Rapid Agriculture and Income Support and Empowerment Project, El Salvador

COST-EFFICIENCY ANALYSIS, NOVEMBER 2023

Summary

Catholic Relief Services (CRS) analysed the cost-efficiency of Multi-Purpose Cash Assistance (MPCA) to meet immediate needs and agricultural productivity support through provision of technical training and agricultural inputs provided to vulnerable and food insecure households in the Eastern and Western regions of El Salvador. The analysis revealed the following findings:

- Cost Transfer Ratio was $0.39, which was in line with other cash programs in Central and South America implemented by NGOs.
- It cost $543 per farmer served which includes the cost of capacity strengthening the promoters, farm inputs and farming kits supplied to the farmers.
- Program design approaches such as selecting financial service providers with wide coverage and low transfer charges, reaching high numbers of households through experienced local partners with strong community relationships, and leveraging the support of existing technical specialists can maximize efficiency.
- The project helped improve food consumption, coping strategies, savings, and investments and reduce non-food needs of recipient households to cope with potential shocks and improve future income.

Thanks to Karla Platero, Karla Lara, Marta Benavides, Francisco Casares, Martha Evelyn Gonzalez, Martín Rodriguez, Yoni Gutierrez, Clayton Maring and John Mulqueen for contributing to the analysis. Thanks to Heather Dolphin, Erick Ngwiri, Alan Grundy and Thomas Becker for the leadership and coordination. Thanks to Paul Bartilol and Lucian Lee (IRC) for the technical assistance.

Catholic Relief Services | 228 W. Lexington Street, Baltimore, MD 21201, USA | crs.org | crsespanol.org

Introduction

Rapid Agriculture and Income Support and Empowerment (RAISE) was a 12-month emergency response project implemented in El Salvador by CRS and Caritas El Salvador with funding from USAID Bureau for Humanitarian Assistance (BHA). RAISE assisted vulnerable and food insecure households in the Eastern and Western regions to meet immediate basic consumption needs through delivery of multipurpose cash assistance (MPCA). Additionally, the project supported the households to build resilience to cope with future shocks by providing agricultural technical training and agricultural inputs to increase resilience to drought and other climate-related shocks.

The Needs and Income Gap Assessment found that the average gap between income and the minimum expenditure basket to be $132.73 per month for rural families who were unable to meet their needs. Socioeconomic and geographic conditions in both project regions were sufficiently similar. Consultations with other MPCA providers in the region resulted in a harmonized value of cash assistance at $130 per household per month.

RAISE distributed $1,232,400 in cash which reached a total of 3,200 households (11,456 individuals) over 3 months (September, October, November 2021) through the financial service provider (FSP) Puntoxpress. Fifty-one percent of the recipient households included at least one person with a mild to severe disability; 31 percent of households had at least one elderly person aged 60 years and over; 39 percent had one or more children aged 0 to 5 years; 56 percent were represented by a woman; 24 percent were single-parent households headed by women; 13 percent included at least one pregnant woman.

The project provided training on Water Smart Agriculture (WSA) practices and technologies. The WSA approach is a systematic process where technical knowledge is passed from field technicians to promoters. These promoters are producers who take a leadership role and organize sites in their communities to replicate trainings. These sites for replicating trainings are referred to as Farmer Field Schools (FFS). RAISE project field technicians identified 62 promoters and each one established an FFS with 10-20 farmers, for a total of 1,000 farmers reached.

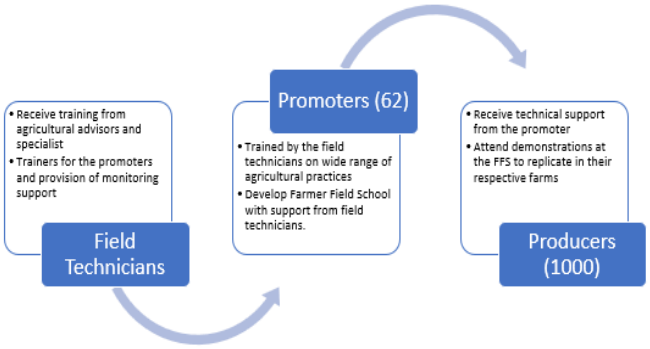

FIGURE 1- WATER SMART APPROACH PROCESS

The project reached 500 farmers in the Eastern region through Caritas San Miguel, and 500 farmers in the Western region through local consultants (Ameyalli, RENACER). Farmers received training to apply WSA techniques to their parcels, totaling 365 hectares by the end of the project. Two-hundred and forty hectares which were pest and disease prone were protected from pests. These achievements are an important contribution to improving soil and crop resilience to drought and other crises, and to increasing basic grain production for targeted communities.

