

CARE YEMEN

Integrated Health, WASH and FSL Assistance to conflict-affected, displaced, and vulnerable households in Amran governorate, Yemen

Funded by (CDCS)

**ENDLINE NARRATIVE REPORT
(Amran Governorate, Yemen)**

August 2023

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ABBREVIATION

| | |
|-------|--|
| AWD | Acute Watery Diarrhea |
| CHVs | Community Health Volunteers |
| CSI | Coping Strategy Index |
| FSL | Food Security and Livelihoods |
| FCS | Food Consumption Score |
| HDDS | Household Dietary Diversity Score |
| HC | Host Communities |
| CC | Community Communities |
| HFA | Humanitarian Food Assistance |
| MAM | Moderate Acute Malnutrition |
| SAM | Sever Acute Malnutrition |
| HH | Household |
| HNO | Humanitarian Needs Overview |
| HTH | High Test Hypochlorite |
| IDP | Internally Displaced People |
| IPC | Integrated Food Security Phase Classification |
| IPM | Integrated Pest Management |
| OCHA | United Nations Office for the Coordination of Humanitarian Affairs |
| PLW | Pregnant and Lactating Woman |
| WASH | Water, Sanitation, and Hygiene |
| MWCs | Water Management Committees |
| USAID | United States Agency for International Development |
| VAM | Vulnerability Analysis and Mapping |
| WFP | World Food Program |

1. Executive Summary:

CARE Yemen has completed implementing CDCS-supported “Integrated Health, WASH and FSL Assistance to conflict-affected, displaced and vulnerable households in Amran governorate, Yemen”. The purpose of this program is to improve health, WASH, food security, livelihoods, and wellbeing for IDPs and vulnerable host communities in Amran Governorate in Yemen.

To set benchmark values for the outcome level indicators and to measure the success of the project in achieving its goals and objectives, a baseline and endline surveys was conducted in the project’s operational targeted areas. The endline survey was conducted with samples of targeted beneficiary households living in Raydah district of Amran Governorate in August 2023. The survey mainly used quantitative methodology (i.e., household survey) to collect pertinent data.

Here are the key survey outcomes:

- **Coping Strategy Index:** The average CSI score for the surveyed HHs 9.96 (male: 10.03, female: 9.85), which is indicating that participants are relatively experiencing significant resilience and recovering from using negative food coping strategies.
- **Food Consumption Score:** The average FCS for the targeted HHs is 54.65 (male: 54.81, female: 54.41). In addition, 89.93% are in acceptable food consumption.
- **Household Dietary Diversity Score:** The average HDDS for the targeted household is 6.7 which indicated that surveyed HHs is somehow adequate dietary diversity. This denotes a good medium quality of diet whereby households consume an average of around 7 food groups out of the recommended twelve food groups.
- **HHS (Household Hunger Scale):** The analysis of the endline data shows that only 2.16% of households faced moderate hunger; whereas 0.0% of households faced severe hunger during the survey time.
- **Access to safe water:** about 74.3% of interviewees (male: 78.6%, female: 64.3%) mentioned to have access to safe water from protected water sources such as piped water system and protected wells.
- **Time taken to collect water:** Majority of respondents 91.4% replied that the water is “Available inside the house” from the primary source which have been rehabilitated by CARE.

- **Practice of water treatment:** 84.3% of respondents (male: 89.8%, female: 71.4%) mentioned treating water before drinking mainly using respectively the techniques of boiling, treated from pipeline, filters, Aqua-tabs, and Chlorine.
- **Availability of household latrines:** The majority 98.6% of respondents (male: 98.0%, female: 100.0%) mentioned that they do have household latrines.
- **Practice of handwashing:** approximately 87.9% of respondents (male: 86.7%, female: 90.5%) wash their hands at least three out of five critical times of hand washing.

2. Introduction:

After more than eight years of conflict, millions of people in Yemen are suffering from the compounded effects of armed violence, ongoing economic crisis and disrupted public services. In 2023, an estimated 21.6 million people will need humanitarian assistance and protection services, a slight decrease from the 23.4 million people in need in 2022. This is largely due to technical changes in cluster-level needs assessments, as well as revised food security projections released in late 2022, rather than an overall improvement in the humanitarian outlook. Yemen's public services and infrastructure have been severely impacted by the conflict, deteriorating economy and recurrent natural hazards. More than 80 per cent of the country's population struggles to access food, safe drinking water and adequate health services. The humanitarian situation moving into 2023 remains bleak, and sustain humanitarian assistance is needed to prevent further deterioration of needs. In parallel, increased focus on collaboration between humanitarian, development and peace actors is key to delivering more sustainable solutions, including to rebuild Yemen's fragile economy and diminished public services¹.

The project of Integrated Health, WASH and FSL Assistance to conflict-affected, displaced, and vulnerable households in Amran governorate, Yemen". The purpose of this program is to improve health, WASH, food security, livelihoods, and wellbeing for IDPs and vulnerable host communities in Amran Governorate in Yemen. The 'Integrated Health, WASH and FSL Assistance to conflict- affected, displaced and vulnerable households in Amran governorate, Yemen' project proposes life- saving emergency food assistance, livelihoods, WASH and health interventions. These sectors mutually reinforce one another and create synergies for improved outcomes and incorporate gender and protection lenses throughout all sectors' activities. The project targets 44 900 individuals. This have been implemented in 2 districts in Amran governorate, namely Amran and Raydah districts. Key results of the project include:

- Increase the access of conflict-affected households to potable drinking water and to improve their hygiene practices.
- Improve access to food and livelihood opportunities for highly vulnerable households in the targeted districts.
- Strengthen the health infrastructure and systems of the targeted health facilities in Amran and Raydah districts to contribute to improved health outcomes among crisis-affected communities, particularly women and girls.

