Mid-term Evaluation Report - FEAD Project

March - April 2016

Mid-term evaluation: Food Emergency Assistance Project in Diffa (FEAD)

Implemented by Samaritan's Purse Niger, funded by USAID / FFP

Agreement No.	AID-FFP-G-15-00068
Effective date and completion date:	June 1, 2015 to November 30, 2016
To:	USAID-FFP-EFSP
By:	Samaritan's Purse
Report submission date:	February 28, 2017
Software used for report:	Microsoft Office Word 2010

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Acronyms

ARCAD	Support for the Resiliency of Communities in Diffa
CSI	Coping Strategy Index
DP	Displaced peoples
FCS	Food Consumption Score
FEAD	Food Emergency Assistance in Diffa
FFP	Food for Peace
GAR	Gardening
HDDS	Household Dietary Diversity Score
HEA	Household Economic Analysis
HH	Household
ICRC	International Committee of the Red Cross
IDP	Internally Displaced Person
MUAC	Mid-Upper Arm Circumference
MMD	Mata Masu Dubara (local language)
NGO	Non-Governmental Organization
NSPAMM	Nutrition Supplement to Prevent Acute Malnutrition and Mortality
PDM	Post Distribution Monitoring
PLW	Pregnant and Lactating Women
SC	Super Cereal
SC+	Super Cereal Plus
SFT	Seeds for Training
SP	Samaritan's Purse
UNHCR	United Nations High Commissioner for Refugees

WFP World Food Programme

WHO World Health Organization

1. Summary

The Food Emergency Assistance in Diffa (FEAD) Project is a food security emergency intervention for displaced and host populations in the Department of Bosso. It follows the Support for the Resiliency of Communities in Diffa (ARCAD) project that was funded by USAID/FFP/EFSP which ended in July 2015, and has provided food assistance to vulnerable people in the same department since July 2014.

This report presents the results of the mid-term evaluation survey conducted with the beneficiaries in 16 villages in the Department of Bosso.

The information contained in this report describes both the methodology of the mid-term evaluation, and the results of the survey with a view to making a comparison of the results to show the progression of the living conditions of the beneficiary population. This evaluation will in turn help to determine to what extent the set of results indicators were achieved in terms of objectives provided for in the logical framework of the project.

This evaluation focused on five categories of beneficiaries of the project and was conducted in March 2016 for Seeds for Training (SFT) beneficiaries and during the month of April 2016 for the other categories of beneficiaries. It should be noted that this evaluation also serves as **the final survey for the beneficiaries of SFT and gardening.**

At the end of this mid-term evaluation, several key findings were noted, namely:

- The coping strategy index (CSI) average in the households (HHs) is **13.9** while the result for the Baseline was **14.3** ;
- **46.9%** of HHs were using emergency coping strategies in the last 30 days preceding the assessment;
- **27.8%** of surveyed HHs had a poor or limit food consumption score (FCS);

- **98.8%** of women beneficiaries were able to list at least six hygiene and nutrition practices compared to 62% of the baseline survey;
- Results from this survey also showed a Household Dietary Diversity Score (HDDS) of **4.6 w**hich is equal to the Baseline result of **4.6**;
- The prevalence of acute malnutrition in women was **10.8%** and the prevalence of acute malnutrition in children aged 6-59 months was **5.8%** compared to 13.7% and 7% from the baseline survey respectively;
- The prevalence of exclusive breastfeeding among the children under the age of six months was **75%** compared to 40% in the baseline;
- The prevalence of children 6 to 23 months receiving a minimum acceptable diet was **54.5%** compared to 41.2% at the baseline survey;
- The percentage of gardening women who contributed to group savings to support the activities of gardening was **35.0%;**
- The percentage of farmers who used at least two sustainable agricultural practices in the past 12 months was of **95.1%** widely over the 29.3% of the baseline;
- The average production per farmer for millet was **182.6kg**, and for cowpeas **17.3kg**, respectively, compared to 80.5kg and 13.9kg before the implementation of the activities;
- The average production of vegetables per woman of the total 80 targeted beneficiaries who participated in the project was **114.1kg,** compared to 144.6 kg per woman at the baseline. Of the 80 beneficiaries who participated in the project, only **53** women produced sufficient yields. Thus, when calculating only the women who produced, the average production was **172.2kg** per woman.

2. Introduction

2.1. Project presentation and humanitarian situation

The FEAD Project was implemented by Samaritan's Purse (SP) Niger. It was an emergency project for the food security of the population in the Department of Bosso. Its timeline was for a period of one year from the month of June 2015 through November 2016. The project was implemented in the catchment areas for the benefit of vulnerable HHs in 18 villages in two

communes of the Department of Bosso (Diffa region) who were concerned with the distribution of food and seeds with a very short cycle, and also in other villages affected by gardening challenges among women. The catchment villages had been severely affected by the Boko Haram insurgents, and the project aimed to ensure the food security of the targeted beneficiaries.

In the project proposal, SP planned to target 2,279 HHs for the lean season and 2,474 beneficiary HHs in the post-lean season. Among these beneficiaries, were the displaced people composed of refugees, some returnees and internally displaced persons (IDPs). The size of the displaced population has been changing, and humanitarian organizations are working hard to cover most of this population with life-saving interventions. However, at baseline, it had been estimated that more than 100,000 people hailed from Nigeria. This number increased to approximately 241,000 displaced people (DP) in all categories during the month of May 2016 according to UNHCR. Night attacks by the Boko Haram militants continue to cause the displacement of the population to the north of the Department of Bosso, the place judged to be the calmest from the security point of view. The humanitarian community is continuing to better coordinate response in the region to meet the needs of the affected population. A significant number of humanitarian actions are especially focused on food distribution in the region.

The FEAD Project's overarching aim was to provide emergency food assistance to the DPs in the Diffa Region. The project comprised of two strategic objectives, namely:

1. Increased food access at the household level among targeted beneficiaries.

2. Improved nutrition and dietary diversity to prevent acute malnutrition.

These objectives were to be achieved through various integrated activities.

Training in sustainable farming techniques followed the distributions of seeds with a very short cycle. These were conducted for 782 host HHs during the winter period. During the lean period, three targeted unconditional food distributions were carried out from July through September 2016. Maize, cowpeas, and oil were distributed to each HH. In addition to these provisions, the

Super Cereal Plus (SC+), super cereal and oil were also distributed to HHs in which pregnant and/or lactating women (PLW) as well as children from 6 to 59 months had been identified.

These activities continued throughout the post-lean season. Four additional distributions were conducted from November 2016 to February 2016 in favor of 2,474 vulnerable HHs.

In addition to these activities, FEAD also continued to support two gardening women groups in the villages of Toumour and N'Gouba that it inherited from the ARCAD Project. The 80 gardening women were in two groups, and had participated in the ARCAD project since 2014. These women were actively involved in the awareness-raising and nutritional education activities including gardening, savings and credit.

2.2. Mid-term evaluation objectives

This survey aimed to:

- Measure the performance indicators for the project to ascertain the current food situation of the beneficiaries of the project;
- To compare the values of these obtained indicators with those of the baseline in order to better recognize the nature of the results achieved.

