CARE / CARGILL Partnership

Final Evaluation Report

Nourishing the Future II Project

Guatemala, Honduras, Nicaragua and Costa Rica

September 2016 – August 2019

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EXECUTIVE SUMMARY

The CARE-Cargill *Nourishing the Future II* project was implemented in Guatemala, Honduras, Nicaragua and Costa Rica between September 2016 and August 2019 (36 months). Its primary objective was to help producers and women micro-entrepreneurs improve the quality of life of their families, assuring their food security and the sustainable management of natural resources.

Six impact indicators and 32 outcome indicators were tracked for Guatemala, Honduras and Nicaragua, and 11 indicators were applied in Costa Rica, where we implemented a subset of interventions (food security, nutrition and hygiene). Overall, when comparing indicators to their baselines, **the average effectiveness was 72%**, with Honduras achieving the best results and Nicaragua having less favorable results due to ongoing social, political and economic issues.

Among the most relevant findings of the evaluation were the success of Cargill's inclusive business model and value chains in integrating small producers and micro-entrepreneurs into markets; an increase in the resilience of households to the effects of climate change; an increase in the use of sustainable agricultural practices; and an increase in incomes as a result of market sales, access to financial services and related training. Moreover, we observed the target beneficiaries working together in rural savings unions, cooperatives and producer associations, supporting the provision of financial, technical and marketing services to their members. Regarding food security and nutrition, our work with schools led to an increase in the consumption of healthy foods at the household level. The project increased access to nutrient-rich foods through community, school and family gardens as well as increased knowledge and application of good practices in sanitation and hygiene.

Regarding partnerships with national and local governments and beneficiary communities, mainly in Honduras and Guatemala, we observed how these relationships were beneficial in terms of the provision of extension services and the design and implementation of public policies on gender and food security. At the same time, these partnerships had a multiplied effect beyond the geographic area covered by the project, with good agricultural practices being replicated in other communities outside the project scope.

Finally, even though there are still challenges to overcome to achieve gender equality, the project significantly improved women's production, access to training, organization and participation in decision-making in their households and communities.

I. Introduction

The first phase of the project took place between September 2013 and August 2016 in Guatemala, Honduras and Nicaragua. The success of the partnership resulted in an extension of the project to a second phase between September 2016 and August 2019, including extending coverage to Costa Rica as a fourth country. The results of this project are presented in the evaluation below.

II. Justification

Despite the fact that the average growth of the Central American region during the last nine years reached 3.5%, well above the Latin American average of 2.1%, it has not been sufficient

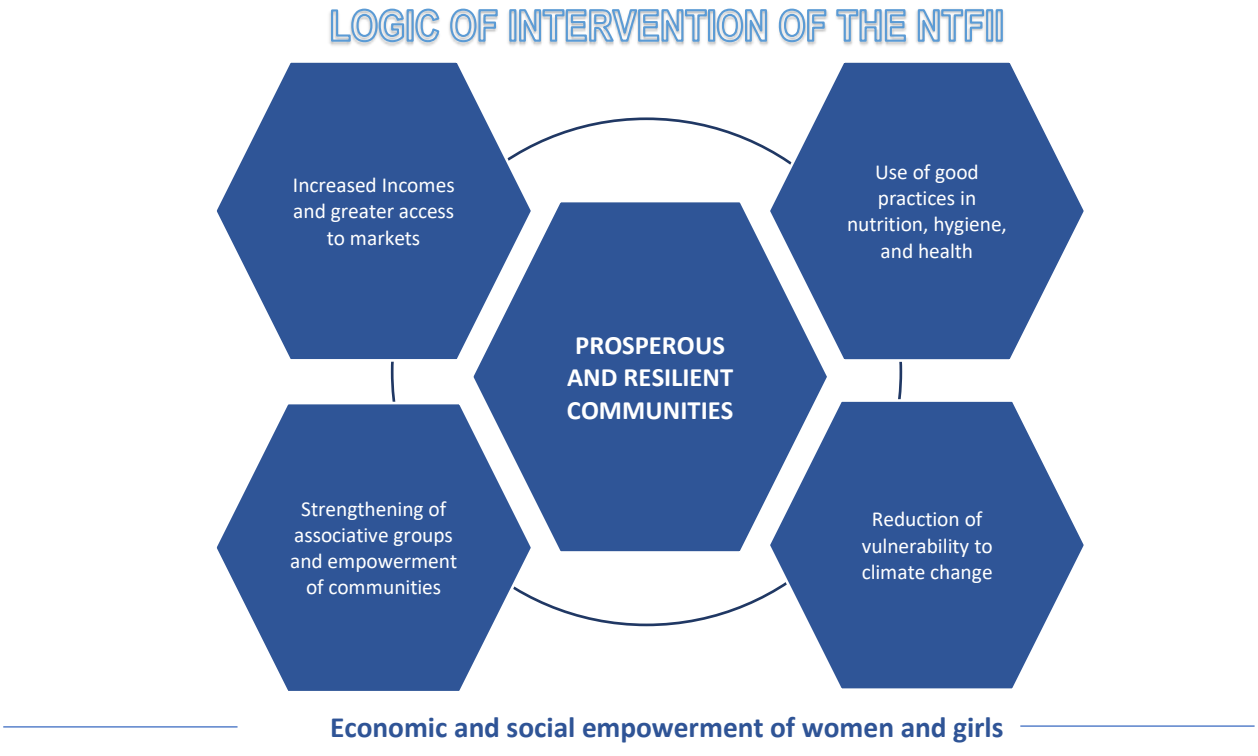
to significantly reduce poverty levels. Poverty and extreme poverty levels in Central America are above the average for the Latin American region, 43% vs 28%, and 14% vs 7%, respectively.

Food insecurity and poverty are greater in rural areas. Sixty percent of people in rural areas live in poverty and a third of people live in extreme poverty. The Economic Commission for Latin America and the Caribbean (ECLAC) reports that the effects of climate change on the Central American population may negatively impact agricultural production and availability and prices of food, while increasing the scarcity of water and instability in agricultural work.

In the specific geographic areas where Cargill operates, the following problems were identified: (i) Limited knowledge of good practices for sustainable agriculture and nutrition; (ii) weak commercial and financial capacity of producer associations and micro-entrepreneurs; (iii) limited access to and control of productive resources and participation in economic decisions by women; and, (iv) limited support from local governments in the promotion of activities to adapt to climate change.

III. Project description

The *Nourishing the Future* (NTFII) project aimed to help producers and microentrepreneurs in rural and semi-urban areas within Cargill's areas of operation, to improve the quality of life of their families, ensuring their food security and the sustainable management of their natural resources. Based on the needs of these communities, the following logical framework was developed to achieve the project's final objective of having prosperous and resilient communities. The project team defines the objective as: *A group of people who live in decent conditions with financial and social autonomy, which ensure their right to food security, health, education and community participation with equality and justice.*



NTFII is based on two models: one related to inclusive businesses and the other to food security and nutrition in schools. The **first model** seeks to generate conditions and opportunities so that producers organized in associations can achieve more equitable commercial relationships. The premises of this model are: (i) value chains allow for the economic empowerment of women organized in associations; (ii) entrepreneurial associations of small producers create the conditions necessary for linkages to stable markets and access to sustainable technologies; and (iii) entrepreneurial associations of small producers have the ability to comply with market contracts and quality standards, triggering a stable business relationship which ensures financial income for the families of the producers. The **second model**, related to food security and nutrition in schools, consists of promoting a common approach in all four countries to achieve changes in households, schools, and communities, in the use of good practices for nutrition, sanitation and hygiene. The strategy empowers school communities (teachers, parents, students, local stakeholders) with knowledge, skills, tools and resources (school gardens, water infrastructure, equipped kitchens, governance, awareness campaigns, etc.) to adopt this school model.

General objective:

To help rural producers, microentrepreneurs and local communities ensure the food security of their families, with equal access to markets, control over resources and greater resilience to the effects of climate change.

Specific objectives:

(i) Agricultural producers and microentrepreneurs have increased their incomes and capacities to adapt to climate change.
(ii) Agricultural producers and microentrepreneurs are better organized, have improved associative structures, and have increased access to markets.
(iii) Vulnerable families have increased their knowledge and have access to information regarding food security and nutrition, and they improve their leadership capacity and participation in decision-making spaces.
(iv) Communities are more capable of developing action plans to increase food security and improve nutrition, which is sustainable in terms of climate change.

Location and target population

The NTFII worked in **80 school** and **72 communities** in four countries and had a direct impact on more than **42,208 people**. The target population consisted of:

(i) Agricultural producers who may or may not have previously participated in the agro-food production chains of Cargill.
(ii) Microentrepreneurs linked or not linked to Cargill's value chains.
(iii) Boys and girls of pre-school and elementary school age who attend one of the 80 schools supported by Cargill.

Table 1. Geographic location

Country	Department / Province	Municipality / Canton	Community / District
Guatemala	Chimaltenango	San Juan Comalapa San Martín Jilotepeque	18
	Escuintla	Masagua	
	Guatemala	Relleno Sanitario Z 3, Cdad de Guatemala	
Honduras	Cortés	San Pedro Sula Santa Cruz de Yojoa Villanueva	22
	Comayagua	Siguatepeque	
	Santa Bárbara	Quimistán San Marcos	
Nicaragua	Masaya	Masaya Nindiri	26
	Managua	Tipitapa Ticuantepe	
	Chinandega	Chinandega Chichigalpa El Viejo	
Costa Rica	Alajuela	Alajuela	6
	Heredia	Santa Bárbara Barva Belén	

Source: Country Teams and Baseline Country Report NTFII 2017

Table 2. Target Population (direct)

Country	Small producers			Micro-entrepreneurs			Children of school age			Teachers and leaders			TOTAL		
	Men	Women	Total	Men	Women	Total	Boys	Girls	Total	Men	Women	TOTAL	Men	Women	Total
Guatemala	191	360	551	3	172	175	5,385	5,603	10,988	1,177	4,642	5,819	6,756	10,777	17,533
Honduras	687	322	1009	300	350	650	4,924	5,100	10,024	147	442	589	6,058	6,214	12,272
Nicaragua	95	57	152		67	67	3,171	3,046	6,217	135	756	891	3,401	3,926	7,327
Costa Rica						0	2,061	2,101	4,162	303	611	914	2,364	2,712	5,076
TOTAL	973	739	1712	303	589	892	15,541	15,850	31,391	1,762	6,451	8,213	18,579	23,629	42,208

Table 3. Total Target Population (direct + indirect)

Beneficiaries	Direct	%	Indirect	%	Total	%
Men	18,579	44%	330,588	50%	349,167	49%
Women	23,629	56%	333,360	50%	356,989	51%
TOTAL	**42,208**	**100.0%**	**663,948**	**100.00%**	**706,156**	**100%**

IV. Evaluation methodology

The evaluation measures the impact of the project on the beneficiary population, from September 2016 to August 2019. The evaluation applied an approach of mixed quantitative and qualitative cross-sectional methods. At the same time, a review of documents, including all of the reports generated by the project throughout its implementation, was carried out.

