

Harvesting Rainwater for Family Gardens



Carol Doriska proudly shows off her rainwater catchment system and vegetables picked from her new backyard vegetable garden.

Name of Organization:	Beyond Borders
Address:	5016 Connecticut Ave. NW Washington, DC 20008 www.beyondborders.net
Telephone:	202-686-2088
Primary Contact:	David Diggs, Executive Director ddiggs@beyondborders.net
Project Title:	Harvesting Rain Water for Family Gardens
Project Location:	La Gonâve Island, West Department, Haiti
Granting Partner:	HOPE Foundation
Grant Amount:	\$15,000 USD
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Beyond Borders

Beyond Borders (BB) supports Haitians as they build movements to:

- 1) end child slavery and other practices that harm children;
- 2) guarantee universal access to quality education;
- 3) end violence against women and girls (VAWG); and,
- 4) promote economic justice and sustainable livelihoods.

Family Gardens Program & Rainwater Harvesting Kits

Program Goal: The overarching goal of the Model Community Initiative (MCI) is to propagate the vision, hope, methods, and means that allow rural Haitian communities to overcome vulnerability to poverty and better protect the welfare and rights of their children, and for this to grow and be sustained by the communities, themselves, independently.

Project Objectives: The objectives of the School and Family Garden project is to improve agricultural skills and nutrition of students and families, and to generate income for schools and families through sustainable school and family gardens.

Primary Project Activity: The key activity supported by HOPE Foundation grant was the installation of 46 rainwater harvesting kits in the family gardens of Family Garden Project participants.

Achievements

Beyond Borders and partner organization, Matènwa Community Learning Center (MCLC), installed rainwater harvesting kits for a total of 150 families participating in the family garden project. Forty-six (46) of these were financed by the \$15,000 grant from HOPE Foundation. The installation of each kit installed included gutters, pipes, cement, water storage barrels (200 gallon Tuff Tanks), and labor. Working through 25 schools in ten rural communities on La Gonâve Island, this outreach initiative provided school families with training, materials, and technical support to plant and harvest organic vegetables in their own backyards. By supporting the purchase and installation of rainwater harvesting kits, the HOPE Foundation facilitated improved nutrition and water access for 46 families, who used stored rainwater to irrigate family vegetable gardens and meet other household water needs. The table below shows water catchment kits installed and the numbers of families supported through this grant from HOPE Foundation.

Community	# Families	# Families supported through this grant	Vegetables
Nan Mango	25	3	Cabbage, bell peppers, Scotch Bonnet peppers, tomatoes, carrots, beets & lettuce, eggplant & watermelon
Matènwa	16	16	Cabbage, bell peppers, Scotch Bonnet peppers, tomatoes, carrots, spinach & eggplant
Masikren	12	0	Cabbage, bell peppers, Scotch Bonnet peppers, tomatoes, carrots, beets & eggplant
Chen Kontan	3	2	Cabbage, bell peppers, Scotch Bonnet peppers, tomatoes & carrots
Bouziyèt	16	16	Cabbage, bell peppers, Scotch Bonnet peppers, tomatoes, carrots & leeks
Dèbalèn	20	0	Rainwater catchment system installed, gardens to be planted
Fonnèg	20	0	Cabbage, bell peppers, Scotch Bonnet peppers, tomatoes, carrots, beets, eggplant, leeks & onions
Gran Sous	14	0	Cabbage, bell peppers, Scotch Bonnet peppers, eggplant, tomatoes & spinach
Nan Kafè	9	9	Rainwater catchment system installed, gardens to be planted
Tikoma	15	0	Cabbage, bell peppers, Scotch Bonnet peppers, leeks, tomatoes & carrots
Total	150	46	

Results

Beyond Borders and MCLC used these metrics to measure outcomes of the family gardens project:

Outputs	Outcome	Impact	Assessment Tool
46 families (an estimated 244 family members, including at least 1 school child per family) from 25 schools are trained and coached to establish organic family vegetable gardens.	50% participants demonstrate at least one new sustainable gardening skill.	Improved sustainable gardening practices	Observation gardening skill assessment of participant sampling
	50% increase in household production of nutrient-rich foods for consumption	Improved nutrition and livelihoods of participating school families	Production reports from visits to family and school gardens

BB and partner organization MCLC are in the final stages of developing capacity and tools to measure the impact of the family garden program in the lives of project participants. These tools will be used to take quantitative measures of indicators with the next group of participants. Anecdotal, qualitative evidence collected during workshops and home visits indicate that participants are experiencing these impacts from rainwater harvesting systems:

- Improved vegetable crop in the dry season;
- Decreased hardship to collect water for household usage during the dry season, leading to children arriving on time for school and parents stressing less about water procurement. Households reported experiencing increased time in conversation with children;

Results are reported from the family vegetable gardens:

- Increased variety of vegetables consumed in meals cooked at home;
- Increased spending power either because families no longer need to use household revenue to purchase vegetables for consumption, or due to new revenue from sales of vegetables; and,
- Integration of new sustainable farming practices.