The direct beneficiaries of the FEAD Project were identified during operational targeting using the Household Economic Analysis (HEA) method. This method was used because it provides a minimum complete set of information, including all the relevant variables and it ensures that the collection of information is comprehensive. This methodology is credible in identifying the most vulnerable HHs in a community.

The data collection for this mid-term evaluation was conducted from March 10-13, 2016, for the SFT beneficiaries (which is the final evaluation), April 9-13, 2016, for the women benefitting from gardening activities (which is the final evaluation), and April 25-30, 2016 for the other three categories, (host, DPs, and the PLW) about a month after the last food distribution.

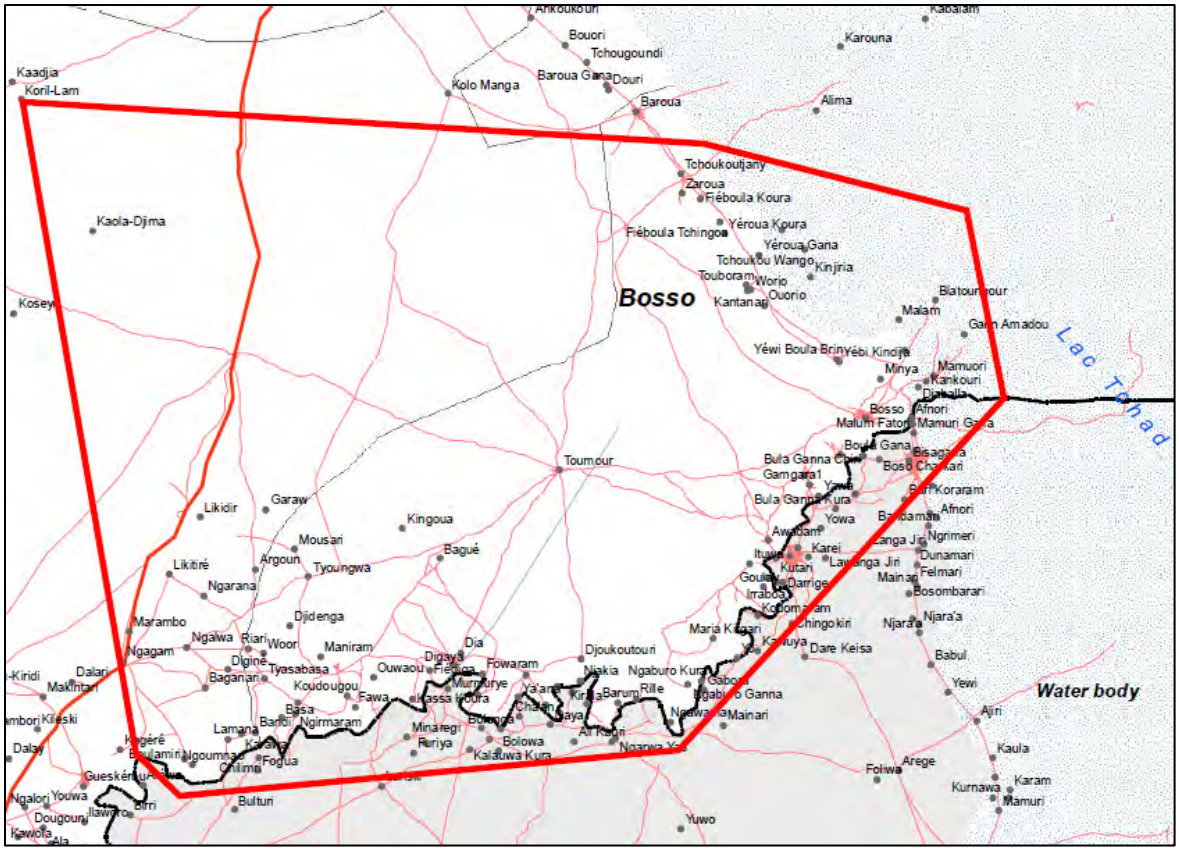

Figure 1: Map of the area of intervention of the project (Bosso and Toumour communes) (Source: OCHA)

A total of 16 beneficiary villages were selected in catchment areas of intervention and supported with food by the FEAD Project. The geographical coordinates of the villages as well as the reasons for their selection are summarized in the following table.

Following the security events which have caused the displacement of people from their home villages, some villages were replaced by others in food distributions. This was the case of Tchoukoujani, Fie Boulwa Koura, Djarawa, Yarwa Koura, and Yarwa Gana. To complete the gap, the beneficiaries of these villages were replaced by the ones from Bourbourwa, Mandawa, Kalkali, Guwaso, and N'gueldjoungoudo villages.

Table 1: Intervention villages of the project

N	Communes	Villages	GPS Coordinates		Village Targeting Rationale	
			Latitude (N)	Longitude (E.)	Grain deficit	Displaced
1	Bosso	Bague	13.36.577'	013.04.569'	Yes	Yes
2	Bosso	Bague kiessa	13.36.020'	013.01.398'	Yes	Yes
3	Bosso	Borbouyari	13.49.641'	013.13.090'	No	Yes
4	Bosso	Djarawa	13.50.466'	013.12.097'	Yes	Yes
5	Bosso	Fie Boulwa Koura	13.49.297'	013.12.699'	Yes	Yes
6	Bosso	Mille	13.47.643'	013.14.920'	Yes	Yes
7	Bosso	Tchoukoudjani	13.50.214'	013.11.593'	No	Yes
8	Bosso	Yarwa gana	13.18.707'	012.36.009'	Yes	Yes
9	Bosso	Yarwa koura	13.49.178'	013.14.728	Yes	Yes
10	Toumour	Djariho	13.53.501'	012.45.263'	Yes	Yes
11	Toumour	Gagorce	13.52.051'	012.29.080'	Yes	No
12	Toumour	Kachacho	13.41.983'	013.10.039'	No	Yes
13	Toumour	Kakarwa	13.43.413'	013.04.439'	Yes	Yes
14	Toumour	Karo	14.06.240'	012.28.240'	Yes	No
15	Toumour	Nguelgnale	14.11.904'	012.24.647'	No	Yes
16	Toumour	Sayam	13.50.901'	012.37.860'	Yes	Yes

3. Methodology

3.1 Preparation of the random sampling

Four samples corresponding to the four categories of beneficiaries were prepared separately on the basis of the comprehensive lists of HHs. However, for the nutrition and gardening beneficiaries, 100% (80 women) were surveyed. Using the site www.raosoft.com/samplodesize.html with a 90% level of confidence and 10% margin of error, then inputting the total number of HHs in the 'population' section; the result is a primary sample "recommended sample size," which is **65** for the category of communities, **64** for DPs, **51** for PLW, and **61** for SFT beneficiaries. On each primary sample, it is necessary to add 20% of

the last sample to obtain the final number of HHs to be interviewed. Therefore, the total HHs who were interviewed by category was 78 for the host community, 77 for DPs, 61 for the PLW, and 73 for SFT beneficiaries. There were 80 gardening beneficiary women. The margin of 20% added to the first four categories was considered to be a reserve for questionnaires during data entry to subsequently eliminate certain questionnaires, which would not have sufficient information or would present errors.