The questions of the evaluation were designed based on program theory, to verify the validity of the underlying assumptions and to evaluate if the program achieved its objectives. It was designed by the CARE-USA technical team and CARE-NTFII technical teams from the four countries (Guatemala, Honduras, Nicaragua, and Costa Rica).

The information was processed once the compilation process was completed and was downloaded from the SurveyCTO platform. As part of the ethical principles of CARE, informed consent was requested from each participant before compiling the information.

Quantitative Evaluation

The compilation of the quantitative information was carried out using representative samples of each target group of the project in each country. The process consisted of random sampling and using household surveys to compile the information. Afterwards, the data obtained was analyzed to verify statistical validity. All the information was disaggregated by gender to measure the impact on women and girls in the communities.

StatCalc was used to determine the size of the sample, based on the following formula:

$$n = \frac{N}{1 + N(e^2)}$$

Table 4. Sample size per country and target population

Country	Producers		Microentrepreneurs		Families with school children		Total
	Universe	Sample	Universe	Sample	Universe	Sample	
Guatemala	425	222	200	14		354	**590**
Honduras	669	165	536	136		235*	**301**
Nicaragua	276	159	168	98	6,300	381	**638**
Costa Rica	-	-	-	-	4,324	353	**353**
Total	**1,370**	**546**	**904**	**248**	**10,624**	**1,088***	**1,882**

Qualitative Evaluation

The methodology to compile the qualitative information included focus groups and semi-structured interviews, as well as applied observation. The sample was representative of population groups: small producers, microentrepreneurs, mothers and fathers with children in elementary schools supported by the project, community leaders and key stakeholders of the project's partner institutions.

V. Findings

The project tracked a total of 36 indicators – six impact indicators and 32 outcome indicators - for the three countries in which the project implemented comprehensive interventions: Guatemala, Honduras and Nicaragua. In the case of Costa Rica, where only nutritional aspects were implemented, 11 of the indicators were applied and 10 were evaluated (See Annex 1).

The effectiveness of the project, measured by the average of goals accomplished in the four countries, totaled 53%.[1] In terms of effectiveness by country, the totals are: **70% for Honduras, 52% for Guatemala, 50% for Costa Rica and 41% for Nicaragua.**

It is important to point out that this effectiveness, that is, the success in terms of accomplishing the goals agreed to at the beginning of the project, depends on two aspects: (i) the context of the country at the time of implementing the evaluation and throughout the year immediately before the measurement; and (ii) how realistic and appropriate were the goals that were set. This is particularly relevant for the case of Nicaragua, where the social and political situation of the country[2] has had a negative impact on the results achieved; and for Costa Rica where the particular characteristics of the implementation of the project made it necessary to reconsider the appropriateness of the goals that were proposed.[3]

Given the above, considering the indicators that showed improvement when compared to their baseline, there may be a better way to assess the effectiveness of the project and its impact on the lives of beneficiaries. Looking at it in this way, even if it were not possible to achieve the goals as planned, there were improvements or positive changes in the final measurement for most of the indicators compared to their initial values. Taking this perspective, **we found the average of positive changes in the tracking indicators totaled 72% when measuring the effectiveness of the project.** These results are very satisfactory, when considering the challenges of achieving development goals in the region. The best performance was evident in Honduras, followed by Guatemala, Costa Rica and Nicaragua.

Table 5. NTFII Accomplishment of Goals

Country	Indicators with Goals	Goals Achieved	%	Goals Not Achieved	Not Achieved, but had Improvement	%	Total Indicators with Positive Changes	%
Guatemala	33	17	52%	16	9	56%	**26**	**79%**
Honduras	33	23	70%	10	10	100%	**33**	**100%**
Nicaragua	32	13	41%	19	6	32%	**19**	**59%**
Costa Rica	10	5	50%	5	0	0%	**5**	**50%**
		Average	**53%**				**Average**	**72%**

[1] An objective is achieved if 95% or more of the value established at the start of the project is reached.
[2] In April 2018, a series of protests began nationwide in Nicaragua in response to modifications to the social security system. Despite the fact that the reforms were suspended a few days later, protests continued against the government. These resulted in several confrontations between security forces and the civil population, resulting in more than 300 casualties and a deterioration of the financial situation. In 2018, Nicaragua was the only Central American country that suffered a contraction in its economic growth, equal to -3.8%. The International Monetary Fund estimates that the economic growth rate of the country fell by -5% in 2019.
[3] In Costa Rica, the interventions concentrated on increasing knowledge regarding nutrition for school-age children; however, indicators such as monthly household food supply and women's empowerment were also measured, as they have an indirect relationship with the activities promoted.

Regarding the results for Nicaragua, it is worth noting that despite the fact that they are less favorable than the ones observed in Honduras and Guatemala, we estimate that the actions of the project allowed for a smaller deterioration of the situation of the target population, considering the financial and political crises of the country. According to World Bank estimates, between 2016 and 2019, poverty increased by more than 3 percentage points, and that is why the actions promoted by the project, such as fostering savings and promoting the idea that 20% of agricultural production should be used for food security, provided additional support to the target population (TP) in facing the crisis.

The main findings of the evaluation are presented below, in terms of the general objective, the four specific objectives of the intervention and the corresponding impact indicators and outcome indicators. In the case of Costa Rica, whose scope of intervention was smaller, this will be explicitly addressed when the results include values for that country.

A. Impact Indicators

The project measured its impact by way of six indicators: poverty, resilience to the effects of climate change, value of household assets, food security, months of food supplies, and dietary diversity. Impact is a long-term measurement and is affected by a whole set of factors which have no direct relationship with the project.

1. **Progress Out of Poverty Index (PPI).**[4] The PPI measures the percentage of households that *probably* live above the poverty line of a country. It is calculated based on 10 questions regarding the characteristics of the household and these are specific for each country. The responses obtained allowed us to present the results in two forms: (i) in terms of the percentage of the TP that *probably* lives above the poverty line, which was the measure used in Honduras, or (ii) the percentage of the TP that probably lives *below* the poverty line, which was the measure used in Guatemala and Nicaragua.[5]

   In terms of the results, the actions implemented by the NTFII positively affected the target population of Honduras, increasing the percentage of population living above the poverty line, from 48% to 53%. In Guatemala, we also obtained positive results, where the percentage of project households living in poverty fell from 54% to 43%. In Nicaragua, it is estimated that the share of poor households increased by 8 percentage points, from 24% to 32%. As previously noted, this behavior is linked to the economic, social and political situation, and is consistent with nationwide poverty estimates.

Country	Poverty Index (%)					
	Total		Households Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala*	54%	43%	60%	43%	53%	43%
Honduras	48%	53%	45%	53%	50%	54%
Nicaragua*	24%	32%	22%	32%	26%	37%

* Guatemala and Nicaragua the level of poverty, therefore the desired result is a reduction in the indicator.

[4] The *Progress out of Poverty Index (*PPI) is an index used by the Grameen Foundation and other institutions working on poverty issues around the globe. https://www.povertyindex.org/es/sobre-el-ppi

[5] The form of measurements implies that in Honduras we aimed to **increase** the % of population above the poverty line; while in Guatemala and Nicaragua the goal was to **reduce** the % of the population below the poverty line.

2. **Ability to build resilience to the effects of climate change.** Resilience increased in the three countries with comprehensive interventions. This was defined as the ability of the communities to continue to function, repair and recover from negative events related to climate change and its variability.[6] On average, 10% of project households increased their capacity to adapt through the use of one or more measures, such as savings, early warning systems, soil conservation, etc. This is equal to an average reduction of 80% of vulnerable households. In Nicaragua, whose target population is located in the Dry Corridor of the country, the reduction of vulnerable population went from 19% to 4% which is indicative of how important the actions of the NTFII are.

Country	% of persons with increased ability to build resilience to the effects of climate change					
	Guatemala		Honduras		Nicaragua	
	Baseline	Final	Baseline	Final	Baseline	Final
Not Vulnerable	40%	61%	54%	60%	15%	14%
Somewhat Vulnerable	48%	37%	44%	40%	66%	82%
Total Not + Somewhat	**87%**	**97%**	**98%**	**100%**	**81%**	**96%**
Vulnerable	13%	3%	2%	0%	19%	4%

3. **Property and Assets Average Rate (PAAR).** This rate measures the value of livestock, productive and domestic assets of the household.[7] A greater rate indicates that the household has accumulated assets over time, which translates into decreased vulnerability compared to households with a lower rate. The evaluation shows that Honduras was the only country where the PAAR increased from 38% to 42%. Guatemala and Nicaragua experienced reductions of 2% and 13%, respectively. The greatest change, which occurred in Nicaragua, is reflective of the complicated economic situation throughout the past year, with households having to use or sell assets to respond to the crisis. This also has implications in the near future, since Guatemala and Nicaragua are now in less favorable positions to face future climate shocks. When disaggregating by gender, we see that the changes are consistently less favorable for women-headed households. One reason may be due to cultural issues as gender inequality still exists, where men are the ones who have all the household assets registered under their name. This represents a barrier to the empowerment of women.

Country	Property and Assets Average Rate					
	Total		Households Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	34%	32%	38%	37%	31%	28%
Honduras	38%	42%	43%	51%	33%	35%

[6] This indicator is based on the *Tracking Adaptation and Measuring Development* (TAMD) framework, developed by the International Institute for Environment and Development. https://www.iied.org/tracking-adaptation-measuring-development-tamd

[7] Includes the value for land, livestock, equipment, durable consumer goods and transportation assets.

