Office
HH	Household
GAC	Global Affairs Canada
GBV	Gender-based Violence
HF	Health Facilities
HHS	Household Hunger Scale
HNO	Humanitarian Needs Overview
HPV	Hygiene Promotion Volunteers
IDP	Internally Displaced People
LCSI	Livelihoods Coping Strategy Index
MEAL	Monitoring, Evaluation, Accountability, and Learning
PNC	Post Natal Care
RH	Reproductive Health
SRHR	Sexual and Reproductive Health and Rights
TBA	Traditional Birth Attendant
TYF	Tamdeen Youth Foundation
VSLA	Village Saving and Loan Association
WASH	Water, Sanitation, and Hygiene
WMC	Water Management Committees

EXECUTIVE SUMMARY

CARE Yemen has been implementing the “Meeting basic needs livelihood, Enhancing Access to WASH and Improving Reproductive Health Services in Yemen” project from 01 April 2018 to 31 March 2020. The project aimed to address the WASH, Health and food security needs of the most vulnerable and conflict affected communities living in the targeted areas. The key results of the project were: (1) increased capacity for vulnerable and conflict affected households, especially women, to meet livelihoods and basic needs; (2) improved access to safe water, sanitation and hygiene services for vulnerable households in conflict affected areas; (3) increased equitable access to Sexual Reproductive Health and Right (SRHR) services for targeted communities.

With the objective of comparing the result of the key performance indicator of the project with the established benchmark information during the baseline period, an end-line survey was conducted in March 2020 in the project operational districts. A quantitative methodology (i.e. household survey) was utilized to collect pertinent data. The following are the key survey outcomes:

FOOD CONSUMPTION SCORE: The average FCS for the surveyed households is 43.64. The survey results further indicated that 66.3% of HHs are in acceptable food consumption whereas 26.2% and 7.5% of HHs respectively are in borderline and poor food consumption.

REDUCED COPING STRATEGY INDEX (rCSI): The rCSI score for the surveyed households is 12.75.

HOUSEHOLD HUNGER SCALE: 92.5% of HHs faced little or no hunger; 7.5% of HHs faced moderate hunger; and 0% of HHs faced severe hunger.

PRIMARY SOURCE OF WATER: 64.5% of respondents replied that their primary source of water is piped system at homes whereas 22.4% of them are getting water from protected boreholes, Piped System in public fountain is the primary source of water for 7% of interviewees and 6.1% of survey participants use unprotected water harvesting pools. Overall, the endline survey result indicated that 93.9% of interviewees primarily rely on protected water sources.

ACCESS TO WATER SOURCES: 14.6% and 6.1% of interviewees respectively replied that it takes ‘1-2 hours’ and ‘more than 2 hours’ to fetch water from the nearest water source whereas 8.2% of them stated that it takes 30 to 60 minutes to fetch water. 6.4% of respondents reiterated that it takes less than 30 minutes to fetch water from the nearest water source, 64.5% of respondents (Female: 54.3%, Male: 71.2%) replied that their water source is piped systems at the house so that they do not travel anywhere to fetch water.

WATER TREATMENT: 74.3% of interviewees indicated that they use Chlorine/other chemical reagents to treat drinking water whereas 1.9% practice boiling to treat water before drinking. 23.8% of survey participants reiterated that they did not practice any water treatment technique.

SANITARY PRACTICES: 82.2% of survey participants indicated that they use family toilets for defecation whereas 9.4% of them mentioned that they use public toilets. The remaining 8.4% of them practice open defecation.

PRACTICE OF HAND WASHING: 45.8% of interviewees know three or more critical moments; 44.4% of them know two critical moments; and 9.8% of respondents know only one critical moment of handwashing.

SOLID WASTE DISPOSAL: 63.8% of respondents practice burning; 1.4% use community pits; and 1.9% use individual pits to dispose solid wastes. 32.4% of survey participants disposed solid wastes in open areas. This implies that 67.6% of interviewees practice proper solid waste disposal.

ACCESS TO THE NEAREST HEALTH FACILITIES: 42.3% and 32.2% of respondents reported that it takes 'less than 30 minutes' and '30-60 minutes' to reach the nearest health facilities whereas 9.6% of them stated that it takes one-two hours. The remaining 15.9% of survey participants reiterated that it takes more than two hours to reach the nearest HF.

VISIT HEALTH FACILITIES FOR REPRODUCTIVE HEALTH SERVICES: 50% of the interviewees mentioned to visit the HFs during the previous one month preceding the survey to get RH services such as Ante-Natal Care (ANC), Post Natal Care (PNC), and Family Planning (FP) services.

PLACE OF DELIVERY: The majority of respondents (77.9%) delivered their last child at home and only 22.1% delivered at HFs.

ASSISTANCE DURING DELIVERY: 28.3% and 22% of respondents respectively indicated that they were assisted by 'trained Traditional Birth Assistants (TBAs)' and 'trained health personnel from HFs'. 27% of them mentioned that they were supported by family members; 20.8% were assisted by neighbors; and 1.9% were assisted by untrained TBAs. This shows 50.3% of births were attended by trained personnel.

ANTENATAL CARE SERVICES: The majority of respondents (68.3%) stated that they visited health facility for ANC services while 31.7% of respondents stated that they didn't visit HFs for ANC. Out of the 68.3% of respondents who visited the HFs for ANC, 56.3% of them visited the HFs three or more times for ANC services

POST NATAL CARE SERVICES: 48.8% of respondents visited HFs for Post-Natal Care (PNC) services and 51.2% of them didn't visit the HFs for the same purpose.

1. INTRODUCTION

The humanitarian crisis in Yemen remains the worst in the world. Nearly five years of conflict and severe economic decline are driving the country to the brink of famine and exacerbating needs in all sectors. According to the 2019 Yemen Humanitarian Needs Overview (HNO), an estimated 80 per cent of the population – 24 million people – require some form of humanitarian or protection assistance, including 14.3 million who are in acute need. An estimated 20.1 million are food insecure and 9.9M are severely food insecure and at risk of starvation, 17.8 million lack access to safe water and sanitation including 12.6 million are in acute need, approximately 19.7 million people need health assistance – an increase of 3.1 million people comparing with last year, around 6.7 million people require assistance to meet needs related to shelter, NFIs or camp coordination and camp management¹. In addition, an estimated 7.4 million people require services to treat or prevent malnutrition, including 4.4 million who are in acute need. Severity of needs is deepening, with the number of people in acute need a staggering 27 per cent higher than last year².