3.2 Drawing of households to investigate

For each category, the drawing was done so that each HH had the same chance to be interviewed. To begin with, the survey team proceeded with the determination of the sampling interval by dividing the population by the previously-obtained final sample. Then a random number was drawn between 1 and the whole part of the first sampling interval using the function "HAZARD BETWEEN BOUNDS" on an Excel Spreadsheet. The first figure given by this function corresponds to the order number determining the first HH among those who were to be surveyed. In this way, the next HH to be investigated is determined by adding each time the sampling interval to the previous HH. On the Excel spreadsheet, the HHs to investigate were marked by thick boxes to identify them during the data collection exercise.

The purpose of this survey was to assess the impact of the food distributions carried out by the project and to know the level of food security for the beneficiary HHs, and also to gauge the level of improved nutrition and dietary diversity in the HHs.

Table 2: Categories of surveyed beneficiaries for the evaluation

No.	Description of the category	Sampling rate
1	**Host communities - (HC)** *(which have been targeted in different villages of the FEAD Project)*	Level of confidence = 90 % Margin of error = 10%
2	**Displaced households - (DH)** *(which have been targeted in different villages of the FEAD Project)*	Level of confidence = 90 % Margin of error = 10%

3	**Pregnant and lactating women (PLW) beneficiaries of the NSPAMM Program** *(who have been targeted in the first two categories)*	Level of confidence = 90 % Margin of error = 10%
4	**Gardening women of Toumour and N'Gouba (Gar)** *(beneficiaries of the ARCAD Project which the FEAD Project accompanied with trainings on gardening, nutrition, and savings systems)*	All of the 80 women beneficiaries
5	**SFT Beneficiaries (millet and cowpeas)** *(which were targeted in the first category)*	Level of confidence = 90 % Margin of error = 10%

To calculate the samples of the first three categories as well as the fifth category of beneficiaries, the 90% level of confidence and 10% margin of error were applied by using the website www.raosoft.com/samplodesize.html. For beneficiaries of category four, all of the 80 women were surveyed because of the small sample size.

On the basis of these calculations, the total sample was 321, but 369 beneficiaries were surveyed in the course of the evaluation exercise.

Table 3: Sample for evaluation by category of beneficiaries

	Total number of households	**Sample size used**	**Number of completed surveys**
Category 1: Host communities	1,502	65	78
Category 2: Displaced peoples	972	64	77
Category 3: Pregnant and Lactating Women	196	51	61
Category 4: Gardening women	80	80	80
Category 5: SFT beneficiaries	571	61	73

(millet and cowpeas)			
TOTAL		**321**	**369**

All of the indicators contained in the logical framework were measured during this evaluation. The list of indicators per category of beneficiaries is presented in the table hereunder.

Table 4: Indicators measured by beneficiary category

		Categories of beneficiaries				
No	Indicators	1 HC	2 DP	3 PLW	4 Gardening	5 SFT HC
1	Coping Strategy Index average of HHs *(Category 3 and 5 are included in 1 and 2)* – CSI	X	X		X	
2	Prevalence of HHs who use emergency coping strategies *(category 3 and 5 are included in 1 and 2)*	X	X		X	
3	Household Dietary Diversity Score *(Category 3 and 5 are included in 1 and 2)* - HDDS	X	X		X	
4	Percent of HHs with FCS (<= 42) limit or poor *(Category 3 and 5 are included in 1 and 2)*	X	X		X	
5	Prevalence of children 6 to 59 months with acute malnutrition *(category 3 and 5 are included in 1 and 2)*	X	X		X	
6	Prevalence of acute malnutrition in women			X	X	
7	% of beneficiary women who know at least 6 hygiene and nutrition practices				X	
8	Prevalence of exclusive breastfeeding for children under 6 months				X	
9	Prevalence of children 6 to 23 months who receive a minimum acceptable diet				X	

10	% of garden women who contribute to the savings of the group				X	
11	Average production of vegetables by woman				X	
12	Average production of millet, cowpea and moringa by HH					X
13	Percentage of SFT beneficiaries who used at least 2 sustainable farming techniques in the past 12 months					X

3.3 Training of enumerators

Four types of questionnaires were developed based on the different categories of beneficiaries to be interviewed.

To carry out this investigation, two teams of four enumerators each were formed. It should be noted that special emphasis was placed on the level of the enumerators and the mastery of the local language for their selection. The enumerators were then trained on questionnaire administration for a day. After the training, two of the enumerators were chosen as team leaders, and the teams were supervised by two monitoring and evaluation assistants forming part of the SP staff for the collection of data in the field.

3.4 Data collection

The collection of data for this mid-term evaluation lasted for six days for the three categories (host community members, DP, and PLW), four days for the fourth category (women beneficiaries of gardening activities) and four days for the fifth category (SFT beneficiaries of millet and cowpeas).

At each step, after explaining the objectives of the mission to the (customary) local authorities, enumerators visited HHs to interview targeted persons. At the time of the survey, when members

from a targeted HH were absent, the HH was automatically replaced by the HH that followed in the chronological order on the list of beneficiaries.

3.5 Data entry and analysis

Data entry and analysis were done on an Excel template previously established by the monitoring and evaluation team of the project.

All possible formulas to compute the set of indicators were incorporated into this template. To facilitate the data entry, each issue was represented by a code on the questionnaire. After the data entry, the monitoring and evaluation team carried out data cleaning and analysis. The noted errors were corrected by referencing the hard copies of questionnaires and triangulating the information captured.

Different indicators of food security were calculated based on standard formulas used by the World Food Programme (WFP) in Niger.

4. Principal results of the evaluation

4.1 Situation of the displaced populations

The DPS were interviewed regarding the reasons that led them to leave their villages of origin and 98% (63 persons out of 64) stated that they fled Boko Haram attacks.

As shown in the figure below, most DP surveyed were IDPs (55%), who fled from the villages lying at the edge of the Lake Chad Basin where insurgents are very active. The returnees represented 27% of the respondents, and 19% were refugees.

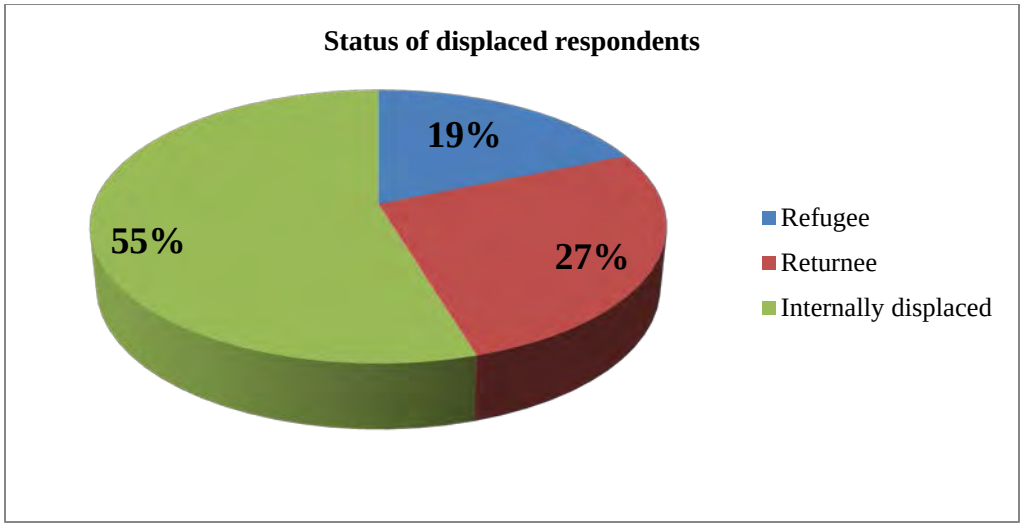

Figure 2: Status of surveyed displaced households

On the other hand, 86% of surveyed displaced people had at least 10 months' seniority in the villages where they were currently staying. Only 14% lasted less than 10 months in these host villages.