Nicaragua	55%	42%	58%	49%	47%	33%

4. **Prevalence of population with moderate or severe food insecurity, based on the Food Insecurity Experience Scale (FIES).**[8] This indicator captures the level of food security of households and the negative strategies that they have used throughout the previous 12 months, such as skipping meals, not having anything to eat for a day, or reducing the variety and quality of foods consumed. Honduras showed a positive development, reducing the percentage of the insecure population from 70% to 41%, which is a significant reduction. NTFII promotes food production for commercialization, but also for self-consumption, and the support to family and school gardens also helped to make a difference. In Guatemala, Nicaragua, and Costa Rica, there were increases in food insecurity levels, of 6%, 18%, and 19 percentage points, respectively. A greater number of households reported less access to food, whether in terms of quality or quantity, or sacrificing one or more meal per day. The homes that are headed by males showed a greater deterioration when compared to those headed by women, which may be due to the fact that in general, women are more careful about their food supply in hard times.

Country	Prevalence of Population Experiencing Food Insecurity (%)					
	Total		Households Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	40%	46%	17%	35%	46%	48%
Honduras	70%	41%	72%	38%	68%	43%
Nicaragua	50%	68%	50%	73%	50%	67%
Costa Rica	37%	56%	39%	56%	36%	46%

5. **Months of Adequate Household Food Provisioning (MAHFP).**[9] This indicator measures the ability of households to satisfy food needs during the previous 12 months. Households in Honduras were capable of increasing the availability of food beyond the minimum nutritional requirements, from 9.7 to 10.1 months; while in Guatemala, Nicaragua and Costa Rica, the deterioration in food security was accompanied by a reduction in MAHFP from 10.7 to 10.5 months for Guatemala, from 11 to 10 months for Nicaragua, and from 11.2 to 10.7 months for Costa Rica. The changes observed are less than 10% with respect to the baseline. In some cases, such as Guatemala, the field team observed that both insecurity and food supplies are influenced by difficult financial times and the seasonality of some foods.

Country	Months of Adequate Household Food Provisioning (#)					
	Total		Households Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	10.8	10.5	11.6	11.0	10.6	10.5
Honduras	9.8	10.1	9.8	10.1	9.7	10.4

[8] Measured based on the Food Insecurity Experience Scale (FIES). According to FAO, FIES measures access that people or households have to food. Likewise, it measures the seriousness of food insecurity based on the responses of people to questions regarding limitations in their ability to obtain sufficient food.

[9] *Months of Adequate Household Food Provisioning* (MAHFP). This indicator was developed through a process of consultation led by the United States Agency for International Development (USAID). https://www.fantaproject.org/sites/default/files/resources/MAHFP_June_2010_SPANISH_v4_0.pdf

Nicaragua	11.0	10.0	11.1	10.0	10.8	9.6
Costa Rica	11.3	10.7	11.6	10.7	10.3	11.2

6. **Minimum Dietary Diversity for Women (MDD-W) and the Household (MDD-H).**[10] More households diversified their diets to include more food groups - at least seven out of 10 in the case of households and five out of 10 in the case of women, in the four countries. The most significant changes occurred in Guatemala and Honduras, where the percentage of households and women who have diversified their diets more than double when compared to the baseline. This result reflects the effectiveness of strategies used by the project to achieve changes in behavior: the field work carried out by the community facilitators, the promotion of production for self-consumption, school and community training seminars, agricultural outreach services, and the creation of school gardens. All of these have been influential in leading households to increase their knowledge about which food groups should be consumed and which have less nutritional value.

Country	Minimum Dietary Diversity (%)			
	Women of Reproductive Age		Households	
	Baseline	Final	Baseline	Final
Guatemala	25%	84%	17%	85%
Honduras	25%	55%	12%	34%
Nicaragua	27%	28%	13%	22%
Costa Rica	36%	59%	6%	6%

B. Outcome Indicators

To evaluate the achievement of the specific objectives, the project identified 30[11] outcome indicators in six areas: agricultural production, climate change, access to markets, food and nutritional security, governance and gender. Below are the results, classified according to the four specific objectives and a section on gender.

B1. Smallholder producers and microentrepreneurs have increased their incomes and capacity to adapt to climate change.

This component focused on increasing the quality and quantity of the agricultural production of four types of agro-food chains: (i) chains for export, dedicated to foreign markets; (ii) supply chains dedicated for sales to Cargill; (iii) distribution chains for Cargill products - cold cuts or sausages and animal feed; and (iv) agricultural chains for the food security and nutrition of the families and communities. Specifically, NTFII supported 10 value chains: Two agro-export value chains for green beans and berries; five connected to Cargill businesses; two supply chains for yellow corn and sorghum, two distribution chains of feed for pigs and tilapia, and one distribution chain for cold cuts/sausages; as well as three chains for food security promotion based on white corn, beans and fresh vegetables. Furthermore, the project provided training and technical assistance for the development of business plans, business administration and improvement of quality standards for the various products.

[10] *Minimum Dietary Diversity for Women, (MDD-W)* and *Minimum Dietary Diversity for Households, (MDD-H)*. https://www.fantaproject.org/sites/default/files/resources/MAHFP_June_2010_SPANISH_v4_0.pdf

[11] 27)indicators were evaluated against the baseline for Guatemala and Honduras; 26 for Nicaragua; and seven for Costa Rica.

In total, the project supported 1,482 small producers (667 women) and 807 microentrepreneurs (505 women). By the end of the project, these participants produced 9,120 metric tons (MT) of food, which represented an increase of 550% in their gross income, going from US$876,600 during the first year of the project, to $5,706,900 by the third year.

Agricultural Production

- **Change in production per unit of land.** Productivity, measured by the performance in tons per hectare, increased an average of 20% in Honduras and Guatemala. In Honduras, the average yields of yellow corn, white corn and beans were above the national average. The biggest change occurred with yellow corn, a product linked to Cargill's production chain, where the farmers more than doubled their production, from 1.78 to 4.11 MT/Ha. The scaling up of activities from NTFI to NTFII, the identification of the most appropriate areas for specific crops, and full-time technical assistance made the difference in performance.

  In Guatemala, the productivity of green beans increased by 30% compared to baseline, where the increase in the number of farmers was 51%. This result is attributed to the presence of specialized community facilitators and the use of improved seeds and other agricultural good practices. Moreover, the livestock production linked to Cargill's business chain also was successful, and even though there was no baseline, in the last year of the project, the production of tilapia reached 7,000 kg (15,400 lbs.) while pork production was 25,000 kg. (55,000 lbs.).

  In Nicaragua, the productivity of all products decreased compared to the baseline. In the case of sorghum, linked to Cargill's business chain, the production was affected by plagues. Reduced crop prices in the market also affected the situation, causing producers to plant less per unit of land. For yellow corn, which also showed decreased productivity, it is significant because of its use for household nutrition, an aspect promoted by the NTFII.

Country	Product	Productivity per Unit of Land (MT/Ha)					
		Total		Men		Women	
		Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	Green Beans	8.27	10.73	8.93	10.05	7.69	11.65
	Blackberries	16.82	18.67	16.05	18.89	18.34	18.58
Honduras	Yellow Corn	2.98	4.26	3.15	4.28	1.78	4.11
	White Corn	1.45	1.62	1.51	1.63	1.18	1.56
	Beans	0.90	0.94	0.92	0.95	0.75	0.90
Nicaragua	Yellow Corn	1.20	0.80				
	White Corn	1.40	1.10				
	Sorghum	1.70	1.20				

- **Access to extension services.** The emphasis of extension services has shown very positive results, in the three countries where a comprehensive intervention was implemented. The project had particular success in Guatemala, where it doubled the number of beneficiaries, and in Honduras where it almost tripled. In both countries, a key factor in the achievement of these results was the establishment of partnerships with the local governments and ministries of government. Specifically, the municipalities and/or agriculture ministries provided full-time technical extension staff, while CARE provided the necessary training. The constant presence of extension staff assured timely guidance for

targeted producers. Another partnership was established with distributors of fertilizers, who also trained farmers on the use of their products. The sustainability in the delivery of these services will depend on the continuation of these collaborations over time.

Nicaragua also was able to increase extension services, despite the fact that there was no support from local authorities and there was a need to be more cautious in scheduling field visits to avoid putting the extension staff at risk, due to conflict in some parts of the country. NTFII in Nicaragua adopted a strategy where each technician was accompanied by several promoters, to share knowledge. Information technologies also were used, including text messages, to inform producers about changes in climate and biological conditions that may affect crops, and measures to be adopted as a result.

Country	% Farmers with Access to Extension Services					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	40%	91%	32%	91%	48%	90%
Honduras	29%	85%	26%	82%	40%	93%
Nicaragua	67%	75%	80%	75%	57%	75%

"We're doing okay producing green beans thanks to training, certification, and having a crop management plan, and an agronomist visits us once a week." **Producer in Guatemala.**

- **Producers who adopt a minimum number of three sustainable practices and technologies promoted by the project.** The increase of outreach services directly explains why, in the last 12 months, that 90% of producers in Guatemala and Honduras report the use of at least three of the 11 practices promoted by the program[12], representing a significant increase compared to the beginning of the program. In both cases, the increase of the use by women farmers was greater.

  The number of producers adopting sustainable practices promoted by the project decreased in Nicaragua from 60% to 20%. This decline is not consistent with the increase in the access to extension services discussed above. There are two explanations to this contradiction. One is that although participants in Nicaragua had access to extension services, the reduction in crop area led to a situation where several of the producers did not consider it necessary to apply at least three different practices promoted by the project (and measured by the evaluation), but rather they limited their work to the use of one or two. The other reason is related to the definition and measurement of the indicator of access to extension services.

[12] This includes minimum tillage; mulching; pest and weed management; appropriate use of fertilizers; improvement of harvest processing/storage; crop rotation; cover crops; organic fertilizers; mixed crops, inter-cropping; improved seeds; and soil erosion control.