CARE has developed a comprehensive package of activities to meet the immediate needs of vulnerable households, promote recovery of livelihoods, and improve access to safe water, sanitation, hygiene and reproductive health services in the districts of Ash Shamayatayn, Al Ma'afer and Sama in Taiz governorates. Through this project, CARE targeted 9,411 households (65,877 individuals: 13,587 men, 17,175 women, 17,019 boys, and 18,096 girls). This project was a third iteration of funding from Global Affairs Canada (GAC) and it was built on key lessons learned and successes of the previous GAC supported projects, which have been vital in restoring and improving access to WASH and basic items to conflict affected communities in Taiz through restoration of water schemes, construction of latrines, provision of filters, hygiene and dignity kits. Although there have been challenges to accessing vulnerable populations inside Taiz, CARE efforts to increase strategic engagement with local authorities has helped secure clearance and access to program areas. CARE also expanded its work with local partner organization which Tamdeen Youth Foundation (TYF) and enabled closer ties to the target communities. This project had three pillars: Livelihoods, WASH, and SRHR.

LIVELIHOODS Through Cash Transfer Programming (CTP), the project provided immediate assistance to vulnerable households and restore community assets damaged in the crisis. The CTP also aimed at preventing households from resorting to negative coping mechanisms, including buying cheaper, less nutritious food, limiting portion sizes, reducing the number of meals, or taking monitory money. In conjunction with the CTP, the project encouraged beneficiaries to save parts of their cash transfer and establish Village Saving and Loan Association (VSLA) to assist communities with group savings and loan facilities.

WATER AND SANITATION: CARE has been implementing comprehensive WASH interventions that aim at increasing access to safe drinking water, increasing access to sanitation facilities as well as improving hygiene knowledge, attitudes and practices of targeted vulnerable people. Strategic water supply schemes were rehabilitated – through both CFW schemes and contractors - to ensure there is increased access to safe water. The project established gender-sensitive Water Management Committee (WMC) at village level and trained members of the WMC in operation and management of the water schemes as a way to ensure sustainability after the project period.

The project also supported vulnerable and marginalized communities to ensure improved access to sanitation facilities and services through construction of family latrines in those areas where

¹ 2019 Yemen Humanitarian Needs Overview

² Ibid

people are practicing open defecation. The family latrines were built using locally available materials and through CFW to ensure community participation and ownership as well as improving construction skills of local community members. In addition, CARE partnered with Tamdeen Youth Foundation to conduct the hygiene awareness campaigns at the community level and solid waste management in public spaces. Accordingly, series of hygiene/sanitation promotion sessions were conducted through training and mobilization of gender sensitive Hygiene Promotion Volunteers (HPVs). Furthermore, the project distributed hygiene kits to targeted vulnerable households, aligned with existing national WASH cluster guidelines.

SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS IN EMERGENCIES: CARE has been working to strengthen the capacity of communities, health facilities, and hospitals to deliver positive health outcomes for women and girls. The project has been striving to expand its work with Traditional Birth Attendants (TBAs) and Community Health Workers (CHWs) to improve their knowledge and skills to undertake safe home deliveries, and raise awareness of the issue in their communities. Clean delivery kits were provided to birth attendants, health workers and pregnant women. CHWs and TBAs were trained and been undertaking awareness activities on safe home deliveries. Health Facilities (HFs) were provided with key supplies and train skilled attendants to manage normal births and any obstetric and newborn complication. Peer groups were established to conduct education and counseling, and broader awareness raising and outreach to their communities on sexual and reproductive health.

2. OBJECTIVES OF THE SURVEY

The objective of the end line survey was to compare the result of the key performance indicator of the project with the established benchmark information during the baseline period. The specific objectives of the survey included assessing the food security status of the community, identifying the various coping mechanisms employed by the local communities, examining the knowledge and practices of hygiene and nutrition in the area, and measuring reproductive health services, knowledge and practice in crisis contexts. This endline survey focused on the following key outcomes indicators of the project:

- Average Livelihoods Coping Strategy Index Score
- % of VSLA members who are active users of financial services
- % of VSLA members who are able to engage in small business enterprise
- % of households who have access to safe water for drinking and domestic consumption from protected sources
- % of households that practice open defecation
- % respondents interviewed who know at least three of the five critical times to wash hands
- % households with access to reproductive health services
- % of pregnant women who access health facilities at least three times for ante-natal care
- Proportion of births in target communities attended by skilled health personnel

This survey also aimed to deeply understand the living condition of the surveyed communities during this crisis through collecting pertinent and timely information on various thematic areas include food security, livelihood, WASH and reproductive health.

3. METHODOLOGIES AND SURVEY SITES

3.1 STUDY METHODOLOGY

This survey utilized a quantitative methodology (i.e. household survey) and the questionnaires was geared towards collecting pertinent data on the above-mentioned outcome indicators.

3.2 SAMPLING METHODOLOGY

The survey followed a random sampling of villages within the three operational districts to ensure that the sample adequately reflected the diversity of villages. Simple random sampling used to select households for interview and households were randomly selected using the list of households from the village administration as a sampling frame. Sample size of households was determined based on the sampling approach followed during the baseline survey to ensure consistency and comparability. Accordingly, a total of 214 households were interviewed in Sama, Ash Shamayatyn & Al Ma'afer districts. The sample size in each district will be determined by the proportion of beneficiary population in the targeted districts. Either the head of the HH is interviewed or the spouse and every effort that is made to preserve an appropriate gender ratio.

3.3 DATA COLLECTION AND ENTRY

The survey was conducted in March 2020 and the MEAL Officer in Taizz Field Office was responsible to coordinate the survey. Enumerators were recruited by the Field Office (FO) based on the criteria that ensured their competence and limit bias to the extent possible, Gender balance was taken into consideration so as to reach significant proportion of female respondents. Enumerators' training was led by the M&E Officer. MS-Excel was used in the quantitative analysis, including for designing the data entry format, entering raw data, and analyzing the quantitative results.

4. RESULTS OF THE SURVEY

4.1 DEMOGRAPHIC CHARACTERISTICS

- Sex of respondents: 62.1 % of respondents were males and females constituted 37.9% of the respondents. Female headed households (HHs) comprised 24.3% of respondents.
- Household status: Host communities constituted 96% of the respondents and 4% of interviewees were Internally Displaced people (IDPs).
- Average age of respondents: The average age of interviewees was 41.6.
- Average HH size: The average HH size of interviewees was 7.
- HHs with children under the age of 5: 68.2% of survey participants indicated that they have children less than 5 years of age.
- HHs that separated/unaccompanied children: 2.8% of respondents mentioned that they hosted separated/unaccompanied children in the HH.