¹ [Reliefweb.int/report/yemen-humanitarian-needs-overview-2023](https://reliefweb.int/report/yemen-humanitarian-needs-overview-2023)

3. Objectives of The Survey:

The overall objective of the endline survey is to present the information and performance targets for impact/outcome level indicators of the project after the completion of all planned activities of the project. These statistically valid information for impact/outcome level indicators will serve as the basis for comparison with the same type of baseline information collected before the beginning of the project. In addition, the survey will help to obtain a better understanding of the intervention effectiveness in the project operational areas. In addition, the endline has defined the following specific objectives:

- I. Determine the endline values for outcome indicators and assess the impact comparing with baseline evaluation.
- II. Collect data to measure changes on outcome indicators between endline and baselines.
- III. Suggest recommendations for CDCS activity intervention in line with the findings.

The report will present quantitative information for the following project's impact/outcome indicators:

- % Of households targeted by WASH program that are collecting all water for drinking, cooking, and hygiene from improved water sources;
- % Of households who have Improved access to appropriateness of WASH facilities;
- % Of people targeted by the hygiene promotion program who report using latrine the last time they defecated;
- % Of people targeted by the hygiene promotion program who know at least three (3) of the five (5) critical times to wash hands;
- Reduced Coping Strategies Index (rCSI);
- % Of households with poor, borderline and acceptable FCS;
- Prevalence of households with moderate or severe household hunger scale (HHS) score;
- Average Household Dietary Diversity Score;
- Average number of liters that family consumed for drinking, cooking and hygiene per day.
- Percentage of HHs that travel more than one hour to collect water.
- Percentage of HHs that reported existence of functional WMCs.
- Percentage of HHs that treat water before drinking.

4. Methodologies of The Survey:

The endline survey used quantitative method to gather the required information on the food security, and WASH of targeted households considering project's outcome indicators. The survey was conducted internally by CARE MEAL team. The survey was conducted in (Raydah district) of Arman Governorate in August 2023. The survey covered 279 households (139 HHs were interviewed regarding FSL; and 140 HHs were interviewed

regarding WASH activities) from the targeted villages across the district in Amran governorate, which were selected on randomly basis. However, during the survey, the data collectors mainly used a quantitative methodology (household survey) to collect the data of the survey. The data collected from the households after taking their permission for interviewing them.

5. Data Collection and Analysis:

The field MEAL team, enumerators and supervisors were trained on the data collection tools and methodological approach. As a result of contextual sensitives data was collected by using paper forms then transformed to Kobo App/smartphones. Data cleaning was conducted on excel and SPSS tool before embarking the analysis and reporting writing. Key results of the survey were disaggregated as per the indicators data demand and level of disaggregation.

6. Findings Of the Survey:



6.1 Demographic Information:

- Sex of respondents: 65.9% of respondents are male and female constitute 34.1% of the respondents.
- Household status: Host communities constitute 25.9% of the respondents; 71.0% are IDPs HHs; and 3.1% are returnee HHs.
- Marital status: 45.5% of interviewees are married; 5.2% are single; 33.0% are widowed; and 16.4% are divorced.
- Age of respondents: The average age of respondents are 40 years (male: 40, female: 41 years).
- Average HH size: 7 individuals.
- Context: all 100% are rural.
- Children in HHs suffering from malnutrition: 0.0% of respondents mentioned to have children suffering from malnutrition (with an average of 0 male & 0 female) in the household.
- Disability: 21.2% of respondents mentioned to have a disabled person (either with physical or mental disability) in the household.
- Pregnant or lactating women (PLW) in the HH: 27.7% of respondents reiterated that there is a PLW in their households.



6.2 FOOD SECURITY:

6.2.1. Coping Strategies Index (CSI)

Coping strategy is defined as the behaviors that households revert to when food is in short supply to meet their needs during the food shortage period. The rCSI often used as a proxy indicator of household food insecurity and measures the behaviors adopted by households when they have difficulties covering their food needs. It is calculated based on a list of five food-related coping behaviors to meet their food needs. In this respect, the sample households were asked to report on what coping strategies they used during the past 7 days prior to the interview and if there have been shortages of food or money to buy food. To calculate the rCSI, the coping strategies are summed and multiplied by their standard weight.

Endline survey shows good improvement comparing with baseline. As indicated in table below. On average, the surveyed households (at endline) only had 9.96 (male: 10.03, female: 9.85), vs 22.36 (male: 22.59, female: 22.0) at baseline survey, which is indicating

that participants are relatively experiencing significant resilience and recovering from using negative food coping strategies.

Moreover, according to the results of the survey, the coping strategies that participants utilized in the past 7 days if there have been times when there have not been enough food or money to meet their household essential needs, how many days their household had to utilize of these various coping strategies. However, an average of 6.94 days/week of the survey respondents relies on a less preferred food; an average of 1.33 days/week of them used to borrow food, or rely on help from a friend or relative; an average of 0.35 days/week limit portion size at meals; an average of 0.00 days/week restrict consumption by adults in order for small children to eat; an average of 0.01 days/week reduce number of meals eaten in a day.