TABLE 1- AGRICULTURAL PRODUCTIVITY OUTPUTS

Indicator	Achievements
Number of hectares under improved management practices or technologies with BHA assistance.	365.7
Number of individuals who have applied improved management practices or technologies with BHA assistance.	1,000
Number of hectares under pesticide treatment against pest and diseases	241.8
Percent of households with access to sufficient seed to plant.	From 45% at baseline to 96% at end line

The agricultural management practices trained include mulch and cover crop management, intercropping with cover crops, seed planting density, use of improved seeds, integrated pest management and the 4R approach *(right source, right rate, right time, and right place)* to plant nutrition management. WSA included crop protection practices for pests and diseases since one of the major risks to good harvest in the region was fall armyworm infestation. The total area treated and protected against pests/diseases was 241.8 hectares.

Farmers also received agricultural packages that responded to identified needs and corresponded with the timing of the *primera* and *postrera* planting seasons (Table 2). Agricultural

inputs were calculated based on an average cultivation area of 0.35 hectares per family. Technicians assessed communities' needs in each region to create customized inputs packages. They also utilized existing data from soil testing conducted in the area to determine the types and quantities of fertilizers to distribute. Seeds were provided to 279 farmers in Eastern El Salvador.

TABLE 2-DISTRIBUTION OF AGRICULTURAL INPUTS PER FARMER, REGION

Input	Eastern Region (500 farmers)		Western Region (500 farmers)	
	Per farmer	Total	Per Farmer	Total
18-46-0	3 qq	1,500 qq	2 qq	1,000 qq
Nitro Xtend + s	2 qq	1,000 qq	4 qq	2,000 qq
Metalosate Multimineral	1 Lt.	500 Lt.	1 Lt.	500 Lt.
Dolomite Lime	1 qq	500 qq	0	0
Maize Seeds	14 lbs	3,906 Lbs (279 farmers)	0	0
Farming Kit	1	500	0	0

Analysis Approach and Methodology

This analysis focuses on estimating the cost-efficiency of MPCA and agricultural productivity provided through the Rapid Agriculture and Income Support and Empowerment project and identifying lessons on maximizing cost-efficiency.

Cost-efficiency analysis estimates the ratio of program costs to outputs created, enabling comparison of cost-per-output for programs which all produced the same output. For MPCA, the cost-efficiency metric of **Cost Transfer Ratio (CTR)** was utilized. This is the ratio of all delivery costs, such as staffing, targeting, and transfer fees, to the total value of the cash transferred. The cost-transfer ratio is an intuitive measure because it shows how much was spent on delivery costs for every dollar transferred to beneficiaries.

Under the sector Agricultural Productivity as defined by the Dioptra Expansion and USAID Collaboration award, the cost-efficiency metric of **cost per farmer served** was utilized. This is the ratio of all costs related to capacity strengthening of field technicians, promoters & producers, agricultural inputs, kits supplied and continuous mentorship to the total number of farmers reached.

In November 2023, CRS conducted the cost-efficiency analysis using the Dioptra tool over the course of four two-hour sessions.

Data

For the analysis, the main data needed were the project expenditure and output data. Expenditure data were sourced from CRS' Insight finance database (including Direct Project Costs, Direct Shared Costs, and Indirect Costs for the project implementation period of January 6th, 2021 – December 31st, 2021, and output data were sourced from project reports.

The Dioptra Tool

Dioptra is a web-based cost analysis software that allows program staff in country offices, who are most familiar with day-to-day program implementation, to rapidly estimate the cost-efficiency of program interventions. It guides users through a standardized costing methodology, ensuring that all analysis results are methodologically consistent and can be meaningfully compared across different contexts and organizations.

By using the Dioptra tool, rather than having to learn a complex costing methodology and assemble data manually in spreadsheets, staff can focus on providing crucial estimates of how different resources were used across activities within a program, which are not captured in any current data system. For more information, see www.dioptratool.org/how-does-dioptra-work.