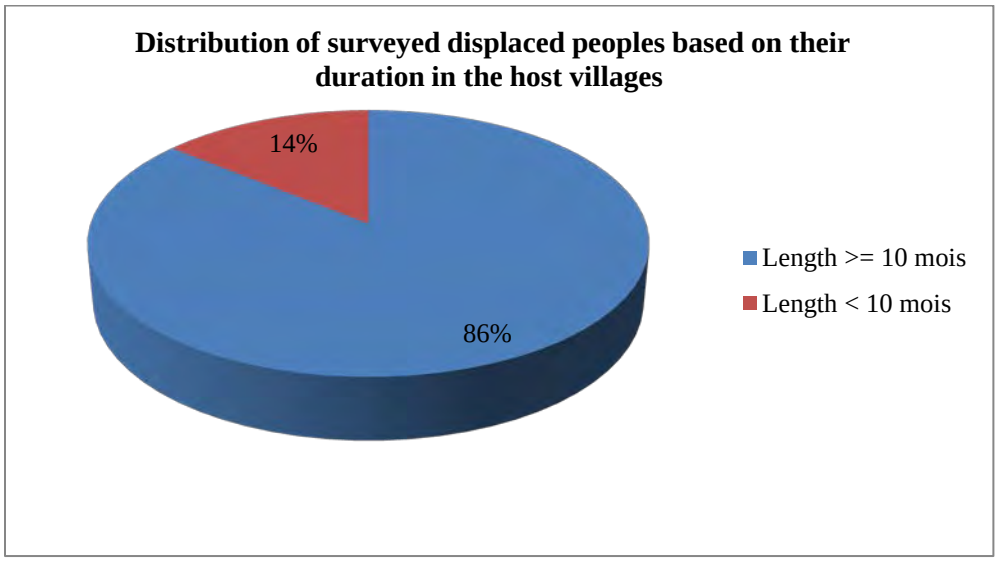

Figure 3: Distribution of surveyed displaced peoples based on their duration in the host villages

The figure below gives the time estimates that surveyed beneficiaries spent in their current host villages. Indeed, according to the data collected, 73% of respondents intend to remain

permanently in the host villages. 23% of these displaced people expect to stay there until the end of the conflict, and only 3% plan to stay temporarily and leave after four to five months.

The analysis of this information shows that the majority of the displaced people left their villages of origin in very difficult circumstances, which is why they do not want to return. Even for those who intend to return, their return is contingent upon an end to hostilities.

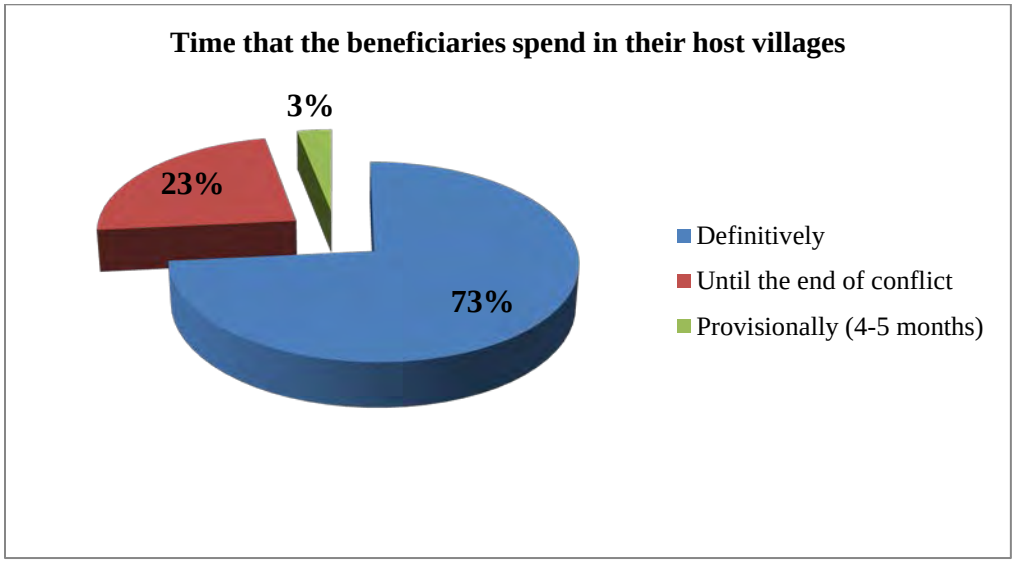

Figure 4: Time that the beneficiaries spend in their host villages

The following table shows the main causes of food insecurity among the surveyed HHs. According to the collected data in this survey, insecurity was the main cause of food insecurity in interviewed HHs. This was further compounded by drought or poor rainfall, followed by lack of means for food purchases. When an analysis was done by category, host community members were much more affected by drought and the damage to crops than the other categories.

Table 5: Main causes of food insecurity, according to the categories of recipients surveyed

Main cause of food insecurity by category of beneficiaries

	#					%				
	1-HC	**2-DP**	**3-PLW**	**4-GAR**	**5 SFT**	**1-HC**	**2-DP**	**3-PLW**	**4-GAR**	**5 SFT**
Drought/poor rainfall distribution	16	1	11	18	47	24.62%	1.56%	21.57%	22.50%	77%
Insecurity	29	60	22	51	4	44.62%	93.7%	43.14%	63.75%	7%
Lack of input	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%
No physical access to the market	1	0	0	0	2	1.54%	0.00%	0.00%	0.00%	3%
No way to buy food	15	3	15	11	0	23.08%	4.69%	29.41%	13.75%	0.00%
Damage to crops	4	0	3	0	8	6.15%	0.00%	5.88%	0.00%	13%
TOTAL	**65**	**64**	**51**	**80**	**61**	**100%**	**100%**	**100%**	**100%**	**100%**

4.2 Reception of food assistance

The FEAD Project team took a keen interest in verifying whether the beneficiaries received food aid from other humanitarian agencies. Accordingly, the results of this survey revealed that no host community HHs received food assistance from other humanitarian actors in the last 30 days prior to the survey. However, 12.5% of DPs and 2.5% of the gardening beneficiaries received some assistance from International Committee of the Red Cross (ICRC) during the last 30 days prior to collection of data (Figure 5). The proportion of recipients who received a significant amount of aid is that of the DPs, and that is due to their mobility. They can be registered by other partners to receive food assistance in other towns. For the gardening beneficiaries, they did not benefit from the FEAD food distributions because they are in Toumour and N'gouba villages where another partner (ICRC) was already doing food distributions.