Table 1: Reduced Coping Strategies Index

| Coping Strategy | Baseline survey | | | Endline survey | | |
|--|-----------------|----------|--------------|----------------|----------|-------------|
| | Freq. | Severity | Score | Freq. | Severity | Score |
| Rely on less preferred and less expensive food | 5.32 | 1 | 5.32 | 6.94 | 1 | 6.94 |
| Borrow food, or rely on help from friends or relatives | 3.08 | 2 | 6.15 | 1.33 | 2 | 2.66 |
| Limit portion size at meals | 2.93 | 1 | 2.93 | 0.35 | 1 | 0.35 |
| Restrict consumption by adults for small children to eat | 2.00 | 3 | 6.00 | 0.00 | 3 | 0.00 |
| Reduce number of meals eaten in a day | 1.95 | 1 | 1.95 | 0.01 | 1 | 0.01 |
| Total Score | | | 22.36 | | | 9.96 |

Further analysis of households revealed that the percentage of 99.15% of the respondents exhibited 'high' coping strategies at the baseline, have decreased to 47.48% as indicated in below table:

Table 2: rCSI pre-established thresholds

| CSI Category Scale | | | | |
|--------------------|----------|--------|----------|--------|
| CSI Thresholds | Baseline | | End-line | |
| | # | % | # | % |
| Low (0-3) | 0 | 0% | 0 | 0% |
| Med (4-9) | 1 | 0.85% | 73 | 52.52% |
| High (>=10) | 117 | 99.15% | 66 | 47.48% |
| Total | 118 | 100% | 139 | 100% |

6.2.3 Food Consumption Score (FCS):

The FCS indicator measures dietary diversity, food frequency and relative nutritional importance of different food groups consumed at the household level, over a recall period of one week. A standard questionnaire is used to ask respondents about the frequency of their households' consumption of nine food groups over the previous seven days recall.

To calculate the FCS, the consumption frequencies are summed and multiplied by the standardized food group weight. Households are then classified into three food consumption groups: poor, borderline, and acceptable food consumption, using the adjusted thresholds of the FCS (poor: 0 - 28; borderline: 28.1 – 42, and acceptable: > 42)².

The average food consumption score for all food categories of endline survey was about 54.65 (male: 54.81, female: 54.41) out of 112, against 31.30 (male: 33.42, female: 28.10) at baseline survey for all households participated in both surveys which indicated great improvement in HHs food consumption. Moreover, the below table is showing comparison among the two surveys (baseline vs Endline) score of each food group referring to the average of each group that respondents consumed last 7 days before conducting the survey.

Table 3: Food Consumption Score (FCS)

| Food Item | Baseline survey | | | End-line Survey | | |
|--------------------------------|-----------------|--------|--------------|--------------------------------|--------|-------|
| | Avg. | Weight | Score | Avg. | Weight | Score |
| Main staples | 4.84 | 2 | 9.68 | 6.98 | 2 | 13.96 |
| Pulses | 2.89 | 3 | 8.67 | 2.20 | 3 | 6.60 |
| Vegetables | 1.83 | 1 | 1.83 | 2.10 | 1 | 2.10 |
| Fruits | 0.12 | 1 | 0.12 | 0.90 | 1 | 0.90 |
| Meat and fish | 0.33 | 4 | 1.32 | 0.88 | 4 | 3.51 |
| Milk | 1.63 | 4 | 6.51 | 5.25 | 4 | 21.01 |
| Sugar | 3.09 | 0.5 | 1.55 | 6.83 | 0.5 | 3.41 |
| Oil | 3.25 | 0.5 | 1.62 | 6.32 | 0.5 | 3.16 |
| Condiments | 3.34 | 0 | 0.00 | 6.81 | 0 | 0.00 |
| Total of FCS (Baseline) | | | 31.30 | Total of FCS (End-line) | | |
| | | | | 54.65 | | |

As above table, the sample household food consumption frequency analysis shows high consumption of cereals at an average of 6.98 days a week; 2.20 days for pulses; 2.10 days for vegetables and 0.90 for fruits; 6.83 days a week for sugar/sweets; and 6.32 days a week for oil. Households consumed other highly nutritious food items more frequently (milk and other dairy products = 5.25 days per week; and meat, fish, and eggs = 0.88 days/week) in a recall period of seven days.

Based on the average of food consumption score, households further categorized according to the pre-established thresholds and summary of the analysis presented in the table below. Overall, as the table indicates that (14.41% at baseline decreased to 2.88% at endline survey) of households who were in poor food consumption; also (52.54% at baseline vs 7.19% at endline) of participants were in borderline food consumption; and (33.05% at baseline survey against 89.93% at endline) were in acceptable food consumption.

² In Yemen oil and sugar is almost consumed on daily basis.

Table 4: FCS threshold by gender

| FCS Thresholds | Baseline Survey | | | End-line Survey | | |
|----------------|-----------------|-------------|-------------|-----------------|-------------|-------------|
| | Female | Male | Total | Female | Male | Total |
| Acceptable | 34.04% | 32.39% | 33.05% | 90.57% | 89.53% | 89.93% |
| Borderline | 65.96% | 43.66% | 52.54% | 9.43% | 5.81% | 7.19% |
| Poor | 0.00% | 23.94% | 14.41% | 0.00% | 4.65% | 2.88% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

6.2.4 Household Dietary Diversity Score (HDDS):

The HDDS is based on the number of different food groups consumed by the head of household or any other household members in the past 24 hours. To calculate HDDS, regroup the 12 food groups used for FCS, by simply adding frequencies. The ranges from 0 to 12, with lower numbers indicating less dietary diversity. Although the HDDS gives an indication of food groups consumed in the household in the last 24 hours, the HDDS should not be interpreted as a nutrition indicator reflecting diet quality, but rather as an indicator of food access. Thus, it serves as a proxy for socioeconomic status.

The average HDDS for the targeted household in baseline survey was 4.4 increased to 6.7 at endline survey which indicated that surveyed HHs is somehow adequate dietary diversity. This denotes a good medium quality of diet whereby households consume an average of around 7 food groups at endline survey out of the recommended twelve food groups comparing to around 4 food groups at baseline survey. Below table shows details of HDDS and comparing between (baseline & endline) per each food group.