Country	% Farmers Adopting a Minimum of Three Practices Promoted by the NTFII					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	51%	91%	58%	95%	45%	86%
Honduras	20%	93%	29%	94%	17%	91%
Nicaragua	57%	22%	54%	12%	58%	31%

"Our cooperative received the knowledge to know how to add organic fertilizer to the soil, to rotate crops, to add [to the soil] all that you can in terms of organic fertilizer, and we received a type of bio-solid fertilizer that has been excellent. In the first year, we were heavily affected by climate change [drought], last year we were affected by the Root Aphid and Pecan Aphid, and we received help through different techniques, receiving text messages to check on our crops, especially under the leaves, and in addition, technical support was always provided to us." **Representative of a Women's Cooperative, El Viejo, NICARAGUA**

- **Access to inputs.** This indicator measures the percentage of producers who had access to inputs such as fertilizers and pesticides through one or more of the following types of providers: cooperatives, government programs, agro-distributors or local producers of supplies. On average, 8.6 out of every 10 producers in the three countries had access to adequate inputs during the previous 12 months, compared to 9.4 at the beginning of the project. Honduras was the only country where the percentage increased. Two aspects had an influence on this, the facilitation by the producer associations and rural savings and credit unions (further explained below), and the location of a distributor within five km or less from the area of production.

  In Guatemala, a reduction of 21 percentage points was reported, going from 98% to 77%. The change in not providing seed capital may have influenced farmers in a negative way. In the first phase of the project, we provided the supplies directly to the associations, but during the second phase, the delivery of supplies had to be done directly by the cooperatives. Respondents may have interpreted this change as a reduction in access to inputs. This explanation would be consistent with the fact that the productivity of the agricultural outputs increased, a change that would have been difficult to achieve without adequate inputs. Nicaragua also experienced a decrease, although smaller, going from 97% to 91%. On the demand side, the fact that some producers carried out their own crop planning may have affected the use of supplies of a lesser quality, while on the supply side, the main distributor of certified seeds was intervened by a rural bank.

Country	% Producers with Access to Inputs					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	98%	77%	98%	75%	98%	79%
Honduras	87%	91%	86%	90%	88%	91%
Nicaragua	97%	91%	96%	88%	99%	98%

Resilience to climate change

- **Households with savings.** Having cash savings in formal financial institutions or informal associations (cooperatives, savings and credit unions and saving groups) is an important element to reduce the vulnerability of households. Out of every 10 households, 5.3 in Honduras, 3.8 in Nicaragua and 3.7 in Guatemala reported having savings, an all of them had more than what was observed at the baseline. This allows us to assume that NTFII has been effective in promoting a culture of savings among the target population. In Honduras, having included requirements for monthly contributions by the members to their rural savings and credit unions has been an efficient way to increase savings. In Nicaragua and Guatemala, while the increase in the number of households was above 60%, and even double in the case of households led by women, the values continue to be low. In the case of Guatemala, we know that a high percentage of households have in-kind savings such as livestock and that the absence of trustworthy savings and credit entities close to their communities makes it difficult for those households to save in cash with formal entities.

Country	% With Savings					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	22%	37%	38%	51%	15%	26%
Honduras	41%	53%	39%	49%	45%	56%
Nicaragua	23%	38%	23%	31%	19%	37%

Most producers and microentrepreneurs report that their savings are put into the Rural Savings and Credit Unions (RSCUs) and then the RSCUs deposit the funds in the formal banking system, which allows them to earn interest and enables the possibility for short-term and medium-term gains for members. **HONDURAS**

- **Producers with diversified income sources.** Households that depend exclusively on agriculture and livestock are more vulnerable to the impacts of climate change. Diversifying their sources of income is one way to increase their resilience. A greater number of agricultural producers in Guatemala and Honduras reported that they had three or more sources of income, with the greatest increase occurring in male-headed households in Guatemala, and those headed by women in Honduras. It would seem that the strategy of productive linkages and inclusive markets was a key factor for the creation of economic opportunities for families. On the other hand, Nicaragua reported the lowest levels in the region and a reduction in the case of male-headed households compared to the baseline. Once again, the deterioration of the Nicaraguan economy limited options for income generation and affected the vulnerability of households.

Country	% Households with Three (3) or more Income Sources					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	48%	50%	49%	81%	51%	54%
Honduras	24%	32%	26%	28%	22%	35%
Nicaragua	10%	7%	10%	6%	8%	8%

- **Producers who apply sustainable agricultural and natural resource management practices (resilience to climate change).** To better understand the way in which small producers face the effects of climate change, the project measured the percentage of producers who have used at least three practices which are resistant to climate change[13] in the last year. In Guatemala and Honduras, important increases were noted in the percentage of households using sustainable agricultural practices, going from 3% to 59% in Honduras and from 15% to 86% in Guatemala. The tracking of the implementation of community plans on climate change helped targeted farmers to adopt the use of appropriate practices. In Honduras, strategies such as piloting good practices and farmer exchange trips resulted in effective demonstration of the benefits of applying those practices, further motivating community members to adopt them.

  In Nicaragua, the percentage of households using these strategies did not change much, going from 10% to 11%, but it remains significantly lower than in other countries. In this case, several male producers applied one or two practices but not three, which explains the drop of the indicator to 0%.

Country	% Producers Using Sustainable Agricultural Practices					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	3%	59%	4%	45%	2%	78%
Honduras	15%	86%	6%	84%	0%	90%
Nicaragua	10%	11%	15%	0%	6%	21%

- **Use of negative adaptation strategies to reduce the impact of shocks.** When households have limited options to face shocks (i.e., savings, access to the financial sector, or diversity in their income sources), they must use negative adaptation strategies. Among these are the unplanned sale of livestock or agricultural assets, temporary migration, withdrawing children from school, and selling household assets. While most households in all three countries use these measures, Honduras was able to reduce the percentage of households depending on such measures, going from 92% to 82%. Guatemala reports a strong increase of 35 percentage points, going from 60% to 95%, with similar behavior between men and women who are heads of households. In Nicaragua, the increase was 13 percentage points, going from 53% to 66%, where the deterioration for women heads of households was greater than that of male head of households. Households getting poorer is consistent with the use of these negative strategies to attempt to stabilize their situations.

Country	% Households Using Negative Adaptation Strategies					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	60%	95%	56%	95%	61%	95%
Honduras	92%	82%	92%	78%	93%	85%
Nicaragua	53%	66%	49%	52%	54%	69%

[13] Among these we can mention agro-forestry, re-vegetation and re-forestation, use of improved seeds and irrigation technologies, and soil conservation.

B2. Agricultural producers and microentrepreneurs are better organized, consolidate associative structures and access markets.

The goal of this component was to strengthen associations of small producers and microentrepreneurs, establishing an inclusive business model and strengthening the business management skills of the target population. The organization and strengthening of associations played a key role in facilitating access to markets, financing and training. The project prioritized its support to the members of the producer associations, cooperatives and savings unions linked to Cargill's inclusive chains, which represents 91% of beneficiary associations.

At the end of the project, there were (39 associations through which advice and training was provided to 1,558 producers and microentrepreneurs (40% women), on issues related to the development of business plans, operational plans, and financial and accounting aspects. In Honduras, NTFII began with 11 existing associations and added 14 more to total 25, with 21 rural savings and credit unions and four producer associations. The rural savings and credit unions that were created allowed for more opportunities, including the potential to produce tilapia, pork and their incorporation into existing production chains. In Guatemala, we continued to work with the three producer associations that already existed, and we began supporting microentrepreneurs who were not yet organized. In Nicaragua, we worked with multi-sector producer cooperatives and with entrepreneur groups that weren't yet formally organized.

The associations were able to better position themselves within markets and negotiate with buyers, distributors and service providers. This allowed them, throughout the project, to sell a total of 7,986 MT of agricultural production, distributed as follows: 18% to local markets, 44% to agro-export markets and 38% to value chains linked to Cargill. The income generated through these associations represented US$4,715,300, of which 39% ($1.8 million) were sold to value chains linked to Cargill's inclusive business model. Furthermore, these associations reported having purchased $290,000 in balanced feed from Cargill distributors. This shows an economic relationship of mutual benefits for the business model between small producers and Cargill. Additionally, microbusinesses generated a gross income of $990,000.

Access to markets, organizations and income

- **Access to markets to sell agricultural and non-agricultural products.** A greater share of project participants in Guatemala and Honduras reported having made use of one or more points of sale[14] in the last 12 months, 54% vs 70% for Honduras, and 55% vs 87% for Guatemala. In Guatemala, despite the global improvement of the indicator, when disaggregating by gender, we observed a decrease in access to markets by women (from 54% to 48%). This reduction is explained by the reduction in the demand for the production of Guatemalan blackberries due to the increase of production in Mexico. Given the fact that most of the project producers in the blackberry chain are women (105 vs 29 men), the fall in sales of this product primarily affected women. Nevertheless, producers in Guatemala had positive comments to report regarding their participation in value chains as a guarantee to sell their goods during the entire production cycle, no matter what season of year.

  In Honduras, women reported that the formalization of organizations such as rural savings and credit unions, production associations and cooperatives, has resulted in equitable

[14] Individual sales to traders or middlemen; sales through contracts with buyers from the formal sector.

access to markets. In Nicaragua, access to markets was slightly less, 68% versus 67%, where the decrease in the number of men in agricultural production was greater.

Country	% Producers and Entrepreneurs with Access to Markets					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	54%	70%	55%	87%	54%	48%
Honduras	55%	87%	60%	90%	42%	82%
Nicaragua	68%	67%	80%	67%	59%	67%

- **Number of commercial agreements facilitated with associations.** The inclusive market model promoted by project enabled the possibility for commercial agreements with formal companies in all three countries. The positive relationships and the empowerment of producer groups in Honduras allowed them to establish two additional contracts, including one with Cargill. In Guatemala, additional agreements were established with agro-exporters, and a total of 33% (208 beneficiaries) of producers and microentrepreneurs joined Cargill's value chains. In Nicaragua, in addition to having an increase in the number of agreements, there was a sharing of one contract between two cooperatives. This allowed the members of these two cooperatives to work together and reduce costs of transportation to the plant.

Country	Commercial Agreements	
	Baseline	Final
Guatemala	4	8
Honduras	2	4
Nicaragua	1	2

- **Membership in producer and microentrepreneur associations.** Improvements in community organization led to an increase in memberships for producer and microentrepreneur associations by 25% in Honduras, from 943 to 1,205 members. In Guatemala, membership reached 210 by the end of the project, and in Nicaragua it was 276.