4.2 FOOD SECURITY AND LIVELIHOODS

4.2.1 PRIMARY SOURCE OF FOOD

The primary source of food for 49.1% of respondents (female: 35.8%, male: 57.1%) are local markets whereas 29.1% of interviewees (female: 24%, male: 44.4%) rely on humanitarian assistance. Furthermore, own production is the primary source of food for 16.2% of survey participants (female: 16%, male: 16.2%). As indicated in the table below, 2.3% and 3.3% of respondents respectively depend on 'gift/donation' and 'borrowing'.

Table 1: Main Sources of Food

Main Source of Food	Value	
	Baseline	End line
Own production	2.1%	16.2%
Markets	63.5%	49.1%
Gift/donation	0.6%	2.3%
Borrowing	2.7%	3.3%
Begging	0.3%	0.00%
Humanitarian Assistance	22%	29.1%
Others	8.8%	

4.2.2 NUMBER OF MEALS EATEN

Survey participants were asked to indicate the number of meals eaten per day before the crisis and now. As indicated in Table 2, adults and children respectively eat 3 and 3.2 meals daily whereas they respectively used to eat 3.1. and 3.4 meals daily before the crisis. There is no different in terms of gender regarding the number of meals eaten daily.

Table 2: Number of meals eaten

Cat.	No. of Meals Eaten Yesterday		No. of Meals Eaten Before Crisis	
	Baseline	End line	Baseline	End line
Adult	3.13	3.0	3.30	3.1
Children	2.94	3.2	3.04	3.4

4.2.3 FOOD CONSUMPTION SCORE

The Food Consumption Score (FCS) of a proxy food security indicator and is calculated by multiplying the frequency of foods consumed in the last seven days with the weighting of each food group. The weighting of food groups has been determined by WFP according to the nutrition density of the food group. Nutrition density is defined as the ratio of nutrient content (in grams) to the total energy content (in kilocalories). The sum of the scores is then used to determine the FCS. The maximum FCS has a value of 112 which would be achieved if a household ate each food group every day during the last 7 days

Table 3: Food Consumption Score

Food groups	Base line	End line		
	Score	Weight	Average.	Score
Main staples	13.08	2	6.81	13.62
Pulses	2.40	3	2.13	6.39
Vegetables	0.43	1	1.96	1.96
Fruits	0.11	1	0.57	0.57
Meat and fish	1.41	4	0.99	3.96
Milk	5.29	4	2.75	11
Sugar	2.34	0.5	5.76	2.88
Oil	2.31	0.5	6.52	3.26
Condiments	0.00	0	6.68	0
Average Food Consumption Score	27.38			43.64

As indicated in Table 3, the average FCS of interviewed HHs was 43.64 (female: 41.4, male:44.92) and this implies a significant improvement comparing to the baseline value of 27.38. Meanwhile, the total food consumption scores are compared to pre-established thresholds: poor food consumption: 0 to 21; borderline food consumption: 21.5 to 35; and acceptable food consumption: > 35.

Table 3: Food Consumption Score

Threshold	Profiles	Baseline	End line
0 – 21	Poor Food Consumption	44.2%	7.5%
21.5 - 35	Borderline Food Consumption	31.7%	26.2%
>35	Acceptable Food Consumption	24.1%	66.3%

Accordingly, 66.3% of HHs (female 61.7%, male: 69.2%) are in acceptable food consumption whereas 26.2% (female:32.1%, male:22.5%) and 7.5% (female: 6.2%, male: 8.3%) of HHs respectively are in borderline and poor food consumption. This also shows a significant change comparing to the baseline value where only 25.1% of HHs were in acceptable food consumption.

4.2.4 COPING STRATEGY INDEX

This tool measures food insecurity at household's level through assessing the mechanisms that a household has utilized during the previous 7 days preceding the survey when it cannot access to enough food. Accordingly, this survey takes into account five common strategies to measure the coping strategy of households in the survey area. These strategies are relying on less preferred and less expensive food; borrow food, or rely on help from friends or relatives; limit portion size at meals; restrict consumption by adults in order for small children to eat; and reduce number of meals eaten in a day.

Table 4: Reduced Coping Strategy Index Score

Strategy	Baseline value	Frequency	Weight	End line value
Rely on less preferred and less expensive food	6.07	6.14	1	6.14
Borrow food, or rely on help from friends or relatives	5.32	1.71	2	3.42
Limit portion size at meals	2.23	0.90	1	0.90
Restrict consumption by adults in order for small children to eat	5.00	0.55	3	1.65
Reduce number of meals eaten in a day	1.44	0.64	1	0.64
TOTAL	20.06			12.75

The result of the survey depicted that 99.1% of them relied on less preferred and less expensive food; 76.6% borrowed food or relied on help from friends/relatives; 29% limited portion/size of meals; 19.2% restricted consumption by adults in order for small children to eat; and 22.4% reduced number of meals eaten in a day. As indicated in Table 4, the reduced CSI score of surveyed HHs is 12.75 (female: 12.1, male: 13.1), which is a great improvement comparing to the baseline value of 20.06.

4.2.5 HOUSEHOLD HUNGER SCALE

This survey also utilized to a Household Hunger Scale (HHS), which is also a proxy tool that used to assess household food availability at HH level. The following thresholds of HHS are used to categorize households into three hunger groups – None or light, Moderate and Severe: 0-1 score: None or light hunger, 2-3 scores: Moderate hunger, 4-6 scores: Severe hunger.

According to the result of the endline survey, 40 (18.7%) of respondents mentioned that there was no food to eat in their household in the past 4 weeks because of lack of resources to get food. Out of these 40 respondents, 87.5% of them replied that this happened rarely (once or twice in the past four weeks), 12.5% of them replied that this happened sometimes (three to ten times in the past four weeks). Meanwhile, 32 (15%) of the respondents mentioned that a household member had to go to sleep at night hungry in the past 4 weeks because there was not enough food. Out of these 32 respondents, 90.6% of them replied that this happened rarely and 9.4% of them replied that this happened sometimes. Furthermore, 4 (1.9%) of the respondents mentioned that a household member had to go a whole day and night without eating anything in the past 4 weeks because there was not enough food. All of these 4 respondents (100%) replied that this happened rarely.