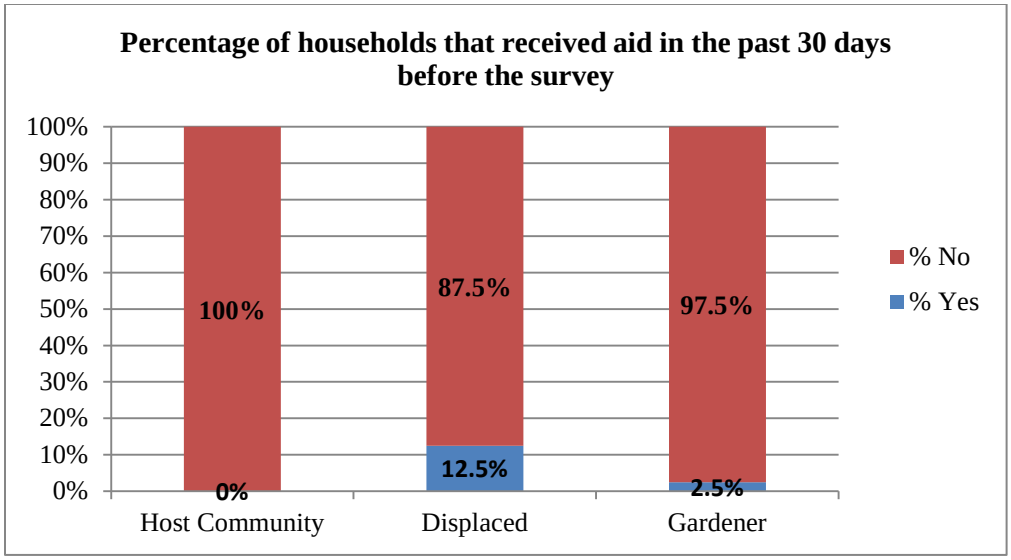

Figure 5: Percentage of households that received aid in the past 30 days before the survey

4.3 Measured indicators of the project

The data collection for this mid-term evaluation survey conducted in the month of April 2016 intended to collect data and measure a set of 13 results indicators for the FEAD Project. These indicators were measured through activities that were implemented, namely: free distribution of food; training and distribution of seeds with a very short cycle; nutrition; gardening; and the implementation of the system of savings (MMD activities).

It should be noted that this investigation is the final survey for categories 4 and 5 (gardening women and SFT beneficiaries of millet and cowpeas) because their activities were completed at the time of conducting the evaluation.

A follow-up of some of these indicators was carried out before this evaluation exercise through Post Distribution Monitoring (PDM) inquiries. It is among these indicators, especially the standard ones (the prevalence of HHs utilizing emergency coping strategies, simplified CSI, FCS and HDDS) often used by WFP in Niger to measure the impacts of food distributions to beneficiary HHs that the mid-term evaluation focused on measuring their significance.

4.3.1. Coping Strategies Index average (CSI)

The CSI measures the adoption of the strategies employed by HHs when faced with a food insecurity situation. This indicator was measured in the last seven days preceding the data collection. Accordingly, it measured the number of days during which one of the following strategies were used by HHs: eating cheaper and less preferred foods, borrowing food from relatives and friends, decreasing the amount of food per meal, reducing meal consumption for adults, and reducing the number of meals per day. Depending on its severity, each strategy has a certain weight and the combination of these weights are used to calculate the indicator.

The average obtained at the end of this final evaluation was 13.9, a decrease of 0.4 for this indicator compared to its baseline value (14.3). The highest average for this indicator was observed at the level of gardening women (15.2). This result shows that the beneficiaries of the gardening activity are the most affected by food insecurity. This can be justified by the fact that the latter did not receive food aid from FEAD and gardening did not do well due to lack of water for irrigation. Moreover, these beneficiaries found the support from other stakeholders involved in food distributions to be inadequate comparable to their needs. This was revealed from discussions with these beneficiaries. The lowest average value for this indicator was observed in the host communities (12.0). It is worth noting that the host community included SFT beneficiaries of millet and cowpeas.

This indicator allowed the project team to make comparisons in terms of food security between the different categories of beneficiaries. Accordingly, the results were a bit lower than the baseline. However, these results were well above the PDM results for the fiscal year 2016 with an average of 1.3 below the target which was <2.86. This variance between PDMs and mid-term assessment can be attributed to the fact that only beneficiaries who received food aid were interviewed in PDMs while mid-term evaluation included all beneficiary categories, including gardening women who did not received food commodities. In addition to that, PDMs were conducted two weeks after the one month ration distributions while the mid-term evaluation was conducted one month or more after the last distribution. This shows the short-term impact of food distributions in this context.

The average value obtained by categories of beneficiaries is summarized in the table below.

Table 6: Average of household adaptation strategies

Beneficiary category	1 HC	2 DP	4 GAR	Total	Survey result
Sample	65	64	80	209	**13.9**
Total Scores	777	923	1212	2912	
Result	**12.0**	**14.4**	**15.2**	**13.9**	
NB: Category 3 (PLW) is included in categories 1 and 2. Category 5 (SFT millet-cowpeas) is included in category 1 as well.					

4.3.2 Prevalence of households using emergency coping strategies

This indicator was measured for the last 30 days preceding the survey. It is based livelihoods and is used to better understand the capacity of HHs to deal with shocks and long-term food insecurity.

The World Food Programme in Niger selected a list of strategies of adaptations that were shared with SP in 2015 (just after the Baseline Survey of the FEAD Project). These strategies were classified into four categories, from the least severe strategy to the most severe: neutral strategies, stress strategies, crisis strategies, and strategies of emergency, respectively in green, yellow, orange and red.

The results of the mid-term evaluation survey shows that an average of 46.9% across the three categories used the emergency strategies. This average was 72.1% in these same categories during the original survey (Baseline). This result shows that the use of emergency strategies has decreased by 25.2% points from the beneficiaries of the project. The reduction in the use of emergency strategies assume that HHs cut down on the sale of breeding animals, sale of land, and begging because of the food aid they received through the various distributions.

Table 7: Prevalence of households using emergency strategies

Beneficiary category	1 HC	2 DP	4 GAR	Total	Survey results
Sample	65	64	80	209	**46.9%**
# of correct response	33	19	46	98	

Result	**50.8%**	**29.7%**	**57.5%**	**46.9%**	
NB: Category 3 (PLW) is included in categories 1 and 2. Category 5 (SFT millet-cowpeas) is included in category 1 also.					

The figure below shows the percentage of HHs that use different coping categories based on the severity of the need for food.