Efforts in the three countries to strengthen, increase and formalize the associations and groups of producers, cooperatives and rural savings and credit unions was a key factor in the ability for the target population to learn and negotiate better prices. The project also institutionalized the practice of including more women in managerial positions.

"The cooperative was disorganized, but CARE helped us put together a board of directors, restructure the organization, complete the legalization process and have good accounting records." **Representative of the Women's Cooperative Villa Franca, Chinandega, Nicaragua.**

"I was not participating in anything in the community. I now participate with the Community Bank that we have organized as a pilot. I am the treasurer. We have been trained. We have a board of directors with a president, a treasurer, and a secretary. The bank is made up of 12 women working on different types of things, and we have our own businesses". **Woman Entrepreneur, Tipitapa, Nicaragua.**

- **Business development services.** The lack of access to business development services may limit the economic opportunities of households. NTFII sought to strengthen business and financial capabilities to increase the income of small businesses, improve their quality, and add value to their products. The project was able to increase service provision in the three countries by an average of 92%. Providing close support and on-site services were the most important parts of the model that helped increase the number of beneficiaries receiving business development services in Guatemala from 2.4 to 4.9 out of every 10 men and from 4.0 to 6.9 out every 10 women.

  In Honduras, the increase of participants was more moderate, going from 3.5 to 4.5 out of every 10 men and from 4.6 to 4.9 out of every 10 women. The provision of these services in the future will be important due to the growing formalization of associations and the scaling up of the production in Honduras. Finally, in Nicaragua, the number of beneficiaries of these services increased from 2.1 to 5.6 out of every 10 individuals, and with an even greater increase in the women participating, going from 1.0 to 5.4 women out of every 10. It is quite probable that beneficiaries in Nicaragua, faced with such a complex economic situation, will find new opportunities through these services to strengthen their businesses and even diversify their sources of income.

Country	% Receiving Business Development Services					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	32%	60%	24%	49%	40%	69%
Honduras	38%	46%	35%	45%	46%	49%
Nicaragua	21%	56%	35%	60%	10%	54%

- **Use of formal or informal financial services.** The seasonality of agricultural production means that small producers need short-term and long-term financing to buy supplies and tools to increase production; however, the financial risks associated with these activities mean that they have less access to these services. A similar situation is faced by the microentrepreneurs who participate in the project. Project participants appreciate the support provided by CARE in the provision of in-kind seed capital (first pase only), in the establishment and strengthening of rural savings and credit unions and cooperatives, and the possibility to access lines of credit through trust funds. These actions have had a positive effect in such a way that the number of active users of financial services will increase, on average, by almost 20 percentage points.

  However, in Guatemala, we see a high disparity when disaggregating the indicator by gender, with a use of 35% by women vs 56% by men. The low degree of empowerment of women, the use of cultural practices such as keeping in-kind or cash savings at home, and a limited presence of institutions close to the communities, all affect this result. In Honduras, the formalization of rural savings and credit unions and the use of revolving funds have made a difference in ability of people to obtain loans and save. In Nicaragua, in addition to the fact that there was access to the trust fund, we observed a growing number of new entrepreneurs and therefore a greater number of microentrepreneurs using the financial system.

Country	% Active Users of Financial Services					
	Total		Dis-aggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	29	44	24	56	32	35
Honduras	44	52	41	41	53	62
Nicaragua	33	66	30	59	36	71

- **Average income from the sale of agricultural and non-agricultural products.** The average income from sales in the last 12 months shows different results in the three countries. In Honduras, there was an increase. In Guatemala it was maintained at practically the same level. In Nicaragua there was a reduction. To better understand these results, we must remember that income from sales is the result of a combination of quantity, prices, production costs, and the political and economic context. In Honduras, the average income from the sale of agricultural and non-agricultural products per household increased significantly by almost 70%, from $2,600 to $4,300. Project participants report that this is due to the ability to sell into the productive chains, especially for tilapia, which is more profitable, and the possibility to access loans from rural savings and credit unions. In Guatemala, changes in climate conditions along with lower market prices led to an increase of average income by less than 2%. On the other hand, in Nicaragua the significant decrease in sorghum prices and the increase in production costs (tariffs on the import of agricultural supplies), in a complex economic, social and political context, led to a fall of 37% in the average income over the past 12 months, going from $1,600 to $1,000.

  Despite the fact that some results were not as expected, we believe that the combination of all of the project activities, including the promotion of agricultural and business best practices and facilitating access to markets, helped to maintain income levels in Guatemala and to avoid an even greater deterioration in Nicaragua.

Country	Average Sales Income during the Previous 12 Months in US$					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	$2,553	$2,593	$3,353	$3,492	$2,018	$1,948
Honduras	$2,577	$4,339	$2,321	$3,903	$2,815	$4,625
Nicaragua	$1,667	$1,052	$1,473	$1,274	$996	$954

- **Income invested in businesses.** Project households invested, on average, $29 of every $100 during the past 12 months, compared to $21 for every $100 at baseline. In Honduras, most investments were made in equipment, tools and supplies to maintain or expand existing businesses. In Guatemala, we observed greater investment by microentrepreneurs rather than producers because they could not guarantee future sales of their production.

  The increase in the average income invested also responds to the creation of new micro-businesses or entrepreneurial ventures including 210 in Guatemala, 535 in Honduras and 57 in Nicaragua.

Country	% Income Invested in Businesses

	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	12%	26%	10%	26%	14%	27%
Honduras	30%	32%	30%	33%	30%	31%
Nicaragua	23%	29%	19%	23%	25%	32%

B3. Vulnerable families have increased their knowledge and have access to information about food security, nutrition, and they have improved their capabilities of leadership and participation.

The project worked with eighty schools in all four countries, reaching approximately 25,968 students (51% girls) per year, and training 1,221 teachers (80% women) on adequate food security practices, nutrition and hygiene. Eighty school gardens were established, and 780 families and communities replicated them in their own gardens. There were three "Back to School with Cargill" campaigns in the four countries that included delivery of approximately 26,910 school kits and organizing three food fairs and two environmental fairs, with the participation of 1,212 Cargill volunteers. We also organized two campaigns called "Walk in Her Shoes" to promote women's rights. Two aspects were considered when evaluating this component: knowledge on good nutrition and health practices, and the use or application of those practices at home.

Food security, nutrition, and hygiene

- **Knowledge of aspects related to nutrition and healthy lifestyles, related to a balanced diet (including Costa Rica).** The percentage of households that have knowledge about a balanced diet and safe consumption of food and water increased from 59% to 70% in Honduras and from 4% to 40% in Guatemala. The results related to the level (70%) in Honduras and the increase of 36 percentage points in the case of Guatemala stem from the successful use of school lunch committees, workshops and educational meetings with families, students and teachers, as well as cooking demonstration sessions with high nutritional value foods. In Nicaragua and Costa Rica, despite similar interventions, there was a significant decrease in the percentage of households with knowledge on these issues, from 83% to 59% in Nicaragua, and from 39% to 16% in Costa Rica.

Country	% Target Population with Knowledge of Nutrition Facts and Healthy Lifestyles					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	4%	40%	2%	26%	5%	44%
Honduras	59%	70%	49%	70%	67%	74%
Nicaragua	83%	59%	80%	53%	83%	59%
Costa Rica	29%	16%	28%	17%	33%	11%

- **Daily consumption of fruit and vegetables (including Costa Rica).** On average, nine out of every 10 households in Guatemala, Honduras and Nicaragua reported having consumed nutrient-rich food, such as fruits and vegetables, at least once a day for the past month. This

proportion is greater than the one observed at the beginning of the project, which was eight out of every 10 households. The apparent disconnection between having knowledge and putting knowledge into practice may be explained by the way information was compiled. It is possible that the questions were not appropriate to the level of education of participants, and therefore, even when the families are eating better, the instrument did not reflect this knowledge. Regarding the reduction in consumption reported by Costa Rica, there was not sufficient information to reach an informed conclusion.

Country	% Target Population Eating Fruits and Vegetables One or More Times per Day					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	78%	87%	78%	92%	78%	86%
Honduras	70%	94%	65%	98%	75%	91%
Nicaragua	86%	86%	?	93%	?	89%
Costa Rica	78%	54%	78%	54%	89%	57%

- **Access to nutrient-rich food (including Costa Rica).** In the three months prior to the evaluation, access to nutritional food was maintained or increased through the use of gardens in the four countries. The experience of Honduras, which doubled the percentage of households with access to micro-nutrients, was particularly interesting as it also involved the creation of a greenhouse in one of Cargill's facilities. From there, high-quality plants were distributed for use on family and school gardens. In Nicaragua, there were contests for the best garden, which motivated people to participate. In Guatemala, there were monthly demonstrations with families and school children about eating fruits and vegetables in combination with other foods. In Costa Rica, the promotion of school gardens was done through a partnership with an FAO project.

  These strategies improved the nutrition in the target communities. Likewise, it illustrates the effectiveness of continuously reinforcing messages with different members of the communities, using a variety of approaches.

Country	% Households Accessing Foods Rich in Micro-nutrients					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	49%	48%	45%	64%	64%	44%
Honduras	17%	36%	18%	49%	16%	28%
Nicaragua	40%	48%	44%	67%	39%	45%
Costa Rica	15%	20%	19%	23%	14%	14%

"My family now drinks natural juices: cucumber with lemon; papaya with milk; as well as oat tarts, and plantain with cheese curds. Before, when my little girl would get sick, we would buy canned juices for her. We no longer consume canned sodas. We learned that we are within the Dry Corridor, and that the fruits and vegetables can help us to adapt. We must plant more trees to fight climate change. I now use the fruit and vegetable husks as fertilizer. I recycle paper and I bury the garbage". **Representative of a mothers group, Tipitapa, Nicaragaua**

- **Knowledge and understanding of specific data related to water, sanitation and hygiene (including Costa Rica).** The Project implemented specific activities to increase knowledge and change behaviors on the treatment and use of water and hygiene. Lectures, cleaning demonstrations and recycling fairs resulted in a greater number of households reporting having knowledge and understanding of these issues. The average in the region went from 54% to 76%, where the most favorable changes occurred in Honduras, where knowledge of male-headed households increased by 58 percentage points, going from 24% to 82%, and in woman-headed households the increase was 42 percentage points, from 48% to 90%.

