

PLENITUD PR & Fundación Comunitaria de Puerto Rico

Submitted August 17th, 2018

PROJECT ACCOMPLISHMENTS: *Fondo Puerto Rico Recovery Now* FCPR 2018-0062

Project Summary: Plenitud has made great strides in improving the resiliency of people in vulnerable communities of Las Marias, establishing community and household rainwater harvesting systems and providing water filters for emergency filtration. The staff has also been focused on community education, offering workshops on water harvesting and emergency filtration as well as training individuals in the design and installation of household rain barrel systems so they can continue this important work. These accomplishments were possible with the support of the *Fondo Puerto Rico Recovery Now* complemented by funding from another source and in-kind donations from Plenitud staff.

Summary Chart:

<i>Rainwater Projects</i>	Description	People Impacted	Water Filters Distributed	Potential Annual Harvest
<i>3/15/18: Iglesia Pentecostal, Bo. Buena Vista</i>	1,500 gallon rainwater tank and installed	300	n/a	90,833 gallons
<i>3/16/18: Workshop, Iglesia Pentecostal, Bo. Buena Vista</i>	Training offered, filters distributed	60	60	n/a
<i>March/April: Household Systems, Bo. Bucarabones,</i>	15 Rain Barrels installed in Phase 1	60 people (avg. of 4/house)	20	150,000 gallons
<i>4/7/18: Workshop, Bo. Bucarabones</i>	Training offered, filters distributed	30	40	n/a
<i>4/15/18: Iglesia de Dios, Bo. Anones</i>	Training offered, filters distributed	50	40	n/a
<i>May/June/July: Household Systems, Bo. Bucarabones</i>	Mentorship of 3 individuals; 10 Rain Barrels installed by this team	40 people (avg. of 4 per house)	10	100,000

RAINWATER HARVESTING OUTREACH: Iglesia Pentecostal, Located in Barrio Buena Vista, Las Marías

Site description: Barrio Buena Vista is one of the more isolated and impoverished areas of Las Marias, and was one of the last communities to have public utilities (water, electricity) restored after Hurricane Maria. During the immediate crisis following Hurricane Maria and in the subsequent months, the leadership and members of this church were very active in community outreach and relief efforts, standing out due to their dedication, consistency and ability to mobilize quickly. By partnering with this church, we are guaranteeing water security for the entire community.

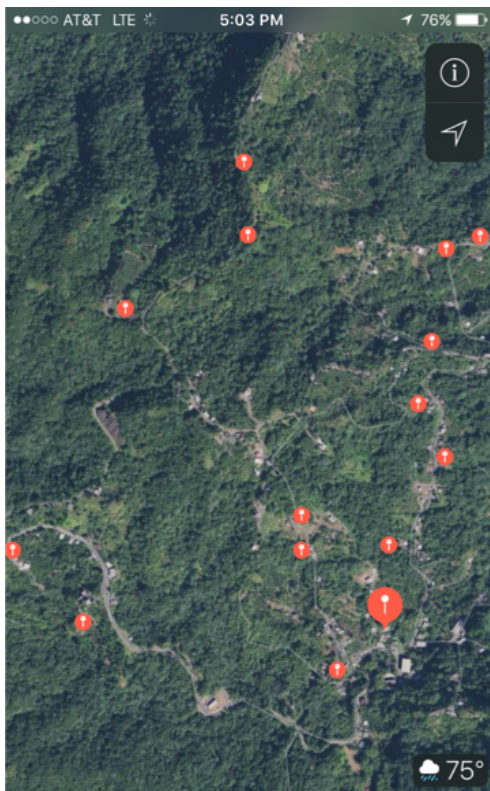
Plenitud's impact: During the month of March, Plenitud's staff worked alongside church members to design and install a community-level rainwater harvesting system at the church. The system featured commercial-grade gutters, a "first-flush" filtration system, and a 1,500 gallon water tank. A workshop on the benefits of rainwater harvesting and the methods used was offered to approximately 60 members of the church. 5 dedicated individuals received intensive hands-on training during the construction of the system. Additionally, 60 household water filters were distributed to the community, along with training in their assembly, usage, and maintenance. An international relief organization, the Sat Nam Foundation, joined the efforts, helping to donate supplies and offer technical advice.