Further analysis of household data indicated the various threshold of interviewed households in the different level of food security. Accordingly, as indicated in Table 5, 92.5% of HHs (female: 95%, male: 91%) faced little or no hunger; 7.5% of HHs (female: 5%, male: 9%) faced moderate hunger; and 0% of HHs faced severe hunger. Comparing to the result of baseline survey where 3% of respondents face severe hunger and 77.2% faced little or no hunger, there is a significant improvement.

Table 5: House Hunger Scale Threshold and result

Thresholds of HHS	HHs Hunger Categories	HHs Baseline Score	HHs End line Score
0-1	None or light hunger	77.2%	92.5%
2-3	Moderate hunger	19.8%	7.5%
4-6	Severe hunger	3%	0%
Total		100%	100%

4.2.6 LIVELIHOODS COPING STRATEGY INDEX SCORE

The Livelihood Coping Strategy Index (LCSI) measures reliance on livelihood-based coping mechanisms to cope with lack of food through assessing the mechanisms that a HH has utilized during the previous 30 days (preceding the survey) when it cannot access to enough food. This survey takes into account 11 common strategies to measure the livelihood coping strategy of households in the survey area.

The result of the endline survey depicted that 2.8% of respondents sold household assets/goods (radio, furniture, refrigerator, television, jewelry, clothes etc.); 34.4% purchased food on credit; 11.8% spent savings; 20.4% borrowed money; 1.9% sold productive assets or means of transport (sewing machine, wheelbarrow, bicycle, car, etc.); 1.3% withdrew children from school; 0.3% sold house or land; 4.8% consumed seed stocks that were to be held/saved for the next season; 0.40% begged; 4.2% sold last female animals; and 17.6% reduced health (including drugs) and education expenditures.

Table 6: Livelihoods Coping Strategy Index

Livelihood coping strategy	Baseline	Endline		
	Value	Freq	Weight	Value
Sold household assets/goods (radio, furniture, refrigerator, television, jewelry, clothes etc.)	0.26	0.20	1	0.20
Purchased food on credit	2.69	2.43	1	2.43
Spent savings	0.55	0.83	1	0.83
Borrowed money	1.77	1.44	1	1.44
Sold productive assets or means of transport (sewing machine, wheelbarrow, bicycle, car, etc	0.48	0.14	3	0.41
Withdrew children from school	0.55	0.09	2	0.19
Sold house or land	1.08	0.02	4	0.09
Consumed seed stocks that were to be held/saved for the next season	0.16	0.34	3	1.01
Begged	0.26	0.03	3	0.08
Sold last female animals	3.27	0.29	4	1.18
Reduced health (including drugs) and education expenditures	1.70	1.24	2	2.49
TOTAL SCORE	12.77			10.35

As indicated in Table 6, the LCSl score of surveyed households is 10.35 (female: 9.35, male: 10.67) and this shows an improvement comparing to the baseline survey value.

4.2.7 SOURCE OF INCOME

Survey participants were asked to mention their primary source of income. The result of the endline survey indicated that daily labor (casual work) is the primary source of 63.3% of respondents whereas 18.4% and 4.8% of interviewees respectively mentioned that their main source of income is humanitarian assistance and sale of livestock or livestock products. In addition, 3.9% mentioned sale of agricultural products, 1.4% mentioned small business, 2.9% stated full-time employment, 2.4% mentioned remittances, and 1.4% indicated other sources of income. 1.5% of survey participants reiterated that they do not have income.

Table 7: Main source of income

Primary source of income	Baseline	End line
Sale of agricultural products	0.00%	3.9%
Sale of livestock or livestock products	9.80%	4.8%
Day laborer	56.86%	63.3%
Remittances	0.00%	2.4%
Full time employment from any source	19.61%	2.9%
Small business	0.00%	1.4%
Humanitarian assistance	11.76%	18.4%
Other	1.96%	1.4%
No income		1.5%

4.2.8 VILLAGE SAVING AND LOAN ASSOCIATION

Saving: The result of the survey indicated that 95.8% of interviewees indicated that they did not have any saving whereas 4.2% of them (Female: 6.2%, Male: 3%) mentioned that they were able to save money with VSLA. There is a slight improvement comparing to the baseline value where only 2% of survey participants were able to save money.

Borrow money: Survey participants were asked whether they have borrowed during the previous 30 days preceding the survey. Accordingly, 66.8% of them (Female: 64.5%, Male: 71.9%) mentioned that they borrowed money during the mentioned period from other individuals in the community. During the baseline survey, 59.5% of survey participants mentioned to borrow money during 30 days preceding the survey.

VSLA or other financial group Membership: Only 3.74% of respondents (Female: 3.7%, Male: 3.75%) mentioned that they are members of VSLAs and all of them reiterated that they have been members of VSLAs since the last one year and provided with training. During the baseline survey, none of the interviewees mentioned that they are members of VSLAs.

Use of financial services: Only 1.4% of survey participants (Female: 1.2%, Male: 1.5%) indicated that they use formal financial services in Micro. During the baseline survey, only 0.8% of interviewees mentioned to use formal financial services.

Engage in any small business enterprise: The result of the endline survey indicated that 2.3% of interviewees (Female: 3.75%, Male: 1.5%) are currently engaging in small business. Most of them are engaged in livestock fattening and selling and the rest are engaging in vegetable production and trading (small shop). During the baseline survey, only 1.54% of respondents mentioned to engage in small businesses.

Impacts of being a VSLA member: There is no impact of being a VSLA member reported as no one of the members received loans from the VSLAs.

4.3 WATER, SANITATION, AND HYGIENE (WASH)

4.3.1 SOURCE OF WATER

64.5% of respondents (Female: 54.3%, Male: 71.2%) replied that their primary source of water is piped system at homes whereas 22.4% of them (Female: 30.8%, Male: 18%) are getting water from protected boreholes, Piped System in public fountain is the primary source of water for 7% of interviewees (Female: 7.4%, Male: 6.9%) and 6.1% of survey participants (Female: 7.5%, Male: 3.9%) use unprotected water harvesting pools. 4.7% of respondents additionally relied on other sources including protected hand dug well, purchase from water trucks, and water trucking from humanitarian agencies. Overall, the endline survey result indicated that 93.9% of interviewees primarily rely on protected water sources. This shows significant improvement comparing to the baseline survey where 76.6% of survey participants were primarily rely on protected water sources.