Jinette Cherme takes rainwater from her cistern.



Jinette Cherme uses rainwater to water her vegetable garden.

Jinette Cherme received her rainwater harvesting kit through the grant provided by HOPE Foundation.

I live in Tè Wouj. I came to the family garden program in 2018. It's only been a month or so since I started the program. I've been to the workshops where I've learned how to plant my vegetable garden and how to care for it. I also volunteer at my kids' school garden, where I collect and deliver donkey manure to supply their composting. This garden helps me in so many ways. The rainwater harvesting system has been such a great addition to my household. It helps me have water to use at home for watering the garden, doing laundry, and for drinking water as well.

-Jinette Cherme, Family Garden Participant, Tè Wouj, La Gonâve Island



Carol Doriska and her daughter display vegetables from their family garden.

Carol Doriksa was one of the 46 families supported by the grant from HOPE Foundation.

My name is Carol Doriska. My husband Jenel Succes and I have six children: Ginel (23), Gilene (20), Loceny (19), Losemerne (14), Angemerne (11), and Kerry (7). I live in the Lakwa neighborhood of Matènwa, on the island of La Gonâve. I joined the family garden program after a meeting I went to where Abner asked us if we'd be interested in planting a vegetable garden in our yard at home. I raised my hand, and that is how I came to participate. They gave me a Tuff Tank, helped me prepare the soil and fence my garden, and I went to training to learn how to manage my garden. I also help out at my child's school garden. This garden has been so useful to me. There have been so many changes in my life because of it. I've sold vegetables and I've been saving money in my savings account. I use the water from the rainwater storage drum to water my vegetable plants, to give my farm animals to drink, and to do laundry. It's been so helpful for our family. Thank you!

-Carol Doriska, Family Garden Participant, Lakwa, Matènwa, La Gonâve Island

Many other families have benefitted from rainwater catchment systems through this project and the support from HOPE Foundation. Some of these stories are shared below:



Family garden program participants with their new Tuff Tanks after a family garden workshop (left)
The Fednor Jean family in Nan Mango with their new rainwater catchment system (right)



In Nan Mango, Fednor Jean waters his vegetable seedling nursery (left) and
Ms. Kesnel Montina draws water from the new rainwater catchment system in her yard (right).



Ms. Montina in her garden (left)
The Verne Maseline family with their new rainwater catchment system at home in Nan Mango (right)



Verna Maseline in the family's vegetable garden (left)
Rosela Alfred draws rainwater at home in Bouziyèt (right)



Sophoni Liben of Bouziyèt draws water (left).
Brivard Rolmique with his family's new rainwater harvesting system (right).



Brivard Rolmique's family vegetable garden in their yard at home in Nan Mango (left & right)



Louina Constant with her rainwater catchment system in Bouziyèt (left)
Monette Luben draws rainwater at her home in Bouziyèt (right)



Joseline Letaille collects water from her rainwater storage tank at home in Bouziyèt (left). Carol Doriska and Arold Edmond of Matènwa carry metal roofing sheets to build gutters to collect rainwater (right).



Prior to receiving installation of a rainwater catchment system, a family garden participant is required to attend a workshop on how to plant and care for an organic vegetable garden at home. Women heads of household from across La Gonâve Island gathered for these workshops. (left & right)

Challenges

While the project was largely successful, the project team encountered a number of minor challenges that were swiftly resolved to ensure on time and to quality completion of the project. These challenges included:

- Procurement of materials: a challenge in procuring enough Tuff Tanks for 150 rainwater catchment system installations; some project participants experienced delays in installation as they awaited backordered stock;
- Breaking faucets: reports of faucets breaking resulted in adjustments in how faucets were being attached to the Tuff Tanks; broken faucets were replaced using an improved installation technique;
- Wood for fencing: some families found it challenging to find wood to fence their family gardens, which is a prerequisite to receiving a rainwater catchment system.
- Evaluation tools: Beyond Borders and MCLC found that it took longer to develop necessary tools to measure impact. As a result, we were not able to conduct quantitative evaluations with the current group of participants. As mentioned above, these tools will be used with our next group.

