

Catanduanes, Philippines



**BioSand Filter Project
Evaluation & Close-Out Report**

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Executive Summary

This report provides an overview of evaluation findings from a BioSand Filter Project in the communities of Summit, San Pedro, and Biong located on the island of Catanduanes, Philippines. In collaboration with a variety of partners and stakeholders, the BioSand Filter Project was launched in September, 2018 and sought to address water quality issues identified by community members as a priority concern during several rounds of research. In May, 2019, our organization led an evaluation survey team and completed semi-structured interviews in all three communities to determine the status of project implementation activities and initial adoption of BioSand Filters. The findings outlined in this report represent key data points and observations from evaluation activities and form the basis of “lessons learned” but are by no means final conclusions of project outcomes.

In Summit, 71 households received a BioSand Filter reaching 438 direct beneficiaries and serving approximately 24% of the community overall. An additional BioSand Filter was installed at the Elementary School during subsequent Project Close Activities. During the evaluation activities, survey enumerators observed BioSand Filters were stored properly in 96% of recipient households, suggesting the filters are a valued possession. Fifty percent of survey respondents reported sharing the filtered water with people outside their household, a finding which is aligned with cultural practices of sharing resources and which suggests the project reach may extend beyond recipient households. Ninety-four percent of survey respondents stated their household had experienced benefits from having a filter of which, 91% listed “health benefits” including less/ no sickness. During semi-structured interviews, the majority of interview participants stated the BioSand Filter Project was a positive thing for their community but also discussed challenges with project implementation including seasonal insufficient water supply and sustaining voluntary (unpaid) labor over the 9 month lifecycle of the project.

In San Pedro, 74 households received a BioSand Filter, reaching 360 direct beneficiaries and serving approximately 77% of the community overall. During the evaluation activities, survey enumerators observed BioSand Filters were stored properly in 100% of recipient households with many painted in colorful designs, suggesting the filters are a valued possession. Almost 40% of survey respondents reported sharing the filtered water with people outside their household, a finding which is aligned with cultural practices of sharing resources and which suggests the project reach may extend beyond recipient households. Ninety-seven percent of survey respondents stated their household had experienced benefits from having a filter of which, 92% listed “health benefits” including less/ no sickness. During semi-structured interviews, the majority of interview participants stated the BioSand Filter Project was a positive thing for their community although echoed similar concerns about sustaining voluntary (unpaid) labor over the 9 month lifecycle of the project. Given the frequency with which this was mentioned in both Summit and San Pedro, this represents an important “lesson learned.”

In Biong, BioSand Filter installation occurred in a more targeted way than Summit and San Pedro, with our organization offering filters only to members of a farming group. Through this effort, 10 households received a BioSand Filter, reaching 55 direct beneficiaries. During the evaluation activities, survey enumerators observed BioSand Filters were stored properly in 100% of recipient households, suggesting the filters are a valued possession. Forty percent of survey respondents reported sharing the filtered water with people outside their household, a finding which is aligned with cultural practices of sharing resources and which suggests the project reach may extend beyond recipient households. All 10 survey respondents stated their household had experienced benefits from having a filter of which, 100% listed “health benefits” including less/ no sickness.

Our organization will complete tasks associated with BSF Project Close by August 31st, 2019. It is our intention to return to BSF Project communities one year from this date and the official project close to conduct further evaluation activities and determine the long term impact of BSF Filters.

Introduction

Report Purpose

This report is intended to provide an overview of evaluation findings from a BioSand Filter Project in the communities of Summit, San Pedro, and Biong located on the island of Catanduanes, Philippines. The findings outlined in this report are by no means final conclusions of project outcomes, but rather an attempt to gauge the status of project implementation activities particularly as it relates to initial adoption of BioSand Filters as a means to addressing water quality issues in target communities. Findings from this report form the basis of subsequent “lessons learned” which will be applied to remaining project close activities as well as the design of future OUR ORGANIZATION projects.

Partnership

In order to be successful, our work requires collaboration across organizations and sectors, with each partner contributing to the final result. In an effort to appreciate this collective effort, our organization recognizes the following key partners for the BioSand Filter Project:

INFORMATION REMOVED TO PROTECT CLIENT CONFIDENTIALITY.

A Single Drop for Safe Water (ASDSW)

Through a series of site visits, a comprehensive needs assessment, and in-depth focus group discussions, representatives of target communities identified “water quality” as a high priority. Additionally, preliminary water testing completed by FARMER GROUP staff revealed that water sources in target villages were contaminated with E.coli bacteria. Based on these findings, our organization sought out a partner with experience addressing water, sanitation, and hygiene (WaSH) issues in rural communities. A Single Drop for Safe Water (ASDSW) was recommended to our organization for their sustainable, community-led approach to addressing WaSH issues, and a review of ASDSW’s past work in communities around the Philippines revealed their organizational values to be aligned with the approach of both our organization and our key partner.