4.3.2 ADEQUACY OF WATER

82.7% of survey participants (Female: 90.1%, Male: 78.2%) responded that the primary source of water is adequate throughout the year whereas 11.7% of them (Female: 7.5%, Male: 15.8%) mentioned that the primary source of water serves only for four months or less. The remaining 5.6% of respondents (Female: 2.4%, Male: 6%) replied that the main source of water is adequate for 4-8 months. During the baseline survey, 65.9% of survey participants responded that that the primary source of water is adequate throughout the year.

4.3.3 TIME TO FETCH WATER

Survey participants were asked the time that will take to fetch water from the nearest water source. Hence, 64.5% of respondents (Female: 54.3%, Male: 71.2%) replied that their water source is piped systems at the house so that they do not travel anywhere to fetch water. 14.6% (Female: 23.5%, Male: 10.6%) and 6.1% of interviewees (Female: 9.9%, Male: 3.8%) respectively replied that it takes '1-2 hours' and 'more than 2 hours' to fetch water from the nearest water source whereas 8.2% of them (Female: 11.1%, Male: 6.1%) stated that it takes 30 to 60 minutes to fetch water. The remaining 6.4% of respondents (Female: 1.2%, Male: 8.3%) reiterated that it takes less than 30 minutes to fetch water from the nearest water source. During the baseline survey, 36.8% of interviewees mentioned to travel more than one hour to fetch water from the nearest source; however, it is reduced to 20.7% in the endline survey.

4.3.4 WATER TREATMENT

74.3% of interviewees (Female: 72.8%, Male: 75.2%) indicated that they use Chlorine/other chemical reagents to treat drinking water whereas 1.9% (Female: 2.5%, Male: 1.5%) practice boiling to treat water before drinking. 23.8% of survey participants (Female: 24.7%, Male: 23.3%) reiterated that they did not practice any water treatment technique. There is a significant improvement comparing to the baseline survey where 87.8% of survey participants did not practice any water treatment techniques.

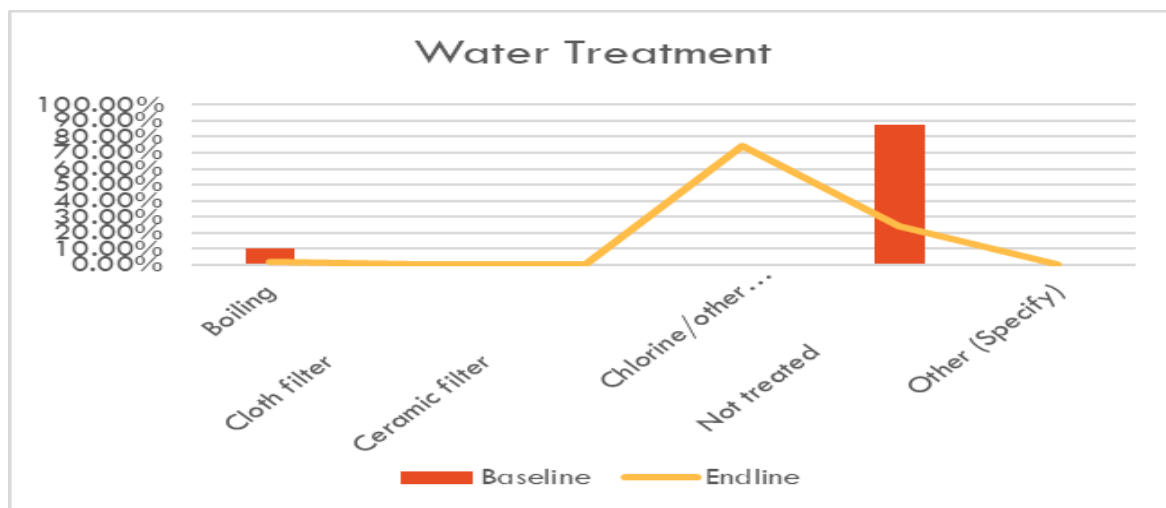


Figure 1: Practice of water treatment techniques

4.3.5 SANITARY PRACTICES

Use of Latrine: 82.2% of survey participants (Female: 91.2%, Male: 77.3%) indicated that they use family toilets for defecation whereas 9.4% of them (Female: 2.5%, Male: 13.6%) mentioned that they use public toilets. The remaining 8.4% of them (Female: 6.3%, Male: 9.1%) practice open defecation. During the baseline survey, 20.9% of interviewees used to practice open defecation and 79.1% mentioned to use latrine (family/public) to defecate.

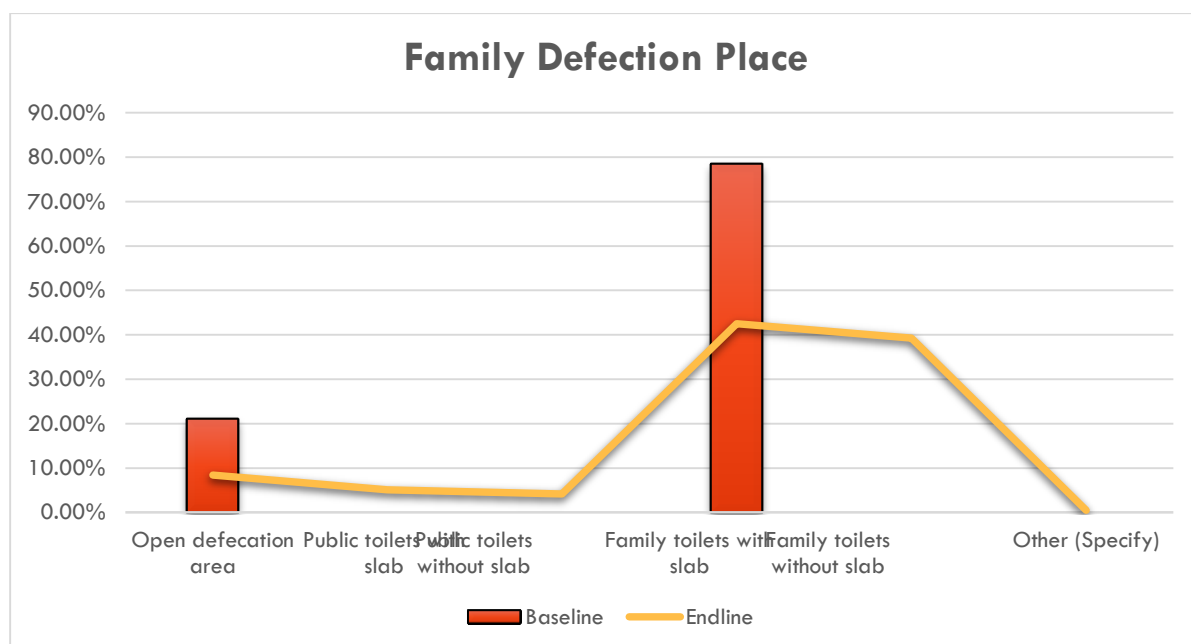


Figure 2: Place of defecation

Gender sensitive latrines and Hand Washing Facilities: Survey participants were asked whether there are different/separate latrines for men and women and 93.6% of them (Female: 95.5%, Male: 93.3%) reiterated that there are no separate latrines for men and women. In line with this, 94.7% of respondents (Female: 97%, Male: 94.2%) stated that the latrines do not have handwashing facilities. During the baseline survey, 95.9% and 98.6% of interviewees respectively indicated that ‘there are no separate latrines for men and women’ and ‘latrines do not have handwashing facilities’. Hence, there is no notable difference between the results of the baseline and endline surveys.