Table 5: Dietary Diversity Summary

| Category | Baseline Survey | End-line Survey |
|---|-----------------|-----------------|
| A. Bread, noodles, biscuits, or any other foods made from millet, sorghum, maize, rice, wheat, or other grains | 51% | 100% |
| B. Potatoes, yams, manioc, cassava, or other foods made from roots or tubers | 38% | 27% |
| C. Foods made from beans, peas, lentils or nuts | 90% | 58% |
| D. Vegetables and leaves | 75% | 79% |
| E. Fruit | 0% | 4% |
| F. Beef, pork, lamb, goat, rabbit, wild game, chicken, duck, or other birds, liver, kidney, heart, or other organ meats | 0% | 5% |
| G. Eggs | 0% | 24% |
| H. Fish | 0% | 1% |
| I. Cheese, yogurt, milk, or other milk products | 25% | 91% |
| J. Sugar or honey | 8% | 98% |
| K. Foods made with oil, fat, or butter | 75% | 84% |
| L. Other foods such as condiments, coffee, tea | 100% | 100% |

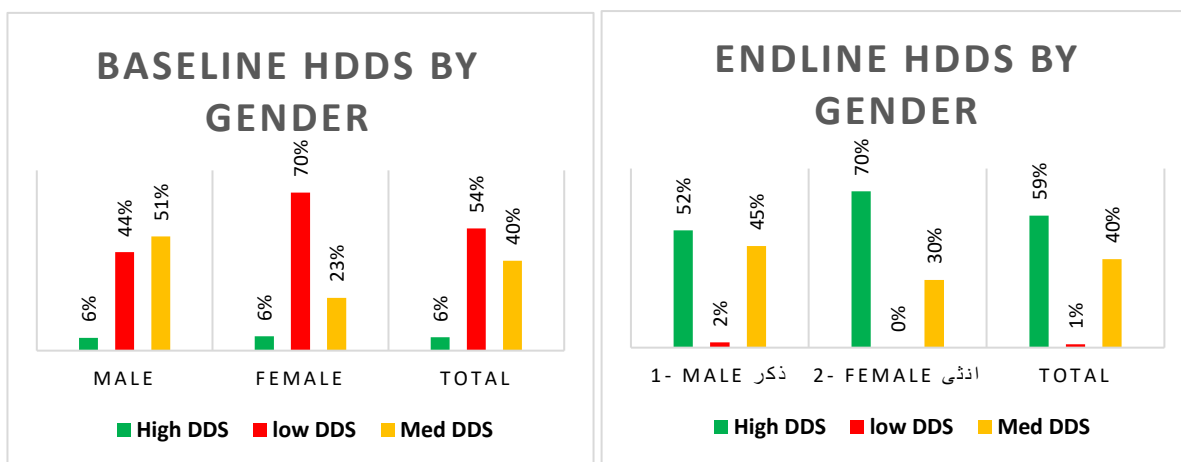
The survey shows that the project has great changes as (baseline 54.2% (male: 43.7%, female: 70.2%) vs end-line 1.4% (male: 2.3%, female: 0.0%)) of HHs are categorized into Low HDDS (≤ 3 food groups consumed); also (baseline 39.8% (male: 50.7%, female: 23.4%) vs end-line 39.6% (male: 45.3%, female: 30.2%)) of HHs are in Medium HDDS (4 or 5 food groups consumed). The remaining (baseline 5.9% (male: 5.6%, female: 6.4%) vs end-line 59.0% (male: 52.3%, female: 69.8%)) are in High HDDS (6 or more food groups consumed):

Table 6: Categorical of Dietary Diversity Summary

| Thresholds | Baseline survey | | | Endline Survey | | |
|--------------|-----------------|-------------|-------------|----------------|-------------|-------------|
| | Female | Male | Total | Female | Male | Total |
| High HDDS | 6.4% | 5.6% | 5.9% | 69.8% | 52.3% | 59.0% |
| Medium HDDS | 23.4% | 50.7% | 39.8% | 30.2% | 45.3% | 39.6% |
| Low HDDS | 70.2% | 43.7% | 54.2% | 0.0% | 2.3% | 1.4% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

Data disaggregation shows that the HDDS score is higher among male participants compared to the female participants' HHS. On gender perspective, the below figure shows the differences scores between male and female, where male has lower DDS than female.

Figure 1: Households Dietary Diversity



6.2.5 Household Hunger Scale (HHS):

Household Hunger Scale (HHS) is the third important food security indicator applied by CDC to measure access to food at household level. This indicator is based on three variables showing the food access situation of households throughout the four weeks (30 days) prior to the interview date. To collect data for this indicator, the person in the household in charge of food preparation is asked about the frequency with which three events were experienced by any household member in the last four weeks:

1. No food at all in the house
2. Went to bed hungry
3. Went all day and night without eating

The analysis of the endline data shows that only 2.16% of households faced moderate hunger; whereas 0.0% of households faced severe hunger during the survey time. According to gender disaggregation, the hunger level was slightly high among female participants' households in which about 3.77% and 0.0% were respectively moderately and severely hungry as compared to 1.16% & 0.0% of the male participants' households. The project cash assistance had positively contributed to the reduction of hunger among the affected target household.

Table 7: HHS Categorical

| HH Categories | Baseline Survey | | | End-line Survey | | |
|---------------|-----------------|-------------|-------------|-----------------|-------------|-------------|
| | Female | Male | Total | Female | Male | Total |
| Little HH | 21.28% | 53.52% | 40.68% | 96.23% | 98.84% | 97.84% |
| Moderate HH | 74.47% | 42.25% | 55.08% | 3.77% | 1.16% | 2.16% |
| Severe HH | 4.26% | 4.23% | 4.24% | 0.00% | 0.00% | 0.00% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

According to above analysis, endline survey showed that the food security conditions of targeted beneficiaries have been improved because of unconditional cash transfers that enabled them to meet their needs of basics food items on household level.