Results

1. Multi-Purpose Cash Assistance

Cost Transfer Ratio was $0.39, which was in line with other cash programs implemented by NGOs in Central and South America.

The program spent $0.39 in delivery costs for every $1 transferred (Figure 2). On average, CRS spent $534 per household, out of which $385 was the amount of cash transferred, and $149 was the delivery cost to transfer that cash (Table 3).

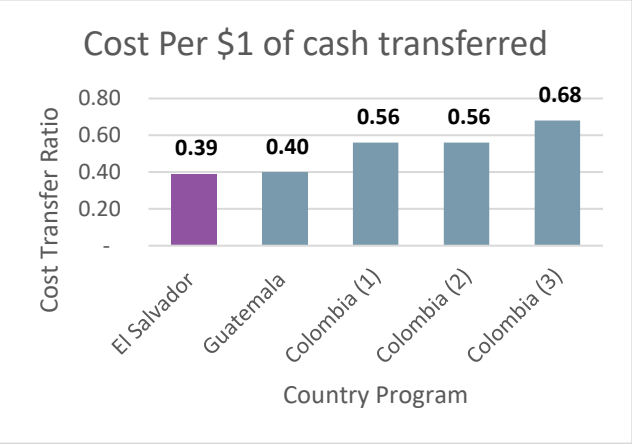

FIGURE 2- COST PER $ TRANSFERRED.

TABLE 3-COST-EFFICIENCY RESULTS OF RAISE MPCA IN EL SALVADOR (2021).

Category	Value
Total cost of MPCA intervention	$1,709,039
Cash transfer value	$1,232,400
Households reached	3,200
Average cash transfer value per household	$385
Average delivery cost per household	$149
Average total cost per household	$534

Most of the costs were spent on material and activities (73%), which included the value of cash transferred by Caritas El Salvador (through Puntoxpress). This was followed by other related program expenses such as (ICR, Office expense, Travel and transportation) at 20%.Staffing (6%), which included international, national, and partner staffing costs (Figure 2). Partners staff cost was relatively low, as partners leveraged on existing staff from other existing programs.

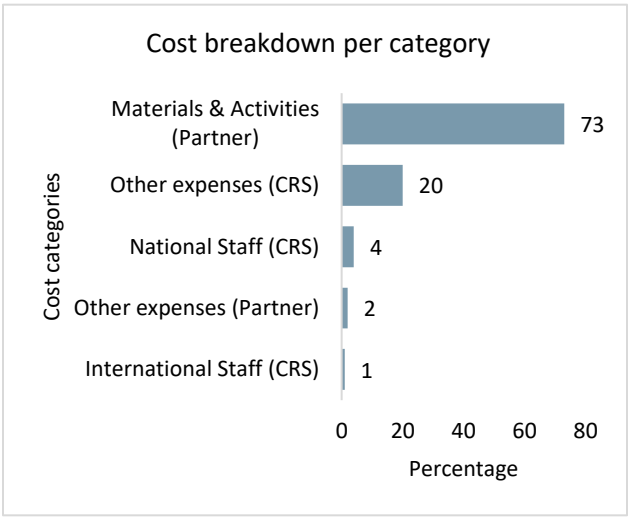

FIGURE 3-COST BREAKDOWN PER CATEGORY – MPCA SECTOR

Program design approaches such as selecting financial service providers with wide coverage and low transfer charges, reaching high numbers of households through experienced local partners with strong community relationships, and leveraging the support of existing technical specialists can maximize efficiency.

Puntoxpress was selected as the cash distribution FSP due to its wide coverage in the project regions and its low transfer charges at $0.95 per transfer, representing 0.53% of the overall intervention cost.

Other approaches that minimized the delivery costs included:

- Reaching a high number of vulnerable households at low cost through the existing community relationships established by local partner Caritas El Salvador.
- Local partner Caritas El Salvador already had significant experience and capacity in implementing cash transfers from past projects, so they did not require heavy start-up costs.
- Leveraging the support of existing technical specialists within the CRS country program, regional office, and HQ to provide technical assistance to Caritas, keeping the CRS national and international staffing costs low at 4 and 1 percent respectively.