Solid Waste disposal: 63.8% of respondents (Female: 60.5%, Male: 66.4%) practice burning; 1.4% (Female: 0%, Male: 2.3%) use community pits; and 1.9% (Female: 2.5%, Male: 1.5%) use individual pits to dispose solid wastes. 32.4% of survey participants (Female: 37%, Male: 29.8%) disposed solid wastes in open areas. This implies that 67.6% of interviewees practice proper solid waste disposal, which is a slight improvement comparing to the baseline result where 63.5% practice proper solid waste disposal.

4.3.6 HYGIENE PRACTICES

Critical Moments of Hand Washing: The survey incorporated questions related to knowledge of critical moments of handwashing, which are (1) before eating, (2) after using toilet, (3) before preparation of food, (4) before feeding children, and (5) after cleaning child’s bottom. Accordingly, 45.8% of interviewees (Female: 60.5%, Male: 36.8%) know three or more critical moments; 44.4% of them (Female: 32.1%, Male: 51.9%) know two critical moments; and 9.8% of respondents (Female: 7.4%, Male: 11.3%) know only one critical moment of handwashing. During the baseline survey, the proportion of interviewees who know three or more critical moments of handwashing was 31.8%. Thus, the result of the endline survey indicated that the project brought a significant change in the knowledge of community members on critical moments of handwashing.

Use of soap for Hand Washing: 93.5% of survey participants (Female: 97.5%, Male: 91%) mentioned to use soap handwashing. During the baseline survey, 68.2% of interviewees indicated that they use soap for handwashing.

Incidence of diarrhea among children under 5: Survey participants (who have children under 5 in the HH) were asked whether there was incidence of diarrhea among children under 5 in the previous two weeks preceding the survey. Accordingly, 72.7% of them (Female: 74.5%, Male: 71.7%) indicated that diarrhea occurred 1-2 times during the previous weeks whereas 21.3% (Female: 19.6%, Male: 22.2%) stated that diarrhea occurred 3-4 times. The remaining 6% of respondents (Female: 5.9%, Male: 6.1%) reiterated that there has not been incidence of diarrhea during the two weeks. During the baseline survey, 49.1% of survey participants mentioned that diarrhea occurred more than 5 times during two weeks preceding the survey. This implies that the project had positive impact in terms of child's health that may be attributed to access to safe water and hygiene education.

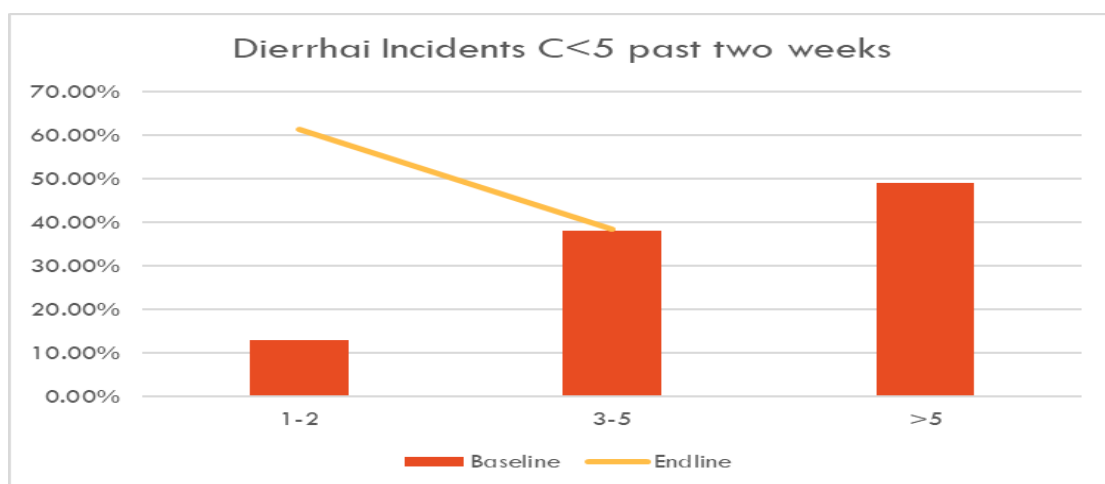


Figure 3: Incidence of diarrhea among children under 5

Availability of Hygiene Items: 93.9% of respondents mentioned that have Soap for bathing; 74.3% have sanitary goods for women; 98.1% have soap for washing clothes and 97.7% have Dish/basin for washing clothes in their house. With regard to the availability of hygiene items in the household. During the baseline survey, 76.5% of respondents mentioned that they have Soap for bathing; 17.9% have sanitary goods for women; 96.2% have soap for washing clothes and there is 50.69 % have Dish / basin for washing clothes in their house.

4.4 REPRODUCTIVE HEALTH (RH)

4.4.1 ACCESS TO HEALTH FACILITY

Time taken to reach the nearest HF: 42.3% of respondents (Female: 51.9%, Male: 36.2%) reported that it takes less than 30 minutes to reach the nearest HF whereas 32.2% of interviewees (Female: 32.1%, Male: 32.2%) mentioned that it takes from 30 to 60 minutes to reach the nearest HF, 9.6% of them (Female: 4.9%, Male: 12.6%) stated that it takes one-two hours and 15.9% of survey participants (Female: 11.1%, Male: 19%) reiterated that it takes more than two hours to reach the nearest HF. During the baseline survey, 29% of survey participants indicated that they travel more than one hour to reach the nearest HF. Thus, there is a slight change comparing to the baseline survey regarding this parameter.