Further analysis revealed that 2.2% of respondents (male: 1.2%; female: 3.8%) mentioned that there was no food to eat in their household in the past 4 weeks because of lack of resources to get food, all of them 100.0% (male: 100.0%; female: 100.0%) replied that this happened rarely (once or twice in the past four weeks). Meanwhile, 2.2% of the respondents (male: 1.2%; female: 3.8%) 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 them 33.33% (male: 100.0%; female: 0.0%) indicated that this happened rarely; 33.33% of them (male: 0.0%; female: 50.0%) referred that it happened sometimes; and 33.33%

(male: 0.0%; female: 50.0%) replied that it happened often. Furthermore, 1.4% of the respondents (male: 1.2%; female: 1.9%) 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. Out of them 50.0% (male: 100.0%; female: 0.0%) told that it happened rarely; 50.0% of them (male: 0.0%; female: 100.0%) replied that it happened sometimes; and None of them has reported that it happened often.



6.3 WATER, SANITATION, AND HYGIENE:

Considering WASH as one of the key sectors under CDC project, baseline team constructed key guiding questions that enabled to generate pertinent data/information on water source and supply, water treatment and storage, sanitation services and hygiene practices from sampled households. The key findings on Water, Sanitation and Hygiene related information analyzed and presented in the following sections.

6.3.1 Source of water:

As indicated in table below, participants of the survey mentioned different sources of water include piped systems at house or public places, bought from water trucks, and protected/unprotected wells.

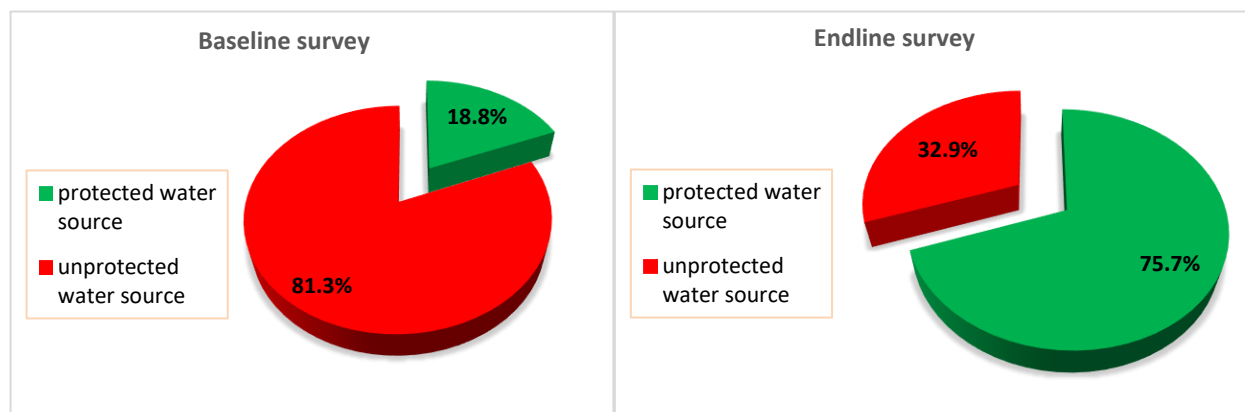
According to the results of the survey, the endline survey show great improvement as the percentage 11.25% (male: 9.84%, female: 15.79%) at baseline increased to 65.7% (male: 70.4%, female: 54.8%) of respondents rely on 'piped water at home' as their main water source; whereas 67.50% of respondents (male: 73.77%, female: 47.37%) at baseline decreased to 24.3% (male: 20.4%, female: 33.3%) at end-line survey of participants who indicated that bought from water trucks is their source of water.

Table 8: Primary Source of Water for Drinking, Cooking, And Hygiene

| Parameters | Response | Baseline survey | | | Endline survey | | |
|------------------------------|------------------------------|-----------------|-------------|-------------|----------------|-------------|-------------|
| | | Male | Female | Total | Male | Female | Total |
| Primary/main source of water | Piped water at house | 9.84% | 15.79% | 11.25% | 70.4% | 54.8% | 65.7% |
| | Piped water at public places | 13.11% | 15.79% | 13.75% | 7.1% | 9.5% | 7.9% |
| | Protected wells | 3.28% | 21.05% | 7.50% | 2.0% | 2.4% | 2.1% |
| | Bought from water trucks | 73.77% | 47.37% | 67.50% | 21.4% | 33.3% | 25.0% |
| Total | | 100% | 100% | 100% | 100% | 100% | 100% |

Further analysis revealed that 18.8% (male: 13.1%, female: 36.8%) at baseline survey vs 75.7% (male: 79.6%, female: 66.7%) at end-line survey of interviewees mentioned to have access to safe water from protected water sources.

Figure 2: source of water



6.3.2 Adequacy of Water from the main source:

All 100.0% of respondents (male: 100.0%, female: 100.0%) reported that their main water source is adequate throughout the year comparing with the results at baseline survey as detailed in the table below.