Perspective Going Forward

The Family Gardens program has proven very beneficial to participating families. Not only does it address food security challenges by increasing variety of vegetables consumed at home, it also works to:

- reinforce agricultural skills learned through school garden projects by students and parents alike;
- reinforce other Beyond Borders programming to improve livelihoods, namely the graduation methodology, which helps families move out of desperate poverty by building sustainable livelihoods;
- extend students' 'learning laboratories' from school to home, as teachers use gardens to reinforce lessons taught in science, mathematics, and social science; and,
- introduce rainwater catchment systems at home, which helps address a major challenge faced by all residents of La Gonâve: accessing water during the dry season.

Going forward, Beyond Borders will continue to work with partner organization MCLC to strengthen the Family Garden program, prioritizing continued support for this programming. Our hope is to expand its reach to more and more families each year. Depending on funding, in the coming few months, Beyond Borders plans to reach an additional 100 families in partner communities on La Gonâve Island.

We invite HOPE foundation to visit our programming and partner communities on La Gonâve Island.



I use the water from the rainwater storage drum to water my vegetable plants, to give my farm animals to drink, and to do laundry. It's been so helpful for our family. Thank you!

-Carol Doriska

Financials

Detailed Budget

Item	Unit	Unit Cost	#	Cost per Participant	Budgeted for 46
Cistern	cistern	\$202	1	\$202	\$9,292
Cement	94 lb. sack of cement	\$7	2	\$14	\$644
Metal roofing sheets	Sheet of roofing	\$4	3	\$12	\$552
Wood boards	Supply for 1 installation	\$10	1	\$10	\$460
Faucet and Pipes	Supply for 1 installation	\$8	1	\$8	\$368
Labor: faucet installation	job	\$8	1	\$8	\$368
Labor: cistern and gutter installation	job	\$24	1	\$24	\$1,104
Transport of materials	trip	\$48	1	\$48	\$2,208
Personnel Costs: Project staff are listed in Staff and Institutional Qualifications section below					In Kind Contribution
Total Budget				\$326	\$14,996

Expenses made against the \$15,000 USD grant budget are reported in the table below. The cost for rainwater harvesting system was budgeted at \$326 USD per family. While there were some variations in actual spending on some budget lines, Beyond Borders reports actual expenses at equivalent cost per family.

Please note that the grant provided by HOPE Foundation represents a portion of a larger family garden project, for which BB has secured multiple funding sources. We report here on the full program, showing both expenditures and revenue, in order to demonstrate the impact of the grant as part a larger initiative.

Expenses

Item	Budget		Actuals		
	Per Participant	For 46 kits	Expenses for 46	Average cost per participant	Balance
Cistern (200 gallon Tuff Tank)	\$202.00	\$9,292.00	\$9,274.19	\$201.61	\$17.81
Cement	\$14.00	\$644.00	\$721.95	\$15.69	-\$77.95
Metal roofing sheets	\$12.00	\$552.00	\$612.10	\$13.31	-\$60.10
Wood boards	\$10.00	\$460.00	\$870.00 ¹	\$18.85	-\$407.00
Faucet and Pipes	\$8.00	\$368.00	\$368.15	\$8.00	-\$0.15
Labor: faucet installation	\$8.00	\$368.00	\$370.97	\$8.06	-\$2.97
Labor: cistern and gutter installation	\$24.00	\$1,104.00	\$1,112.90	\$24.19	-\$8.90
Transport of materials	\$48.00	\$2,208.00	\$1,669.35	\$36.29	\$538.65
Total Budget	\$326.00	\$14,996.00	\$14,999.61	\$326.01	-\$0.61

Revenue

Donor	Revenue	Number of Families
HOPE Foundation (this grant)	\$15,000	46
School Sisters of Notre Dame (SSND)	\$6,219	19
United Methodist Committee on Relief (UMCOR)	\$20,958	64
Individual Gifts	\$11,030	34
Total Revenue	\$53,207	163

¹ Actual wood costs were much higher, at \$2,040.32 for 46 families. The difference will be covered by other revenue sources.