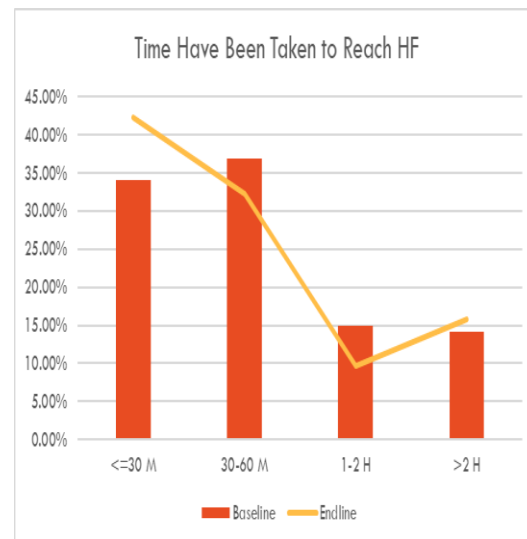


Fig 4: Time taken to reach the nearest HF

Visiting HFs to get Reproductive Health (RH) services: Survey participants were asked whether they (or their spouses) visited HFs during the previous 30 days preceding the survey to get RH services. Accordingly, 50% of the interviewees (Female: 46.8%, Male: 52%) mentioned to visit the HFs to get RH services such as Ante-Natal Care (ANC), Post Natal Care (PNC), and Family Planning (FP) services. During the baseline survey, 34.1% of respondents indicated to visit the HFs to get RH services.

4.4.2 BENEFICIARIES' SATISFACTION ON THE SERVICES AT THE HEALTH FACILITY

The survey assessed the proportion of interviewees who were satisfied with the service provided in the health facility. Accordingly, 86.9% of interviewees (Female: 86.1%, Male: 87.3%) expressed their satisfaction on the services at the HFs. 13.1% of survey participants expressed their dissatisfaction and they cited inadequate medical supplies and high costs of medicines and examinations. During the baseline survey, 79.8% of respondents expressed their satisfaction.

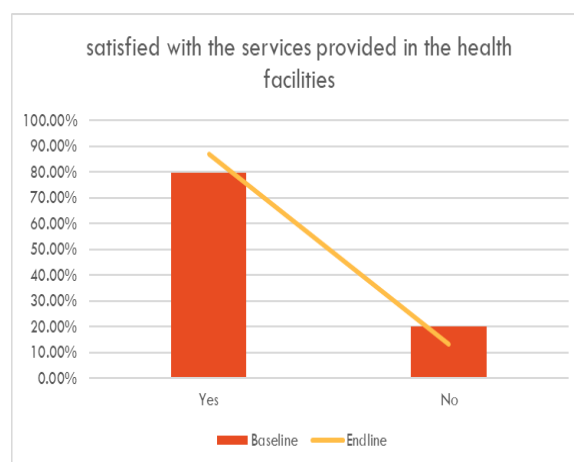


Fig 5: Level of satisfaction on the services at HF

4.4.3 PLACE OF DELIVERY

Survey participants were asked about the place of delivery of their last child. In the districts surveyed were asked about the place of delivery for the youngest child. The majority of respondents (77.9%) delivered their last child at home and only 22.1% delivered at HFs. Interviewees who gave birth at home mentioned that delivery is a natural procedure that does not require a healthcare setting. Interviewees who gave birth at HFs provided various reasons such as complication in their pregnancy and cleanliness and comfort at HFs. There is no difference in the place of delivery comparing to the baseline value where 21% gave birth at HFs.

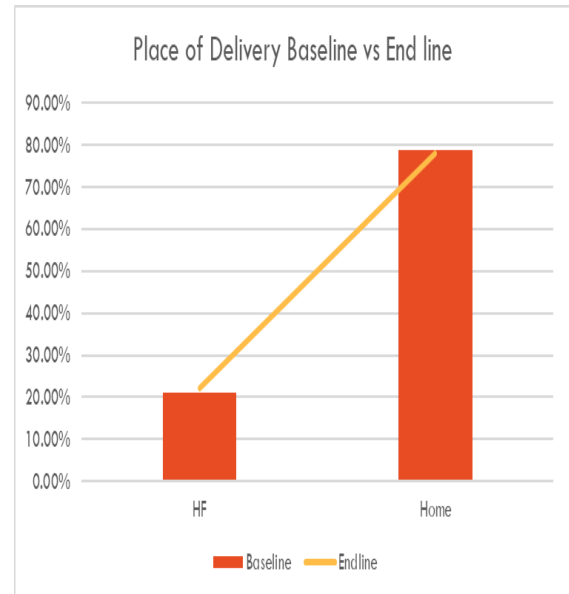


Fig 6: Place of delivery of last child

4.4.3 ASSISTANCE DURING DELIVERY

The type of assistance women receive during delivery is an important determinant of the birth outcome, including the health and survival of the mother and infant. Accordingly, the survey incorporated questions related to who assisted the pregnant women to give birth to the last child. Accordingly, 28.3% and 22% of respondents respectively indicated that they were assisted by 'trained Traditional Birth Assistants (TBAs)' and 'trained health personnel from HFs'. 27% of them mentioned that they were supported by family members; 20.8% were assisted by neighbors; and 1.9% were assisted by untrained TBAs. This shows 50.3% of births were attended by trained personnel. Comparing to the baseline survey where only 18.7% of births were attended by trained personnel, there is a significant improvement brought by the project.