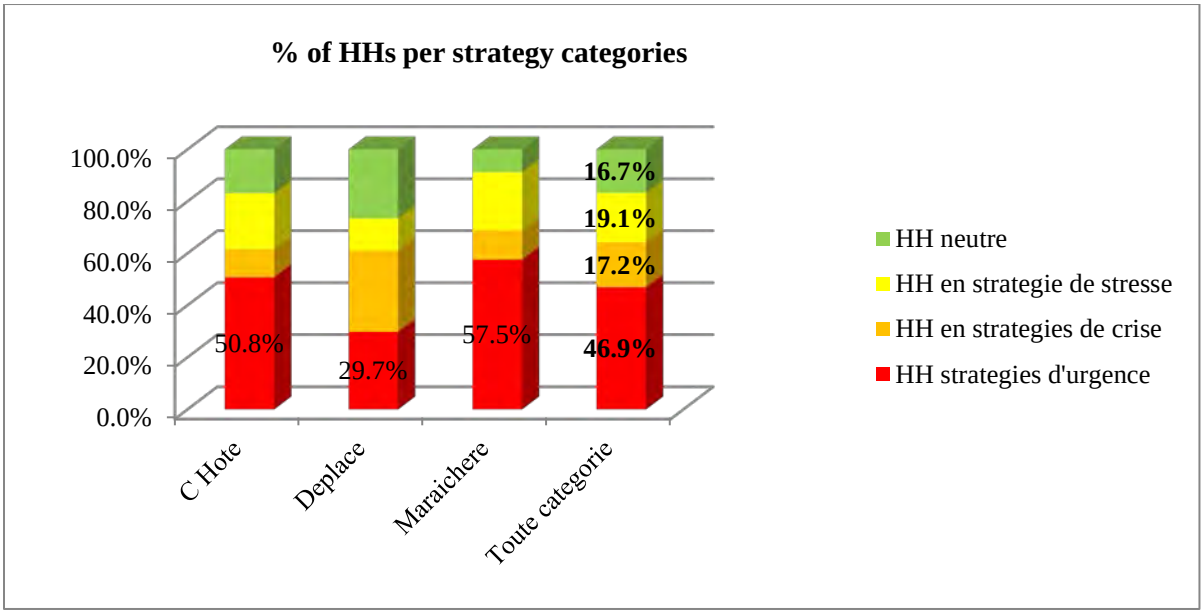

Figure 6: Percentage of households using different coping strategies

This result was higher than the average results from the PDMs which was 13.8 % compared to the target which was set as 14.4 %.

Again results from the mid-term evaluation shows a result not as good as the PDMs, with a percentage of 46.9% as the prevalence of HHs using emergency coping strategies. The result is still better than the baseline. The same reasons apply in the manner that the CSI explains the differences between PDMs and mid-term evaluations.

4.3.3 Household Dietary Diversity Score (HDDS)

This indicator measures the different categories of foods consumed by HHs in the last 24 hours before the survey. This means that it measures the quality of the diet of HHs surveyed. The household consumption required is compared to 16 food groups. The 16 food groups were also grouped into seven major categories. Each food category has a well-defined weight. This weighting varies its nutrition from 0 to 7. Therefore, HHs can be grouped depending on their dietary diversity, thus HHs with a poor diet (HDDS < 4.5), HHs with an average diet (4.5 <= HDDS <= 6) and HHs with a high diet when the HDDS >6.

The result of this survey gave an average of 4.6 HDDS at the end of the baseline survey conducted in June 2015, and the target >=4.6. Although the result of this indicator remained constant, it is attributable to outcomes of training and also the distribution of food commodities by the FEAD Project which ensured that the beneficiaries were able to maintain the pace of food diversification notwithstanding the food challenges in catchment areas. There was a slight difference between gardening women and the other two categories: food diversity was acceptable or even high among this category of beneficiaries because of the training they received, but all thanks to small productions that were done.

Table 8: Household dietary diversity score (HDDS)

Beneficiary category	**1 HC**	**2 DP**	**4 GAR**	**Total**	**Survey results**
Sample	65	64	80	209	**4.6**
Score total	298	255	417	970	
Result	**4.6**	**4.0**	**5.2**	**4.6**	
NB: Category 3 (PLW) is included in categories 1 and 2. Category 5 (SFT millet-cowpeas) is included in category 1 also.					

Category 1 and 2 beneficiaries who received food rations over the last months, shows that the distributed rations by themselves do not increase the number of food groups consumed by HHs.

In this emergency context the most important aspect is to get enough food while diversity comes second.

4.3.4 Percentage of households with a borderline or poor Food Consumption Score (FCS)

The FCS is another indicator used by WFP to measure the dietary quantity and quality of HHs. It measures food diversity, frequency of consumption, and the importance of each food consumed. In the document called "Compendium of Indicators, Strategic Results Framework" used in Niger, WFP uses the following scales for the classification of HHs according to the food consumption score (FCS): HHs with a poor FCS (lower than 28), HHs with a limited FCS (between 28 and 42), and HHs with an acceptable FCS (above 42). The percentage of HHs that had a score of poor or limited food consumption by category of beneficiaries is summarized in the table below.

Table 9: Percentage of households with limited or poor food consumption score

Beneficiary category	1 HC	2 DP	4 GAR	Total	Survey results
Sample	65	64	80	209	**27.8 %**
Correct response	12	33	13	58	
Result	**18.5 %**	**51.6 %**	**16.3 %**	**27.8 %**	
NB: Category 3 (PLW) is included in categories 1 and 2. Category 5 (SFT millet-cowpeas) is included in category 1 also.					

In all classes, there was an average of 27.8% of HHs that had a score of poor or limited food consumption. By category, the highest average was observed among displaced persons (51.6%). This mid-term assessment shows that the target for this indicator which is 4.5% was not reached, and the Baseline result was 22.5%. The number of HHs with a poor or limited FCS increased for two reasons: the lean period negatively impacted the living conditions of these HHs from the food point of view limiting their FCS (the assessment was conducted in the month of April

2016); and also the movement of people led to a supplementary charge in some places, especially at the level of host HHs. In this situation, whether it be host HHs or HHs displaced by insecurity, both sides were forced by circumstances to reduce their food intake owing to an increase in the number of HHs with a poor or limited FCS during this period. The situation of DP was much more precarious. Since the distributions stopped at least one month before the evaluation, it was confirmed that host HHs (which include gardening women) were much more able to adapt and find other food sources than displaced HHs. As soon as the ration for displaced persons ended, the FCS decreased very rapidly.

These results were compared with the PDM findings. The percentage of HHs with a borderline or poor average FCS was 8%, which was much closer to the target of "less than 4.5%". This difference between PDMs and mid-term evaluation can be explained by the fact that only beneficiaries who received food commodities were interviewed in PDMs while mid-term evaluation included all beneficiary categories, including gardening women who did not receive food commodities. Additionally, PDMs were conducted two weeks after the one month ration distributions while the mid-term evaluation was conducted one month or more after the last distribution.

4.3.5 Prevalence of acute malnutrition in children aged 6-59 months

A total of 292 children aged 6-59 months were identified in surveyed HHs in the three categories of beneficiaries and were screened for malnutrition. The screening for malnutrition used the mid-upper arm circumference (MUAC). The following scales are typically used in Niger: a MUAC lower than 110 mm indicates severe acute malnutrition and between 110 mm and 125 mm indicates moderate acute malnourishment.

The result of this mid-term evaluation gives a percentage of acute malnutrition in children as 5.8%, while the rate was 7% at the baseline. Moreover, it can be easily seen that the prevalence of acute malnutrition in children was higher in gardening recipients (10.6%), which explains the limitation of the gardening activities with all associated difficulties that women encountered with the irrigation system, and which has produced very little yields. However, the general average of this indicator (5.8%) among all categories of beneficiaries of the project is acceptable because it

decreased compared to the baseline (7%), and this demonstrates a particular investment in the project by trainings and activities of food distribution taking place to reach the target of "below 7%".