*Above Left: The new installed 1,500 gallon cistern harvesting rainwater from the roof of the church.
Above Right: Introductory rainwater harvesting & water filtration workshop offered at the church.*

RAINWATER HARVESTING OUTREACH: Household Rainwater Systems, Located in Barrio Bucarabones, Las Marias

Site description: *Barrio Bucarabones* is located in the Eastern edge of Las Marias, bordering with the municipality of Lares. It is one of the most remote neighborhoods in Las Marías, has a high poverty index, and was severely affected by Hurricane Maria. Bucarabones was also one of the last neighborhoods in Las Marías to have public utilities (water and electricity) returned, and is therefore considered to be one of the most vulnerable communities in this area. Based on all of these factors, Plenitud selected Barrio Bucarabones as a target area for rainwater harvesting initiatives. Plenitud set an ambitious goal of installing 50 household rainwater collection and filtration systems.



Above Left: *Map of the rainwater harvesting systems installed to date.* Right: *Carson Ingley, a Certified Rainwater Harvesting expert, worked alongside community members and volunteers.*

Plenitud's impact: After visiting a total of 30 households, 15 houses were selected for the first phase of tank installations. Designs were prepared, materials purchased and prepared, and the initial 15 household rainwater harvesting systems were installed during March and April, 2018. Three community members received intensive training and a stipend while helping to install the systems. Additionally, a workshop on rainwater harvesting and emergency water filtration was offered to approximately 30 community

members from Barrio Bucarabones at a public basketball court. Finally, a total of 60 water filters were assembled and distributed to the community members.

During the months of May, June, and July, the community rainwater installation team from CAMBU installed rainwater collection systems at an additional 10 households in the Bucarabones neighborhood. This was accomplished with technical support on designs, materials, tools, and a modest stipend provided by Plenitud, with the support of the *Fondo Puerto Rico Recovery Now* complemented by funding from another source. Each household was provided with a water filter and training in emergency filtration techniques.

Project Partnership: Plenitud has been collaborating with a local non-profit organization, CAMBU, for the workshop, filter distribution, and introductory workshops. This organization, el Centro de Apoyo Mutuo de Bucarabones Unido, was created after Hurricane Maria to bring people together in service and solidarity and increase the resilience of the neighborhood. CAMBU helped to network with the community and identify the households that received the systems, creating an important link between the community and Plenitud. Three staff from CAMBU have been receiving mentorship and training to form a solid installation team. Additionally, volunteers from an international volunteer organization, 109 World Yoga, supported with the preparation of the rainwater barrels, helping to prepare, wash, paint, and install hose connectors.



Above left: Volunteers from a grassroots organization, CAMBU, help to promote and organize a workshop on rainwater harvesting in a public basketball court. *Above right:* International volunteers from 109-World Yoga helped to wash, paint, and prepare barrels for installation in the households.

RAINWATER HARVESTING OUTREACH:**Iglesia de Dios, Located in Barrio Anones, Las Marías**

Site description: This church is located in Barrio Anones, a neighborhood that was severely affected by Hurricane María and has a high poverty index. The church members actively supported relief efforts, and Plenitud previously collaborated with the church to distribute holiday toys, water filters, and hurricane relief supplies. This church also has very progressive leadership that welcomes sustainability initiatives and educational outreach.

Plenitud's impact: In April of 2018, Plenitud offered a workshop to approximately 60 church members on the importance and benefits of rainwater harvesting. The workshop utilized a powerpoint presentation and a hands-on component, assembling (2) 55-gallon rainwater barrels with the participation of 5 members. The workshop also included a demonstration of water filter assembly and maintenance. A total of 40 filters were distributed at the end of the workshop.



Left: Two rainwater barrels were assembled with the support of church leadership and member participation, providing an engaging hands-on component to the workshop.

Anecdotes from the Field:

1. Yeidy is a local community leader and a pivotal member of the grassroots organization, *CAMBU*, with which we have collaborated in our outreach efforts in Barrio Bucarabones. She has been incredibly committed to the work, accompanying our design and installation team on every single site visit and participating in a dozen meetings and planning sessions. Yeidy is not only our direct link to the community, she is also very handy in the field, quick to help unload gear, stabilize a ladder, and glue together a downspout. She has received intensive training and mentorship in rainwater harvesting from the Plenitud staff, becoming part of the three member team of technicians qualified to extend our work in Barrio Bucarabones.

2. The Bosques family are elderly low-income residents of Bo. Bucarabones who lost most of their house during Hurricane Maria. They were selected by *CAMBU* to receive a rain barrel, and Mrs. Bosque received our installation team with a warm smile, an open heart, and cold refreshing limbers. The team was able to successfully connect a system harvesting water from the roof of the small section of their house that remains. When the installation team returned a couple of weeks later to follow up and inspect the already installed systems, no one was home. But the system was functioning well with the rain barrel full; connected to the tap was a hose bringing water towards an area with the family's washing machine and mop bucket. The generosity and gratitude of people with so few material possessions left a lasting impact on our installation team, and we hope to be able to continue to make an impact on this family and others.