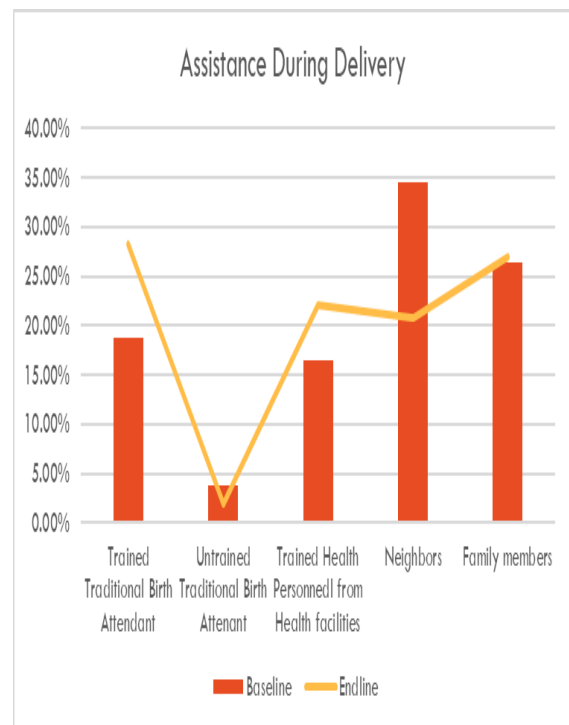


Fig 7: Assistance during delivery

4.4.4 ANTE NATAL CARE VISITS

Antenatal care visits increase the likelihood of safe pregnancy and this indicator therefore assesses the proportion of women who attended antenatal visits at the level recommended by the World Health Organization (WHO). Accordingly, the survey incorporated questions related to visits made by pregnant women for Ante Natal Care (ANC) visits. The majority of respondents (68.3%) of respondents stated that they visited health facility for ANC services while 31.7% of respondents stated that they didn't visit HFs for ANC. Out of the 68.3% of respondents who visited the HFs for ANC, 56.3% of them visited the HFs three or more times for ANC services whereas 43.7% of them visited the HFs once or twice for the same purpose. In line with this, the result of the baseline survey indicated that 42.4% of interviewees visited HFs for ANC services.

Meanwhile, 59.8% of interviewees reiterated that they visited HFs to receive vaccination whereas, during the baseline survey, only 35.3% of them visited the HFs for vaccination.

4.4.5 POST NATAL CARE VISITS

This indicator assesses the proportion of mothers who were provided with postnatal care by qualified health personnel – an effective measure for reducing maternal morbidity and mortality. Accordingly, 48.8% of respondents visited HFs for Post-Natal Care (PNC) services and 51.2% of them didn't visit the HFs for the same purpose. Of those 48.8% of interviewees who visited the HFs for PNC services, 96.2% of them reported that they got the necessary service. There is a noticeable improvement at this juncture comparing to the result of the baseline survey where only 24.9% of them visited the HFs for PNC services.

5. CONCLUSIONS AND RECOMMENDATIONS

The results of the end-line survey depicted that the project has proven to be effective in meeting its objective of meeting the immediate needs of vulnerable households, promote recovery of livelihoods, and improve access to safe water, sanitation, hygiene and reproductive health services. The food security and livelihood activities under this project (such as cash transfer programming and home gardening) have contributed to the enhancement of the food security and nutritional status of targeted households and this was corroborated by the results on the key food security outcome indicators such as reduced CSI, FCS, HHS, and LCSl.

The WASH activities have enhanced increased access to safe drinking water from protected water sources. Furthermore, communities' knowledge on water treatment and other key hygienic practices have significantly improved, which may have positive impact in decrement of water-borne diseases such as diarrhea. There is an improvement in the sanitation practice of targeted households, which is manifested by a decrease in the incidence of open defecation and practice of appropriate solid waste disposal.

The support provided to health facilities including the rehabilitation work, training of health personnel, and community awareness sessions have contributed to the betterment of the reproductive health service. Noticeable change was observed in terms of visiting health facilities for ANC, PNC, and vaccination services. Furthermore, the awareness raising sessions in Gender-Based Violence has contributed to the decrement of the incidence of GBV related cases in the area. In order to improve the effectiveness of future similar programs and enhance the livelihood and well-being of targeted community members, the following recommendations are forwarded:

- As cash transfer programming is a short term measure to alleviate the crisis on food and other basic needs, there should be a focus on early recovery and resilience building activities. This might include provision of agricultural inputs (such as seeds and farm tools), training of farmers on improved agronomic/horticulture programming, introducing new crop/vegetable varieties, support the agricultural extension system, and link farmers to the input-output market.
- Village level finance schemes such as VSLA play a tremendous role in financial inclusion (access to finance) to local communities, mainly women. Thus, future programs in the same area need to strengthen the on-going efforts regarding the operationalization of VSLAs.
- Communities' practice regarding solid waste disposal in the targeted areas is not to the expected level. This might partly be attributed to lack of sanitation facilities. Thus, future programs need to support the installation of community-based sanitation facilities in addition to the software activities (i.e. sanitation awareness activities).
- The reproductive health services in the targeted areas are limited and to improve the services the following activities need to be conducted:
 - Improvement and support of health facilities through rehabilitation of buildings, supplying with equipment, and supplying with medical supplies. HFs should also be supported with supplies required for family planning services.
 - Training of health personnel on RH services need to be strengthened so as to enhance their capacity/knowledge and thereby build communities' trust on them.
 - Training of Community Health Workers and Traditional Birth Attendants should be given focus.
 - Outreach campaigns through CHWs, TBAs, and peer-to-peer groups have to be enhanced to improve communities' knowledge and practice towards RH and family planning services;

COMPARISON OF BASELINE AND ENDLINE VALUES OF OUTCOME INDICATORS

No	Indicator	Unit	Baseline value	Endline value	Remark
1	Average Livelihoods Coping Strategy Index Score	Number	12.77	10.35	
2	Food Consumption Score				
	- Average Food Consumption Score	Number	27.38	43.64	
	- Percent of HH with acceptable food consumption	Percent	24.1	66.3	
	- Percent of HH with borderline food consumption	Percent	31.7	26.2	
	- Percent of HH with poor food consumption	Percent	44.2	7.5	
3	Reduced Coping Strategy Index Score		20.06	12.75	
4	Household Hunger Scale				
	Percent of HH faced little/no hunger	Percent	77.2	92.5	
	Percent of HH faced moderate hunger	Percent	19.8	7.5	
	Percent of HH faced severe hunger	Percent	3	0	
5	Percent of VSLA members who are active users of financial services	Percent	0.8	1.4	
6	Percent of VSLA members who are able to engage in small business enterprise	Percent	1.54	2.3	
7	Percent of HHs that have access to safe water for drinking and domestic consumption from protected sources	Percent	76.6	93.9	
8	Percent of HHs that practiced water treatment techniques	Percent	12.2	76.2	
9	Percent of HHs that practice open defecation	Percent	20.9	8.4	
10	Percent of HHs that practiced proper solid waste practices	Percent	63.5	67.6	
11	Percent of respondents who know at least three of the five critical times to wash hands	Percent	31.8	45.8	
12	Percent of HHs that use soap for handwashing	Percent	68.2	93.5	
13	Percent of households with access to reproductive health services	Percent	34.1	50	
14	Percent of respondents who delivered the last child at home	Percent	21	22.1	
15	Percent of births in target communities attended by skilled health personnel	Percent	18.5	50.3	
16	Percent of pregnant women who access health facilities at least three times for ante-natal care	Percent	26.3	38.5	