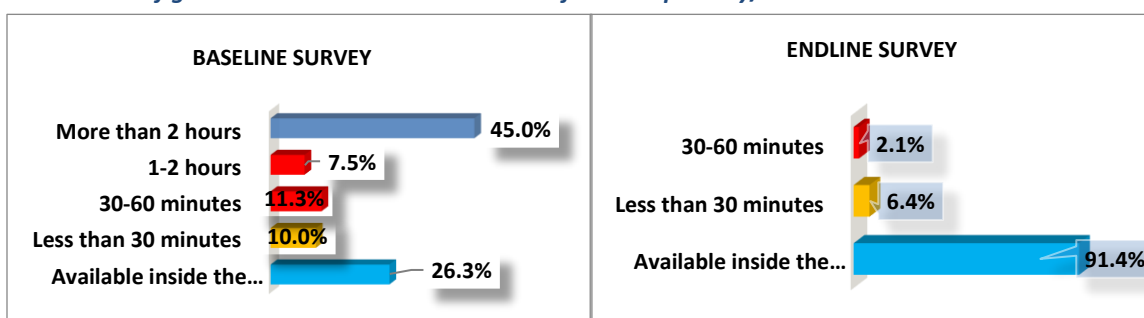
Table 9: Adequacy of Water Source (Baseline Vs End-line)

| Adequacy of Water Source | Baseline survey | End-line Survey |
|--------------------------|-----------------|-----------------|
| More than 4 months | 2.0% | 0.0% |
| Less than four months | 92.00% | 0.0% |
| 4 months | 6.00% | 0.0% |
| Total | 100% | 0.0% |

6.3.3 Time taken to collect water from source:

The survey incorporated questions related to the time that households spent fetching water from the primary/main water source. According to end-line results, there is great improvement related to the time that households spent to fetch water from the primary/main water source as clarified in below figures.

figure 3: Time taken to collect water from the primary/main source.



The percentage of 26.3% (male: 29.5%, female: 15.8%) at baseline increased to 91.4% (male: 91.8%, female: 90.5%) at end-line survey of respondents mentioned that the water is 'available inside the house'; 45% of participants (male: 42.6%, female: 52.6%) at baseline decreased to 0.0% (male: 0.0%, female: 0.0%) at end-line survey of respondents who mentioned that it takes them more than 2 hours to fetch the water from source; whereas 11.3% (male: 11.5%, female: 10.5%) at baseline Vs 2.1% (male: 3.1%, female: 0.0%) of respondents at endline indicated that it takes '30-60 minutes' to fetch water from the source; 7.5% (male: 6.6%, female: 10.5%) at baseline Vs 0% at end-line survey reported it takes from 1 to 2 hours. The remaining of 10.0% (male: 9.8%, female: 10.5%) at baseline against 6.4% (male: 5.1%, female: 9.5%) of respondents at end-line replied that it takes less than 30 minutes to fetch the water from source.

In line with this, the interviewees were asked "Do women/girls feel safe when they go to the water source? Accordingly, this indicator reflects a huge change where all 100% at Endline survey against 55.0% (male: 49.2%, female: 73.7%) at baseline survey of respondents reported yes, the girls & women feel safe when they go to the water source; whereas zero 0% at end-line survey Vs 45.0% (male: 50.8%, female: 26.3%) at baseline indicated that the women/girls don't feel safe when they go to the water source.

6.3.4 Daily quantity of water collected:

Survey participants were asked about the quantity of water that family consumed for drinking, cooking, and hygiene. Accordingly, the average of daily quantity of collected water for interviewees is 129 (male: 132, female: 124) liters/day.

6.3.5 Existence and functionality of water management committees:

Water Management Committees (WMCs) play crucial role in operation and maintenance of water schemes and the effectiveness of WMCs ensure the sustainability of water schemes constructed/rehabilitated by the project. Accordingly, interviewees were asked about the existence and functionality of community based WMCs in their respective areas.

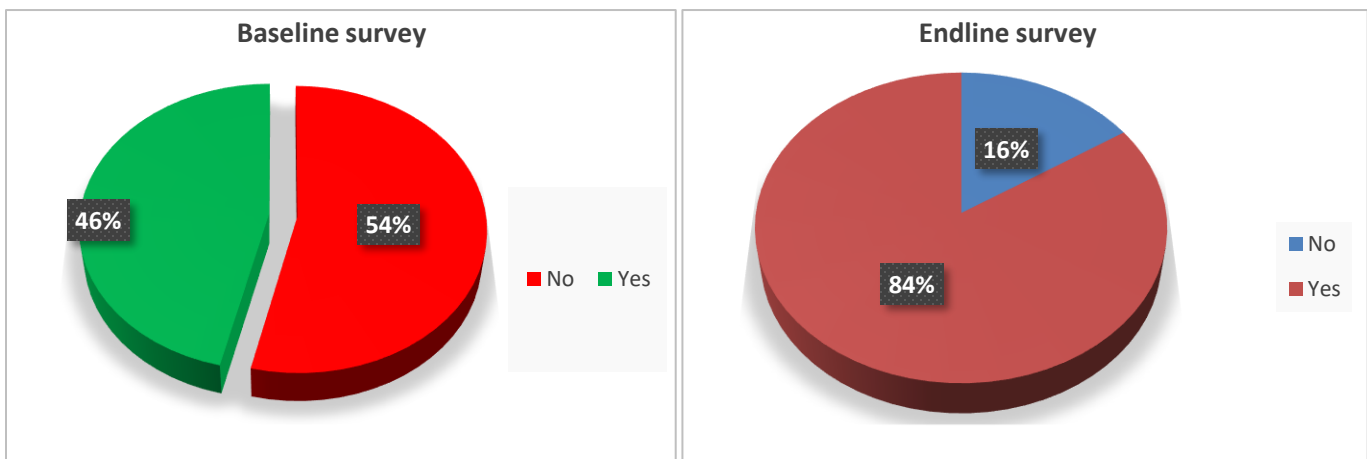
With regards to the existence of WMCs, 27.1% of respondents (male: 23.5%, female: 35.7%) replied that the water sources do not have WMCs; 10.7% (male: 9.2%, female: 14.3%) affirms the existence of WMCs; whereas the remaining 62.1% of interviewees (male: 67.3%, female: 50.0%) indicated that they don't know. Further analysis revealed that all 10.7% of respondents (male: 9.2%, female: 14.3%), of those who affirms the existence of WMCs, reiterated that the existence WMCs are functional.