2. Agricultural Productivity

Providing training and inputs to boost agricultural productivity cost $544 per farmer served over a period of 12 months. This includes the cost of capacity strengthening for the promoters, farm inputs (fertilizer, pesticides, seeds), and farming kits (machete, hoe, shovel, till planter) supplied to the farmers.

FIGURE 5- COST EFFICIENCY METRIC, AGRICULTURAL PRODUCTIVITY

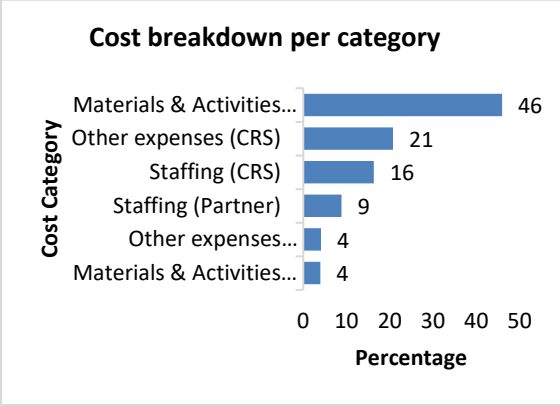

FIGURE 4- COST BREAKDOWN PER CATEGORY, AGRICULTURAL PRODUCTIVITY

Women accounted for 40% of FFS enrollment (604 men, 396 women) and 19% of agriculture promoters who led capacity-building activities. RAISE intentionally selected locations that were more accessible for female participants and encouraged their participation by having women represented in leadership roles as agricultural promoters. Data from the 2015 agricultural survey conducted by the Ministry of Agriculture reported just 17% of women participated in agricultural activities nationally.

The highest share of spending was materials & activities (50%) due to the inputs and kits provided to the farmers, followed by staffing (25%) due to the time and effort required to provide training and customize the agricultural packages.

Both Multi-Purpose Cash Assistance and agricultural productivity interventions helped improve food consumption, coping strategies, savings, and investments and reduce non-food needs of recipient households to cope with potential shocks and improve future income.

Despite market inflation during project implementation, the households were able to improve their food consumption, coping strategies, and reduce non-food needs by the end of the project (Table 2).

- **Food consumption:** Food consumption scores (FCS) improved at the end line evaluation, signalling an increased intake of nutritious foods by households. The share of households that had deficient scores reduced by 2 percentage points, borderline scores reduced by 7 percentage points, and acceptable scores increased by 10 percentage points.
- **Coping strategies:** The Reduced Coping Strategies Index (rCSI) mean and median scores decreased by half, signalling that the households resorted to fewer negative coping strategies after receiving cash.
- **Access to non-food items and WASH needs:** The share of households with adequate access to non-food items increased by 22 percentage points, while fewer households reported that they have reduced essential WASH related basic needs expenditures.

TABLE 2-OUTCOME OF MULTI-PURPOSE CASH ASSISTANCE ON FOOD CONSUMPTION, COPING STRATEGIES, AND NON-FOOD ITEMS.

Indicator	Baseline	End Line
Percentage of households with poor, borderline or acceptable Food Consumption Score. (FCS)	Poor 3% Borderline 12% Acceptable 85%	Poor 1%, Borderline 5% Acceptable 94%
Mean and median of the Reduced Coping Strategies Index (rCSI) score.	Mean = 18 Median = 14	Mean = 9.2 Median = 6
Percentage of households (beneficiaries) reporting adequate access to household non-food items.	26%	48%
Percent of households who have reduced essential WASH related basic needs expenditures.	43%	11%

These findings were supported by the spending patterns of recipient households using the cash received (Table 3). The biggest areas of spending reported were on food (59%) followed by medicine (16%). The households were also able to save and invest the cash on agriculture and livelihoods to cope with potential shocks and improve future income (15%).

TABLE 3-AVERAGE HOUSEHOLD CASH TRANSFER EXPENDITURES BY SPENDING CATEGORY

Expense	*%*
Food	59%
Medicine	16%
Savings/Forecasted Expense	9%
Agriculture Inputs	4%
Basic Services	3%
Cleaning and Hygiene Supplies	2%
Livelihood Investments	2%
Other	5%
Total	100%

Source: Estimated based on the weighted responses from families participating in the second PDM with respect to the total dollar amount distributed.