Country	% Target Population Understands Specific Issues Regarding Water, Sanitation, and Hygiene.					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	43%	79%	50%	71%	41%	81%
Honduras	37%	87%	24%	82%	48%	90%
Nicaragua	59%	64%	51%	61%	61%	64%
Costa Rica	77%	76%	82%	76%	77%	82%

- **Use of good practices for water, sanitation and hygiene.** Regarding the application of the knowledge acquired, Honduras, Nicaragua and Costa Rica reported a growth in the percentage of households applying good sanitary practices promoted by the project: drinking safe water, using adequate sanitation facilities and washing their hands before handling food. The highest levels were reported in Honduras and Costa Rica, with a 95% in Honduras and 86% in Costa Rica making use of good sanitary practices. Nicaragua and Guatemala remain with values below 30%, and in Guatemala a drop of four percentage points was reported regarding the percentage of households that apply good practices, going from 17% to 13%. The challenge in this country is behavioral change, since, as we were able to observe in the previous sub-section, the level of knowledge they have regarding these practices is relatively high.

Country	% Target Population Applying Good Practices for Water, Sanitation, and Hygiene					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	17%	13%	21%	10%	16%	14%
Honduras	15%	95%	12%	92%	17%	97%
Nicaragua	20%	29%	24%	48%	19%	26%
Costa Rica	58%	86%	57%	100%	58%	93%

Chart 1. **Costa Rica – NTFII Qualitative Evaluation**

In Costa Rica, we evaluated three essential aspects to identify the level of knowledge acquired by project participants from training to nutrition, sanitation and hygiene: (i) *knowledge*, refers to the theoretical knowledge acquired and that is expected from people who received training, (ii) *Know-how*, is when participants know how to apply the knowledge, and (iii) *Wanting-to-do*, refers to the attitude of applying the knowledge, if the training had enough of an impact and represented sufficient value added to motivate participants to apply and include into their daily routines their new knowledge once the training has finished.

Based on the aforementioned model, *a trained person is somebody who knows, and knows how to apply the knowledge in their day-to-day life*. Questions for the qualitative evaluation are prepared and grouped according to the three aspect areas. There is a fourth aspect area "being able to do" that is associated to the real possibility of carrying out an action, that is, whether the trainees have the resources required to apply the knowledge.

Results

Knowledge pillar: We evaluated knowledge about healthy diet and the importance of it in the growth and development of boys and girls. Most responses were partially correct, making it necessary to reinforce this knowledge. The level of knowledge shown indicates that mothers have better knowledge of healthy diets, followed by school Nutritional Health Committees (NHCs), and then cooks and students. Reviewing the responses allows us to see more reinforcement is needed on basic nutrients (carbohydrates, proteins and fats) for healthy nutrition and child development.

Know-How pillar: The cooks, mothers and students showed the highest levels of competence in this area in terms of putting their knowledge of healthy diet into practice. The NHCs need more clarity in terms of how the theoretical knowledge is to be applied within their scope of work. For example, there is no clear knowledge on how to prepare a nutrition census, how to compile data, which data should be managed by the NHCs for decision-making purposes, or how to prepare an action plan. These aspects of the *knowledge* pillar directly affect the *know-how* pillar, especially if we consider the fact that NHCs are the highest authority at schools for healthy nutrition issues.

Wanting To Do pillar: Cooks and mothers showed the highest levels of interest in wanting to apply good nutritional practices, followed by NHCs. Students show the highest levels of resistance in wanting to apply what they had learned. This is because, as they reported, they have many options to buy food out in the street. The results of the interviews per pillar indicate that it is not enough to know the importance of good eating habits, but rather that it is necessary to implement the strategies that promote *knowing how* to do it. It is worth noting that the *wanting to do* area does not evaluate whether they can apply the knowledge or not, but rather if they make sufficient efforts to implement what is required.

B4. Increased capability for communities to adapt to climate change, developing action plans to increase food security and nutrition (FSN).

The project established partnerships with national and local governments to support the development of sustainable agendas and plans in the target communities, and expand the scope of the project to other territories not directly engaged. Using CARE's Climate Vulnerability and Capacity Analysis (CVCA)[15], information was compiled and analyzed on the vulnerability of participating communities and their ability to face climate change. As a result, 45 risk reduction action plans were developed; 163 parents and community water association members trained

[15] *Climate Vulnerability and Capacity Analysis* (CVCA). https://careclimatechange.org/cvca/

on risk management; and leaders at 80 schools trained to lead and manage participatory diagnostics and apply the CVCA tool.

The project also helped strengthen local governance by providing technical support to 20 municipalities to promote public policies to address FSN, climate change, and gender equality. In Guatemala, our efforts contributed to the passage of a national law that will benefit 2.5 million school children through improved nutrition and will enable access to local markets for smallholder farmers.

Governance

- **Preparation and execution of community adaptation plans for risk reduction.** The project supported the preparation or improvement of 45 community adaptation plans to increase resilience to climate change in three countries with comprehensive interventions. At the time of the evaluation, we observed an average execution of 70% of adaptation plans, which should translate into an enhanced ability to respond to climate shocks, and serve as an incentive to continue on with more community planning efforts.

  In Guatemala there were six adaptation plans, with an execution rate of 88% (lower than planned due to staff changes in local authorities after national elections). In Honduras,17 adaptation plans were prepared in the most vulnerable communities, of which 15 were fully implemented (88%). These projects concentrated on establishing/improving school gardens, access to water, irrigation systems, perimeter fencing and equipping school kitchens. In Nicaragua, 12 of 24 plans were completed due to polarization of communities from the political conflict.

Country	New Plans for Community Adaptation or Risk Reduction		% Implementation of Community Action Plans	
	Total		Total	
	Target	Final Evaluation	Target	Final Evaluation
Guatemala	5	6	100%	88%
Honduras	17	17	70%	70%
Nicaragua	24	24	80%	50%

- **Community meetings.** The preparation of community action plans was accompanied by meetings between community groups and public institutions. The accomplishment of goals is dependent on the effectiveness of the meetings. This means that, for example, although in Honduras only half of the meetings that were planned were actually held (25/50), the outcome of those meetings was enough to advance community agendas.

Country	# Meetings between Community Groups and Government Institutions	
	Total	
	Target	Final Evaluation
Guatemala	40	38
Honduras	50	25
Nicaragua	72	72

- **CARE's strategic partnerships for the implementation of FSN and gender policies.** Besides establishing good relationships with communities, CARE formed strategic partnerships with the technical units of different ministries, municipal governments and universities. These partnerships supported project implementation and helped to strengthen the capacities of the entities whose scope of action is broader, allowing for the replication of successful activities in other areas outside the scope of the project. In Honduras, the project team advocated with municipal governments to implement three FSN/Climate Change policies in each of the five municipalities, resulting in 15 policy changes. Partnerships with the mayors' offices in Honduras also were quite successful as they led to the presence of full-time municipal technicians supporting project beneficiaries (and beyond).

  In Guatemala, the partnerships with the Ministry of Education and Ministry of Agriculture were essential to promote the approval of the Law on School Nutrition by the national congress. It is estimated that the law will benefit 2.5 million school age children as well as help to streamline the local economies by connecting farmers to markets, since it will be local families (producers) from the communities that will be providing the food to the schools. See Chart 2.

  In Nicaragua, this indicator was not monitored because the political situation did not permit the project to work in this area.

Country	# FSN/Gender Policies Put in Place through Strategic Partnerships	
	Total	
	Target	Final Evaluation
Guatemala	2	1
Honduras	15	15
Nicaragua	-	-

Chart 2. Law on School Nutrition in Guatemala

The Law on School Nutrition, Decree 16-2017, issued by the Guatemalan Congress, was approved in September 2017. The main objective of the law is to "Assure school nutrition, promote health, and increase healthy eating of the population of children and adolescents who attend public or private schools, helping them to make the best possible use of the teaching and learning process and establishing healthy eating habits in students, through food and nutritional educational actions and by supplying food to students during the school cycle..." Although the Law is to be applied in general to both public and private schools, it is the public schools (approximately 33,000 nationwide that will benefit most from the School Food Program (SFP) and corresponding budget allocation.

Among other things, the law provides for an increase in the budget allocation per student: healthy menus adapted to local conditions, that is, with cultural, social, ethnic and biological relevance; the promotion of family agriculture through the acquisition of local products required for the implementation of the school food programs; and the promotion of school gardens as a learning tool to complement the school food component. The law establishes the responsibilities of the Ministries of Education, Public Health and Social Assistance, and Agriculture, Livestock and Nutrition as well as of local governments, parents' organizations and of the public and private schools.

Regarding local producers, the law establishes that of the total financial resources assigned to each school, at least 50% is for purchasing food products from local family agriculture. This will increase to 70% in the next five years, providing that the necessary supply is readily available within the local market and that the quality of the products is guaranteed. The Ministry of Agriculture, Livestock and Nutrition is in charge of keeping a record of the people who are registered within the Family Agriculture Program, and strengthening of activities aimed at improving their agricultural, livestock and aquaculture production skills.

As an active member of the technical roundtables of the SFP, CARE participated in the development of the first Departmental Fair of Family Agriculture for School Food. Through 20 departmental advisors and 60 field trainers, the project supported the training of the departmental advisors, who will have the responsibility of replicating their knowledge with other trainers and technical support staff. The CARE-Cargill project also promoted the participation of 45 producers, who have been certified by the Ministry of Agriculture, to become providers for the SFP, creating a new source of income for these families.

- **Both women and men participated in formal and informal decision-making opportunities.** The project helped to improve local governance, by promoting greater participation of project farmers in community decision-making opportunities in the three countries. The evaluation showed that the greatest increase (and highest level) was achieved in Guatemala, going from 38% to 72% of people participating in decision-making opportunities. Honduras increased slightly from 46% to 47%; and although Nicaragua experienced an increase from 16% to 24%, it was accompanied by a reduction in the participation of women from 17% to 15%.