6.3.6 Practicing of water treatment:

Interviewees were asked whether they use/practice different techniques to treat water at HH level before drinking. Accordingly, they mentioned different techniques such as boiling, using filters, Aqua-tabs, Solar disinfectant, and use of cloth.

As showed in the below figure, the results of the End-line survey showed very good improvement comparing to baseline survey. Accordingly, 84.3% of interviewees (male: 89.8%, female: 71.4%) reported practicing treating water before drinking at endline, against 46.3% of respondents (male: 49.2%, female: 36.8%) mentioned treating water before drinking at baseline survey. In line with this, out of those households who mentioned practicing water treatment, using respectively the techniques of boiling, using filters, Aqua-tabs, Chlorine, and treated from pipeline to treat water before drinking.

Figure 4: water treatment



6.3.7 Sanitary Infrastructure:

Participants of the survey were asked about the type of sanitation facilities (mainly HH latrines) they have as well as their practice of defecation. Accordingly, (at endline survey) the majority 98.8% of respondents (male: 98.6%, female: 100.0%) mentioned that they do have HH latrines; whereas 1.4% (male: 2.0%, female: 0.0%) declared that they do not have HH latrines, comparing to (at baseline survey) 98.8% of respondents (male: 98.4%, female: 100.0%) mentioned that they do have HH latrines; whereas 1.2% (male: 1.6%, female: 0.0%) declared that they do not have HH latrines. All of those interviewees (at endline survey) who responded to have latrine, 98.6% (male: 98.0%, female: 100.0%) reported that the type of latrines they have are of a pour flush latrine.

In line with this, 65.7% of survey participants (at endline survey), those who mentioned having latrines, (male: 71.4%, female: 52.4%) replied that the latrines have hand washing facilities; whereas the remain 32.9% (male: 26.5%, female: 47.6%) reiterated that the latrines do not have hand washing facilities. Meanwhile, out of the interviewees who mentioned not to have HH latrines, 1.4% of respondents (male: 2.0%, female: 0.0%) replied respectively that both of men and women go to empty areas for defecation.

6.3.8 Hygiene Practices (Pre-KAP):

Enhancing the knowledge and practice of community members on key hygiene and sanitation issues is of highly importance to decrease the incidence of water-borne diseases. Accordingly, one of the key components of the project is to implement hygiene/sanitation awareness activities through the trained Community Health Volunteers (CHVs). Therefore, the survey incorporated questions that enable to measure the changes in the knowledge and practice of community members on key hygiene/sanitation issues.

6.3.9 Hand washing at key critical moments:

Hands are vectors that can transport disease agents from person to person directly or indirectly via surfaces, and hence need to be kept clean specially at critical times that involve child feeding and after toilet use or cleaning children. Interviewees were asked to mention the times when they wash their hands. The indicator assesses individuals' knowledge and practice of at least 3 out of 5 critical hand washing practices which are most effective at preventing the spread of pathogens along the fecal-oral cycle. The data analysis was carried out for all respondents. Thus, data for the indicator was analyzed to identify those participants who know at least three out of five critical times of hand washing. The result of the analysis of knowledge of handwashing at key moments is presented in the Table below.

Table 10. Proportion of respondents knowing and/or practicing hand washing at different key moments.

| Critical times | Baseline survey | End-line Survey |
|---------------------------------|-----------------|-----------------|
| After using the toilet | 82.5% | 97.9% |
| Before eating | 70.0% | 100.0% |
| Before preparing food | 46.3% | 65.0% |
| Before feeding children | 42.5% | 43.6% |
| After cleaning baby waste/feces | 53.8% | 49.3% |

As indicated in above table, most respondents were able to identify key moments of washing hands before eating (100.0%) at endline survey comparing to (70.0%) at baseline survey followed by washings hands after using toilet (97.9%) at endline survey comparing

to (82.5%) at baseline survey; and before preparing food (65.0%); and After cleaning baby waste/feces (49.3%) and before feeding children (43.6%)

Table 11: Percentage of who know key moments for hand washing.

| Key moments | Baseline survey | End-line Survey |
|--|-----------------|-----------------|
| Only one moment | 28.8% | 2.14% |
| Two moments | 15.0% | 29.29% |
| Three moments | 17.5% | 18.57% |
| More than three moments | 38.8% | 50.00% |
| Percent of who know at least three out of five critical times for hand washing | 56.3% | 68.57% |

As indicated in the table above, approximately at endline survey 68.57% of respondents (male: 55.10%, female: 100.0%) wash their hands at least three out of five critical times comparing to 56.3% of respondents (male: 60.7%, female: 42.1%) at baseline survey wash their hands at least three out of five critical times.

With regard to regular practice of hand washing, the endline survey showed good changes comparing with baseline as 56.3% (male: 54.1%, female: 63.2%) and 33.8% (male: 32.8%, female: 36.8%) at baseline survey vs End-line survey 87.9% (male: 86.7%, female: 90.5%) and 12.1% (male: 13.1%, female: 9.5%) of respondents respectively indicated that they wash their hand 'regularly' and 'sometimes'.

6.3.10 Water transportation and Storage:

The endline assessment team interviewed target households to get their feedback on what specific type of material was used to transport and store water. The findings on this matter are presented below.

Survey incorporate question related to the type of containers used for water storage, accordingly, the endline survey showed improvement as 0.0% of respondents (male: 0.0%, female: 0.0%) mentioned of using 'using tank connected to pipes at homes' at baseline survey Vs 91.4% of them (male: 92.9%, female: 88.1%) indicated that they are using 'tank for water storage which are connected to pipes at home. In addition, respondents were also asked whether the containers used for water storage are clean. Hence, in baseline survey the percentage 65.0% of them (male: 70.5%, female: 47.4%) increased to 99.3% of them (male: 99.0%, female: 100.0%) mentioned that the containers are clean.