Table 10: Prevalence of children 6 to 59 suffering from acute malnutrition

Beneficiary category	1 HC	2 DP	4 GAR	Total	Survey results
# of children 6-59 months screened	104	94	94	292	**5.8 %**
# of correct responses	3	4	10	17	
Result	**2.9 %**	**4.3 %**	**10.6 %**	**5.8**	
NB: Category 3 (PLW) is included in categories 1 and 2. Category 5 (SFT millet-cowpeas) is included in category 1 also.					

4.3.6 Prevalence of acute malnutrition in women

Targeted PLW and gardening women were identified in the two categories of surveyed beneficiaries screened for malnutrition. Altogether 83 women were screened in beneficiary HHs. The result of this evaluation gives a prevalence of acute malnutrition in women as 10.8% compared to the baseline result, which showed a rate of 13.7%. This decline could be attributed to the distribution of the NSPAMM ration, which allowed for the improvement of the nutritional status of these women. Women with a MUAC <230 mm were categorized as having acute malnutrition. However, interpreting the results between the two categories of beneficiaries, a higher prevalence of acute malnutrition among gardening beneficiaries is observed. This is due to the fact that the latter did not produce enough with gardening activities and they were not the beneficiaries of food assistance. These results reached the target of less than or equal 13.7%.

Table 11: Prevalence of acute malnutrition in women

Beneficiary category	4 GAR	3 PLW	Total	Survey result

# of women in the survey	32	51	83	**10.8%**
# of correct responses	6	3	9	
Result	**18.8%**	**5.9 %**	**10.8%**	

4.3.7 Percentage of women who can list at least six hygiene and nutrition practices *(this survey constitutes the final survey for this indicator)*

A total of 80 women beneficiaries of gardening activities were surveyed on the subject. 40 women were from Toumour and 40 are from N'Gouba. These women led gardening activities and benefited from the awareness-raising sessions on key family practices which include lifesaving information and practical ways to care for children and prevent diseases (topics that were covered through monthly sensitization sessions included: hand washing with soap at appropriate times, exclusive breastfeeding for six months, the use of mosquito nets; the introduction of quality complementary feeding starting at six months of age, accompanied by continuous breastfeeding up to 24 months; use of health centers), and savings systems. These women were also former recipients of the ARCAD project, through which they benefited from the same activities. The results of the evaluation show that there is a cumulative effect of the awareness activities to date in these two projects. Indeed, after the ARCAD Project, or at the end of the baseline survey of the FEAD Project, 62.0% of these women could list at least six nutritional practices. The evaluation of the FEAD Project shows that 98.8% of these women were able to list at least six practices. It should be noted that before the two projects, the results of the baseline ARCAD showed that only 28.3% of these women could list the six practices. This shows the positive and cumulative impact of the two projects through intensive trainings with respect to this indicator. The target of 80% was reached.

Table 12: Percentage of women who can list at least six nutritional and hygiene practices

Beneficiary category	4 GAR.	End line Result (for this indicator, this survey constitutes the final survey)
Sample	80	**98.8 %**
# of correct responses	79	

Result	**98.8 %**	

4.3.8 Prevalence of exclusive breastfeeding for children under six months old *(final survey for this indicator)*

This indicator was measured through the FEAD Project with 80 women beneficiaries through two garden sites at Toumour and N'Gouba. After interviewing 100% of the women, it was established that only four children were under the age of six months. The investigation also revealed that of the four children, three were exclusively breastfed (75.0%). From the representative point of view, the small number of children aged less than six months does not allow the FEAD Project team to make a better comparison and estimation of this indicator. Indeed, even at the current FEAD baseline, there were only five children aged less than six months, and the results of this baseline survey showed that two out of the five (40%) were exclusively breastfed. This result obtained through data collection confirms the result of the previous measured indicator, and also shows the impact of various training courses on key family practices given to beneficiaries. The fixed target of 44.8% was reached notwithstanding challenges.

Table 13: Prevalence of exclusive breastfeeding for children under six months old

Beneficiary category	4 GAR.	End line Result
# of children less than 6 months	4	**75.0 %**
# of children practicing exclusive breastfeeding	3	
Result	**75.0 %**	

4.3.9 Prevalence of children 6 to 23 months receiving a minimum acceptable diet *(final survey for this indicator)*

The prevalence of children 6 to 23 months receiving a minimum acceptable diet as measured by WHO standards was measured through 80 gardening women involved in nutritional outreach activities in the framework of the FEAD and ARCAD projects. There were 33 children aged 6 to

23 months that were represented in the gardening group. Moreover, the results also show that of the 33 children, 18 received a minimum acceptable diet (54.5% of the children in the FEAD Baseline, only 41.2% of children 6-23 months had a minimum acceptable diet. The improvement in the minimum acceptable diet indicator in the end line survey indicates an improvement in dietary diversity and dietary quantity for infants and young children as a result of the training given to the gardening women.

Table 14: Prevalence of children aged 6-23 months receiving a minimum acceptable diet

Beneficiary category	4 GAR.	End line result
# of children from 6 to 23 months	33	**54.5 %**
# of correct responses	18	
Result	**54.5 %**	

4.3.10 Percentage of women's gardening group participants contributing to the saving funds to support gardening activities *(final survey for this indicator)*

There were 80 women beneficiaries of whom 40 worked on the garden site in Toumour and 40 in N'Gouba garden site. The assessment revealed that 28 women out of the 80 interviewed contributed 50 Naira per week as savings to support gardening activities, which is 35% compared to the baseline result of 53.2%. The decline in results is attributable to the women's discouragement due to various challenges (e.g. lack of water on the sites) in gardening activities that made some of them prefer to contribute for other purposes than to support the gardening activities. According to the women interviewed during this evaluation, the objectives of their contributions in the savings are in the chart below (Figure 7).

Table 15: Percentage of women's gardening group participants contributing to the saving funds to support gardening activities *(final survey for this indicator)*

Beneficiary category	4 GAR.	End line result
Total women	80	**35.0 %**
# of correct responses	28	
Result	**35.0 %**	