  In the case of the participation of women versus men, the average participation of women was consistently less in terms of the baseline and the final evaluation. Some cultural aspects regarding the role of women in society may explain these results. Nevertheless, it is important to recognize the positive leap of 40 percentage points compared to the baseline in Guatemala, going from 28% to 68%. It would seem that the project's strategy to promote gender equality in all interactions target population – from agricultural training to school meetings on nutrition – has been successful in opening opportunities for women and promoting a more assertive attitude by them.

Country	% Persons of both Genders with Significant Participation in Formal and Informal Opportunities for Decision Making					
	Total		Disaggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	38%	72%	76%	78%	28%	68%
Honduras	46%	47%	55%	66%	28%	32%
Nicaragua	16%	24%	14%	22%	17%	15%

B5. Gender

As per CARE's mandate, the NTFII project included gender equality in all components, aiming for a constant improvement in the lives of women and girls in the target communities. It is important to consider that changes in behaviors and attitudes regarding the role of women take place over longer periods of time than those of the implementation of the project itself. Despite that, the results achieved are positive in terms of the direction of the changes. To measure

specific behaviors, the project tracked three indicators that are described below. Two of the three indicators were measured in all four countries in the region.

- **Women report having equal participation in financial decision-making processes in the household (including Costa Rica).** In all four countries we observed an increase in the percentage of women that reported having equal participation in financial decision-making at home. The biggest change occurred in Honduras, where the number of women more than doubled, followed by Guatemala where the percentage of women increased to nearly 50%. As women acquire more confidence and assert their opinions at home, we believe this will translate into more assertive attitudes at the community level. This was case in Guatemala, where participation in decisions at the household level increased, as well as in formal decision-making opportunities (as noted in the previous section).

Country	% Women who Report Equal Participation in Household Financial Decisions	
	Total	
	Baseline	Final
Guatemala	60%	87%
Honduras	29%	71%
Nicaragua	54%	55%
Costa Rica	78%	83%

- **Women's Mobilization Rate (including Costa Rica).** An indicator used by CARE to measure women's empowerment is the women's mobilization rate. This is used to measure the level of freedom that women have to participate in school, church and other social activities. On average, this rate increased by nine percentage points in Guatemala and Honduras. Although the rate dropped by eight percentage points in Nicaragua, going from 95% to 87%, this still represents the highest level in the region. In Costa Rica, the evaluation measured the percentage of women that have positions of leadership within community groups or associations. The results in Costa Rica show an increase of 10 percentage points, going from 7% to 17%, in women's participation.

  The results lead us to conclude that the actions adopted by the project to strengthen capacities, opportunities and empowerment of women have had a positive effect in changing the perception of the gender roles of men and women in target communities.

Country	% Women's Mobilization Rate	
	Total	
	Baseline	Final
Guatemala	58%	71%
Honduras	68%	73%
Nicaragua	95%	87%
Costa Rica *	7%	17%

* Measures the % of women occupying leadership roles in community groups.

- **Men and women with favorable attitudes toward the prevention of gender-based violence**. CARE works to prevent gender-based violence and support communities affected

by it. In Guatemala, Honduras and Nicaragua, more than 95% of respondents reported being against gender-based violence, both at the beginning of the project and at the final evaluation. Nevertheless, these results must be viewed with caution, since, even by the very nature of the question, it is possible that there is a bias linked to social acceptance. It is possible that respondents preferred to say something that they know is expected of them by society, even when there are cases of family and gender-based violence in the target communities. Moving forward, it is important to identify new indicators to obtain better measurement of gender issues (noted in Recommendations section below).

Country	% Men and Women with Favorable Attitudes towards the Prevention of Gender-based Violence					
	Total		Dis-aggregated by Gender			
			Men		Women	
	Baseline	Final	Baseline	Final	Baseline	Final
Guatemala	94%	95%	93%	94%	97%	95%
Honduras	94%	100%	95%	99%	93%	100%
Nicaragua	100%	98%	100%	100%	100%	97%

"We learned about self-esteem because sometimes we didn't appreciate ourselves and we allowed others to humiliate us. We also learn about talking to our children about growing up. For example, I grew up in ignorance. My mom never sat me down to talk about my period. I have of young girl now and I talked to her because I really want her to take care of her body and knows that there is a time for everything when she's ready. **Mother and project participant from Zone 3, Guatemala City, Guatemala.**

VI. Conclusions

The inclusive business approach has proven to be a relationship of mutual benefit between producers and Cargill, in terms of the purchase of supplies and the sale of products. The inclusion of women in the value chains, which were traditionally controlled by men (particularly corn and sorghum), also helped to promote alternative sources of income for poor families.

The NTFII project has been able to positively impact the quality of the lives of people in communities served. Given the complexity of the project - six areas of influence (agricultural production, climate change, access to markets, food and nutritional security, governance and gender), with an average project effectiveness of 72% (measured by indicators that reported positive changes with respect to their baseline), the results are satisfactory. As mentioned in the evaluation, the results depend on the social, political and economic context in each country during project implementation. Therefore, considerations regarding each country must be viewed from that perspective, particularly in Nicaragua.

Honduras demonstrated the best results, reporting progress in practically all of the indicators. The scaling up from Phase I to Phase II was very effective, which allowed for the enhancement of activities over the past three years. Some key aspects include the establishment of strategic partnerships with local governments, the support provided to rural savings and credit unions and to the new agricultural-livestock chains (tilapia and pork meat), as well as the strengthening of school and community gardens for food provision and consumption by students and families.

The results in **Guatemala** also were sufficient to effect changes in the living conditions of the beneficiaries. Among favorable aspects was the effectiveness of the support provided to the agro-export and livestock chains, the model for the provision of extension services, the on-site technical training, the demonstration strategies on nutrition and sanitation, the progress made in

promoting gender equality, and the partnerships established with the Ministries of Education and Agriculture.

Nicaragua reported the most modest progress out of the three core countries with comprehensive interventions. The political situation and the economic crisis faced by people in the country limited the effectiveness of some of project activities. Nevertheless, important progress was made in the promotion of production chains that favor food security and changes of behavior to improve the consumption of more nutritional foods, as well as the provision of financial and business services. Had it not been for the support of the project, living conditions for those communities served would most likely have deteriorated even more dramatically than they actually did.

Costa Rica was included for the first time as part of the project in Phase II, exclusively applying the food security, nutrition and hygiene components. Given the difference in the way the program was executed, it was not possible to establish with total certainty the results of the interventions. Although there was progress in issues such as access to better nutrition through the promotion of school gardens and the promotion of good practices in sanitation, it is important for us to rethink the integration of the components and the adequate measurement of the results.

VII. Recommendations

It is important to continue efforts to diversify agriculture production chains. In particular, the producers could apply a variety of alternative options when observing any negative changes in the markets where they sell their products. Access to credit by the beneficiaries continues to represent an important challenge that prevents them from increasing production and starting new commercial ventures. The mobilization of resources through CARE partnerships with other stakeholders would help to enhance activities and achieve even better results. Other recommendations include:

- Systematize all of the interventions in the six areas of impact in such a way that they can be studied and replicated in other CARE interventions and shared with other partners working on economic and social development issues.
- Consider the adoption of measures and activities that can solve the challenges brought about by complex political and economic environments. It is also important to review the experiences of other countries outside of the region.
- Review the approach in Costa Rica and adapt the goals and instruments to it.
- Carry out a more in-depth analysis of gender dynamics in the four countries. At the same time, it would be helpful to design new actions to address the gender inequalities that still exist and to provide direct support to women who face situations of discrimination and violence. Furthermore, we should identify new indicators to have an appropriate measurement of gender issues.
- Review and simplify the series of effect (results) indicators, ensuring the training of the technical teams regarding that rationale and measurement for each, as well as the establishment of realistic goals. We also should review the instruments used to collect information in order to adapt them to the contexts of the countries and the educational levels of the respondents.
- Ensure that the information collection methodology - sampling, baseline preparation and final values – are homogeneous for all countries.
- Systematize the collection of information in the four countries and carry out periodic exercises to integrate results and make better use of the wealth of knowledge and experiences generated by the project.

ANNEX 1

	INDICATOR MATRIX BASELINE, FINAL EVALUATION & TARGET ALL HOUSEHOLDS	GUATEMALA				HONDURAS		
		Baseline	Final Evaluation	Target		Baseline	Final Evaluation	Target
	IMPACT INDICATORS							
1	% Progress Out of Poverty Index (PPI)	54.40	42.75	42.75*		48.00	52.80	60.00
2	% Capacity to build resilience to the effects of climate change							
	Not Vulnerable	39.80	60.80	50.00		54.20	60.10	70.00
	Somewhat Vulnerable	47.50	36.50	45.00		43.50	39.50	30.00
	Vulnerable	12.70%	2.80	5.00		2.20	0.30	0.00
3	Property and Assets Average Rate (PAAR)	34.30	32.00	40.00		37.55	41.56	40.00
4	% Prevalence of population with moderate or severe food insecurity, based on the Food Insecurity Experience Scale (FIES). Includes Costa Rica	40.20	45.50	35.00		69.91	40.00	40.00
5	# Months of Adequate Household Food Provisioning (MAHFP) Includes C R	10.79	10.54	11.30		9.77	10.11	11.30
6	% Minimum Dietary Diversity for Women (MDD-W) Includes Costa Rica	25.30	84.20	84.20		24.76	54.81	40.86
	% Minimum Dietary Diversity for the Household (MDD-H). Includes Costa Rica	17.00	84.90			12.23	33.55	35.35
	RESULTS INDICATORS							
1	% Change in production per unit of land							
	Yellow Corn					2.98	4.26	3.9
	White Corn					1.45	1.62	1.76
	Beans					0.89	0.94	0.99
	Sorghum							
	Green beans	8.27	10.73	10.73				
	Blackberries	16.82	18.67	18.67				
2	% Access to outreach services (previous 12 months)	40.31	90.6	100		28.57	85.14	62
3	% Producers who adopt a minimum number of three (3) practices of sustainable and technological administration promoted by the NTFII	51.31	90.9	70		19.84	93.18	50
4	% Access to appropriate supplies (previous 12 months)	97.91	77.3	100		86.51	90.54	93.5
5	% Households with savings	22.22	36.5	35		41.13	52.82	62
6	% Producers with diversified income sources (at least 3)	47.88	50	55		23.82	31.56	30
7	% Producers who apply sustainable agricultural and natural resources management practices	3.14	59.4	60		15.4	86.26	60
8	% Use of negative strategies of adaptation to reduce the impact of present and future shocks	59.8	95.3	59.8*		92.48	82.06	82.06