Interviewees were also asked whether they regularly wash the water containers that they use for water storage. Accordingly, this indicator reflected good change as 82.5% of respondents (male: 88.5%, female: 63.2%) at baseline increased to 100.0% of respondents (male: 100.0%, female: 100.0%) of respondents at endline who mentioned they regularly wash the containers. Out of this 100.0% of survey participants who mentioned of washing the containers regularly, the majority 75.7% of interviewees (male: 74.5%, female: 78.6%) mentioned that they use ‘water and soap/detergents’; 21.4% of them (male: 21.4%, female: 21.4%) mentioned that they use ‘water only’; whereas 2.9% (male: 4.1%, female: 0.0%) use ‘water and sand’ to wash the containers.

6.3.11 Visits by CHVs and key Messages:

Households were also asked whether they have been visited by CHVs and the type of hygiene/sanitation/nutrition messages received via the CHVs. Accordingly, 87.9% of respondents (male: 89.8%, female: 83.3%) mentioned that they have been visited by CHVs; whereas the remaining of 12.1% of them (male: 10.2%, female: 16.7%) confirmed that they have not been visited by the CHVs. Out of those households who mentioned of visited by CHVs, 95.9% of respondents indicated that they received messages on ‘prevention of cholera/AWD’; 94.3% on safe water; 91.9% on safe food; 98.4% on latrines use; 99.2% on hand washing; and the remaining 87.8% of them mentioned to receive messages from CHVs on COVID-19.

6.3.12 Diarrhea Incidences:

With regards to the frequency of diarrhea occurrences among the children. Below is a comparison among baseline & endline surveys. However, according to baseline survey, 37.5% of participants (male: 32.8%, female: 52.6%) mentioned that diarrhea occurred weekly among their children; 25.0% (male: 26.2%, female: 21.1%) every 2 weeks; 16.3% (male: 19.7%, female: 5.3%) monthly. The remaining 28.8% (male: 31.1%, female: 21.1%) of surveyed HHs reported diarrhea occurred among children on divergent period.

Regarding the End-line survey, only 0.7% of participants (male: 1.0%, female: 0.0%) mentioned that diarrhea occurred every 2 weeks among their children; 3.6% (male: 3.1%, female: 4.8%) monthly; The remaining 95.7% (male: 95.9%, female: 95.2%) of surveyed HHs reported diarrhea occurred among children on divergent period.

Table 12: Diarrhea Incidences among children

| Diarrhea Incidences | Baseline | Endline |
|---------------------|----------|---------|
| Weekly | 37.5% | 0.0% |
| Every 2 Weeks | 25.0% | 0.7% |

| | | |
|--------------------------|-------------|-------------|
| Monthly | 16.3% | 3.6% |
| Rarely/divergent periods | 28.8% | 95.7% |
| Grand Total | 100% | 100% |

6.3.13 Waste Disposal:

Endline survey reflects good improving in waste disposal indicator as 45.0% (male: 52.5%, female: 21.1%) at baseline survey decreased to 36.4% (male: 35.7%, female: 38.1%) at end-line survey) of respondents indicated that they are disposing solid waste on 'Open areas', whereas (94.67% at endline) are practicing safe disposing where 15.0% (male: 16.3%, female: 11.9%) of respondents indicated that they are disposing of solid waste on community pit; whereas 43.6% (male: 45.9%, female: 38.1%) and 5.0% (male: 2.0%, female: 11.9%) of them reiterated that they are disposing of solid waste on the street in the garbage containers.

7. Conclusions And Recommendations:

The endline survey revealed the good improvement of food security of the targeted beneficiaries. In the surveyed areas, the project has positively contributed on assisting households recovering and improving their living conditions, which is manifested by acceptable level of food consumption and household dietary diversity scores as well as low reduced coping strategy index score.

Significant proportion of respondents heavily depends on protected water sources for drinking and other domestic consumption. Furthermore, a significant proportion of households not still travel to fetch water from the sources as the pipes are connected to their homes. The level of knowledge in terms of key hygiene and sanitation practices have been increased as result of hygiene sessions and best practice, which may lead to reduce mortality/morbidity from water-borne diseases.

Overall, the findings revealed that the project have effectively supported the targeted vulnerable and conflict-affected households in Raydah district in Amran governorate to improve their living conditions of accessing the basic needs of food through receiving unconditional cash assistance. The project also enhance access to safe water for drinking and other domestic use, by rehabilitating/constructing of strategic water schemes in their targeted area.

ANNEX 1: BASELINE VALUE OF KEY OUTCOME INDICATORS

| Performance Indicator | Baseline Survey | | End-line Survey | |
|---|-----------------|--------|-----------------|--------|
| | Unit | Score | Unit | Score |
| Percentage of HHs that have access to safe/protected water sources | Percent | 18.8% | Percent | 74.3% |
| Percentage of HHs that travel 'one hour and more' to collect water | Percent | 52.5% | Percent | 0.0% |
| Percentage of HHs that treat water before drinking | Percent | 46.3% | Percent | 84.3% |
| Percentage of HHs with household latrine | Percent | 98.8% | Percent | 98.6% |
| Percentage of HHs that know at least three critical moments of hand washing | Percent | 56.3% | Percent | 87.9% |
| Percentage of HHs that dispose waste in an 'open area' | Percent | 45.0% | Percent | 36.4% |
| Average Coping Strategies Index | Number | 22.36 | Number | 9.96 |
| Average Food Consumption Score | Number | 31.30 | Number | 54.65 |
| Percentage of households achieve Acceptable Food Consumption | Percent | 14.41% | Percent | 89.93% |
| Average Household Dietary Diversity Score (HDDS) | Number | 4.4 | Number | 6.7 |
| Percentage of households with little household hunger scale | Percent | 40.68% | Percent | 97.84% |