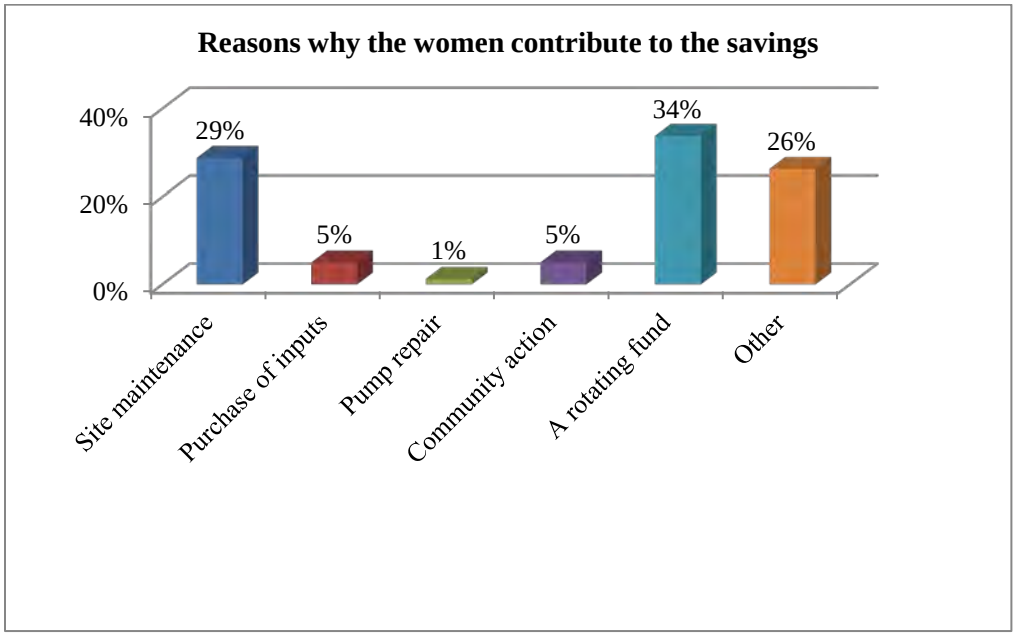

Figure 7: Reasons why the women contribute to the savings

Between October 2015 and February 2016, all the 80 beneficiaries enrolled in the gardening activities contributed on average 1,019 Naira per woman.

4.3.11 Average production of vegetables by women

The two women gardening groups produced a total of 9,125 kg of vegetables and fruits during the 2015-2016 season. On average, each of the 53 women who produced crops yielded 172.2 kg of fruits and vegetables. The average production by all women beneficiaries (80) was 114.1 kg

compared to the baseline of 144.2 kg. The drop in production at both sites was due to a severe water shortage which caused a decline in this indicator.

4.3.12 Average production of millet and cowpeas per household

The table below gives the average production in kilograms for the two seeds cited by HHs beneficiaries of seed activities for training. As for the production of moringa, it should be noted that this will be assessed by the end of the project when recipients begin the harvest.

The table below shows that the average production of millet and cowpeas by HH increased from 80.5 kg at the baseline to 182.6 kg at the end line, and from 13.9 kg at baseline to 17.3 kg at end line respectively. Several factors can explain this result. The average increase in millet and cowpeas production may be due, among other things, to the use of good quality seeds coupled with various training courses on farming techniques from which HHs benefitted. Furthermore, the spike in yields can be attributed to abundant rainfall, or a drop in parasitic pressure in the area compared to the previous year.

As for the moringa, this crop is not very well known or developed in the area of intervention of the FEAD project. Nevertheless, 61 surveyed HHs (100%) received seeds distributed by SP and sowed or transplanted this crop individually or collectively. The survey revealed that among the 61 HHs who sowed or transplanted moringa, 10 HHs were producing it. Unfortunately at the time of the data collection, the harvest had not begun so the team could estimate production from data obtained from HHs.

Table 16: Average production of millet, cowpeas and moringa by beneficiary household

Evaluations	**Average production (Kg)**		
	Millet	Cowpeas	Moringa
Baseline result	80.5	13.9	0.7
End line result	182.6	17.3	TBD

4.3.13 Use of sustainable farming techniques *(final survey for this indicator)*

Table 17: **Use of sustainable farming techniques by farmers**

Evaluations	Use of sustainable farming techniques					
	Assisted natural regeneration	Soaking	Sowing time	Thinning	Localized fertilization	Mulching
Baseline	63.4%	12.2%	24.4%	12.2%	19.5%	12.2%
End line	65.6%	82.0%	88.5%	9.8%	75.4%	32.8%

A comparison of the baseline results to the final evaluation survey illustrates that the use of sustainable farming techniques had increased for all the techniques except for thinning. The improvement is especially important for seed priming, timely planting, localized fertilization, and mulching. This means that farmers received sufficient basics through different training initiatives.

The decline of this result at the level of the thinning is due to cultural beliefs of villagers who hold that this technique could reduce the performance of crop yields.

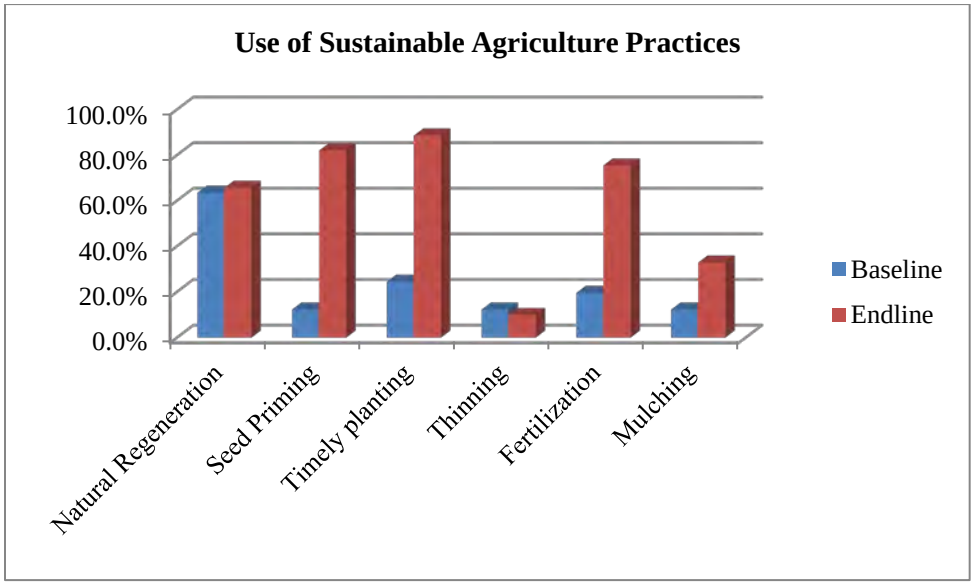

Figure 8: Use of sustainable farming techniques

4.3.14 Rate of adoption of sustainable agricultural techniques *(final survey for this indicator)*

Table 18: Beneficiaries who have applied at least two sustainable farming techniques

	Beneficiaries who used at least 2 sustainable agriculture practices	
	Baseline	**End line**
Total sample	41	61
Total correct responses	12	58
Percentage of correct responses	29,3%	95,1%

The analysis of the results of the final evaluation focused on the calculation of the rate of farmers who used at least two sustainable agricultural techniques during the past 12 months. Thus in the baseline, 12 farmers of the surveyed 41 (29.3%), knew and practiced at least two farming techniques out of the total six.

The results of this final survey indicated that 58 farmers of the total 61 respondents, which is 95.1%, used at least two sustainable agricultural practices. The results gathered at this level show that among the 61 surveyed farmers who participated in the training sessions, 95.1% showed a marked interest in this training and were able to apply at least two techniques.

5. Conclusion

This mid-term evaluation for certain categories of beneficiaries and final for other categories highlighted encouraging results in regards to targets set by the FEAD Project. Indeed, the main indicators related to SFT and nutrition activities experienced a significant improvement when compared to the results of the initial investigation of this inquiry to the final assessment for these categories of beneficiaries.