INDICATOR MATRIX BASELINE, FINAL EVALUATION & TARGET ALL HOUSEHOLDS		GUATEMALA				HONDURAS		
		Baseline	Final Evaluation	Target		Baseline	Final Evaluation	Target
9	% Access to markets to sell agricultural and non-agricultural products (previous 12 months)	54.45	69.9	60		55.4	87.42	76
10	# Number of commercial agreements facilitated with associations	4	8	8		2	4	4
11	# (Increase in) Membership in production and micro-entrepreneurs associations		210			943	1205	943
12	% (Households accessing) Business development services (previous 12 months)	32.46	60.2	70		38.43	46.36	60
13	% (Households) Use of formal or informal financial services (Related to Strategic Development Goal 8.10.2)	29	44.2	50		44.2	52.49	66
14	# New Micro-enterprises created	0	210			17	14	
15	$ Average income from the sale of agricultural and non-agricultural products (Previous 12 months in US$)	2552.78	2593.48	2808.06		2577.21	4339.3	3311.16
16	% Income invested in businesses	11.78	26.34	70		30.13	31.57	50
17	% Knowledge of aspects related to nutrition and healthy lifestyles, related to a balanced diet. Includes CR	4.1	40.4	70		58.62	69.77	72
18	% Increased daily consumption of fruit and vegetables (previous 30 days)	78.1	86.8	85		70.22	94.02	85
19	% Access to food rich in micro-nutrients. Includes CR	49	48	55		17.24	36.21	45
20	% Knowledge and specific data regarding good practices for water, sanitation, and hygiene – Includes CR	42.64	78.8	80		36.99	86.71	57
21	% Use of good practices for water, sanitation, and hygiene – Includes CR	16.95	12.9	60		15.05	95.02	55
22	# Preparation of community adaptation plans for risk reduction		6	5		17	17	
23	% Implementation of community adaptation plans for risk reduction	29.41	88	100		N/A	70	70
24	# Community meetings with government institutions and other strategic partners promoting food security and gender issues	N/A	38	40		20	25	50
25	# CARE's strategic partnerships for the implementation of FSN and gender policies	0	1	2		11	15	15
26	% Persons of both genders have significantly participated in formal and informal decision-making opportunities	37.63	72.1	60		46.39	47.18	60

INDICATOR MATRIX BASELINE, FINAL EVALUATION & TARGET ALL HOUSEHOLDS		GUATEMALA				HONDURAS		
		Baseline	Final Evaluation	Target		Baseline	Final Evaluation	Target
27	% Women's Mobilization Rate. Includes CR	58.4	71.3	70		68.02	72.77	76
28	% Men and women with favorable attitudes towards the prevention of gender-based violence	94.4	94.60	97.00		94.04	99.67	99.67
29	% Women who (report that they can) participate equally in making household financial decisions	60.1	87.15	80		29.3	71.26	40
30	# Community Action Plans which have been implemented		6	5		0	15	17

*** Targets were assumed as there were none in the original Baseline.**

	INDICATOR MATRIX BASELINE, FINAL EVALUATION & TARGET ALL HOUSEHOLDS	NICARAGUA				COSTA RICA		
		Baseline	Final Evaluation	Target		Baseline	Final Evaluation	Target
	IMPACT INDICATORS							
1	% Progress Out of Poverty Index (PPI)	24.00	32.40	24.00*				
2	% Capacity to build resilience to the effects of climate change							
	Not Vulnerable	15.30	14.00	15.00				
	Somewhat Vulnerable	65.80	82.00	75.00				
	Vulnerable	18.90	3.50	10.00				
3	Property and Assets Average Rate (PAAR)	54.50	42.40	55.00				
4	% Prevalence of population with moderate or severe food insecurity, based on the Food Insecurity Experience Scale (FIES). Includes CR	49.70	68.20	44.70		36.50	55.84	33.00
5	# Months of Adequate Household Food Provisioning (MAHFP). Includes CR	11.01	10.00	11.20		11.25	10.71	11.40
6	% Minimum Dietary Diversity for Women (MDD-W). Includes CR.	26.80	27.50	30.00		35.70	59.38	40.00
	% Minimum Dietary Diversity for the Household (MDD-H). Includes CR	12.80	21.80	20.00		6.06	6.31	6.80
	EFFECT (RESULTS) INDICATORS							
1	% Change in production per unit of land							
	Yellow Corn							
	White Corn							
	Beans							
	Sorghum	1.7	1.2	2				
	Green beans							
	Blackberries							
2	% Access to outreach services (previous 12 months)	66.7	75.4	75				
3	% Producers who adopt a minimum number of three (3) practices of sustainable and technological administration promoted by the NTFII	56.8	21.5	65				
4	% Access to appropriate supplies (previous 12 months)	97.3	91.3	98				
5	% Households with savings	22.7	38.2	30				
6	% Producers with diversified income sources (at least 3)	9.9	6.6	10				
7	% Producers who apply sustainable agricultural and natural resources management practices	9.9	10.5	12				
8	% Use of negative strategies of adaptation to reduce the impact of present and future shocks	52.5	66	52.5%*				

INDICATOR MATRIX BASELINE, FINAL EVALUATION & TARGET ALL HOUSEHOLDS		NICARAGUA				COSTA RICA		
		Baseline	Final Evaluation	Target		Baseline	Final Evaluation	Target
9	% Access to markets to sell agricultural and non-agricultural products (previous 12 months)	67.5	66.7	70				
10	# Number of commercial agreements facilitated with associations	1	2	3				
11	# (Increase in) Membership in production and micro-entrepreneurs associations	40	54					
12	% (Households accessing) Business development services (previous 12 months)	20.7	56.1	40				
13	% (Households) Use of formal or informal financial services (Related to Strategic Development Goal 8.10.2)	32.7	66.3	62				
14	# New Micro-enterprises created	-	57	70				
15	$ Average income from the sale of agricultural and non-agricultural products (Previous 12 months in US$)	1667	1051.50	1666				
16	% Income invested in businesses	22.5	28.6	30				
17	% Knowledge of aspects related to nutrition and healthy lifestyles, related to a balanced diet. Includes CR	82.6	58.6	85		29.49	15.86	40
18	% Increased daily consumption of fruit and vegetables (previous 30 days)	85.9	86.4	88		78.37	54.11	84
19	% Access to food rich in micro-nutrients. Includes CR	40.01	47.8	50		14.6	20.4	16
20	% Knowledge and specific data regarding good practices for water, sanitation, and hygiene – Includes CR	58.7	63.5	70		77.2	76.2	83
21	% Use of good practices for water, sanitation, and hygiene – Includes CR	19.9	28.5	30		57.6	86.4	83
22	# Preparation of community adaptation plans for risk reduction		24	24				
23	% Implementation of community adaptation plans for risk reduction		50	80				
24	# Community meetings with public institutions and other strategic partners promoting food security and gender issues		72	72				
26	% Persons of both genders have significantly participated in formal and informal decision-making opportunities	15.8	24.3	30				
27	% Women's Mobilization Rate Includes CR	94.9	86.8	95		7.28	17.28	13
28	% Men and women with favorable attitudes towards the prevention of gender-based violence	99.9	97.50	99.90				

INDICATOR MATRIX BASELINE, FINAL EVALUATION & TARGET ALL HOUSEHOLDS		NICARAGUA				COSTA RICA		
		Baseline	Final Evaluation	Target		Baseline	Final Evaluation	Target
29	% Women who (report that they can) participate equally in making household financial decisions	53.7	54.5	75		78.47	83.49	40
30	# Community Action Plans which have been implemented		24	24				

*** Targets were assumed as there were none in the original Baseline.**

ANNEX 2

IMPACT INDICATORS: Observed Behavior

Country	Poverty	Resilience	Asset Ownership	Food Security	Supplies	Minimum Dietary Diversity	IMPROVEMENTS
Guatemala	+	+	-	-	-	+	3
Honduras	+	+	+	+	+	+	6
Nicaragua	-	+	-	-	-	+	2
Costa Rica	n.a.	n.a.	n.a.	-	-	+	1

IMPACT INDICATORS: Observed Behavior
Objective 1

Country	Production/Ha	Access to Outreach Services	Application of NTFII Agricultural Practices	Access to Supplies (resources)	Savings	Diverse Sources of Income	Use of Sustainable Agricultural Practices	Use of Negative Adaptation Strategies	IMPROVEMENTS
Guatemala	+	+	+	-	+	+	+	-	6
Honduras	+	+	+	+	+	+	+	+	8
Nicaragua	-	+	-	-	+	-	+	-	3
Costa Rica	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Objective 2

Country	Access to Markets	Signed Commercial Contracts	Access to Business Services	Use of Financial Services	Average Income	Income Invested in Businesses	IMPROVEMENTS
Guatemala	+	+	+	+	+	+	6
Honduras	+	+	+	+	+	+	6
Nicaragua	+	+	+	+	-	+	5
Costa Rica	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Objective 3

Country	Knowledge about Nutrition	Consumption of Fruits & Vegetables	Access to Nutritional Foods	Knowledge about Sanitation	Application of Good Sanitation Practices	IMPROVEMENTS
Guatemala	+	+	-	+	-	3
Honduras	+	+	+	+	+	5
Nicaragua	-	+	+	+	+	4
Costa Rica	-	-	+	-	+	2.

Objective 4

Country	Action Plans Developed	Implementation of Plans	Strategic Partnerships	Number of Meetings	Participation in Decision Making Opportunities	IMPROVEMENTS
Guatemala	+	+	+	+	+	5
Honduras	+	+	+	+	+	5
Nicaragua	+	-	n.a.	+	+	3
Costa Rica	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Gender

Country	Participation in Household Decisions	Women's Mobilization Rate	Attitude Against Gender-based Violence	IMPROVEMENTS
Guatemala	+	+	+	3
Honduras	+	+	+	3
Nicaragua	+	-	+	2
Costa Rica	+	+	n.a.	2