Founded in 2006, ASDSW has a vision of “empowered communities taking responsibility to improve their quality of life and manage their resources and capacities.” In order to realize this vision, ASDSW focuses on strengthening community-based WaSH governance systems and the technical capacity of strategic partners as well as soliciting community buy-in and ownership at every stage of the WaSH project planning, design, and implementation process. With strategic guidance from our organization, ASDSW has provided training and oversight to community volunteers who have, in turn, completed community-based WaSH assessments, project planning and design activities, and the eventual construction and installation of BioSand Filters.

Ateneo Social Science Research Center (ASSRC) – Ateneo de Naga University

Ateneo Social Science Research Center (ASSRC), a division of Ateneo de Naga University, “undertakes studies on concrete human life situations in Bicol especially of the marginalized...”¹ which makes them uniquely qualified to assist our organization in our efforts to better understand the lives of abaca farmers on the rural island of Catanduanes. Our organization contracted with ASSRC to provide survey enumerators and facilitators to complete the initial needs assessment, focus group discussions, and final project close evaluation survey. While our organization drafted the initial surveys and facilitation plans, ASSRC provided crucial feedback to ensure interactions with community members would be culturally appropriate and well-received.

¹ Source: <https://external.adnu.edu.ph/Centers/SSRC/>

Previous Research

Prior to beginning the BioSand Filter Project, our organization completed three rounds of preliminary research in order to gain an overall understanding of community demographics and dynamics, strengths, and challenges. Research prior to the BioSand Filter Project can be understood as follows:

August, 2016: Initial Site Visit

- Gathered preliminary, qualitative information about the target communities on the island of Catanduanes, Philippines
- Primary findings covered a broad range of topics and were focused on livelihood, education, financial management, microcredit organizations, family planning, health, government programs, and farmer groups

April, 2017: Catanduanes Needs Assessment (CNA)

- In collaboration with ASSRC, we implemented a 60-question survey in the communities of Summit and San Pedro
- Data collected as a result of this survey provided a more in-depth understanding of these communities, with an emphasis on community strengths and available resources
- Key findings were organized in a comprehensive report in the context of a Livelihoods Framework and focused on the key areas of financial, physical, human, natural and social capital

August, 2017: Qualitative Research for Project Identification (QRPI)

- In another collaborative effort with ASSRC, we conducted further qualitative research in the form of focus group discussions (FGDs) with community members from Summit and San Pedro and Key Informant Interviews (KIIs) with non-governmental agencies (NGOs) and government agencies active in these communities
- The purpose of this research was to further our understanding of community challenges, priorities, and needs as well as identify potential solutions
- Findings from this research indicated that water access and quality were critical issues for both Summit and San Pedro

Community Selection

The BioSand Filter project, a pilot for future community-based WaSH projects in farming communities, was implemented in the communities of Summit, San Pedro, and Biong.



Figure 1: Map of Catanduanes

These villages represent three of six farmer group communities. The villages of Summit and San Pedro were selected for participation in the pilot project due to their locations, Central and West Catanduanes, respectively. These communities were also selected based on the presence of a higher volume of farmers in comparison to other communities.

Farmers in the community of Biong were added as beneficiaries of the pilot project at a later date due to their proximity to San Pedro and the relative ease of including them in BioSand Filter outreach.

Community Profiles

Summit (Pedro Vera)

Located in the central Viga Municipality, Summit (Pedro Vera) is a single community broken into two distinct halves, one at the top of a mountain and one at the bottom. The households at the top are known collectively as “Summit” and represent around 250 households while the households at the bottom are referred to collectively as “Pedro Vera” or “P. Vera,” representing approximately 100 households. Despite a virtually unpopulated distance of 7kms between both halves of the community, they are legally considered a single barangay (community) unit. The Community Spot Map (right) is not to scale but shows the two halves of the community, with P.Vera shown in the upper right quadrant. Summit is located on the National Road to Viga and is roughly one hour by car from Virac, the provincial capital. Although estimates vary, OUR ORGANIZATION believes there are approximately 300-350 households in the Summit (P. Vera) community.



Figure 2: Summit Community Spot Map

The majority of residents earn a living through the abaca industry. A total of 40 farmers in the Summit area are a part of our target farmer group, making it the second largest group in the farmer group network.

San Pedro

San Pedro is a community of approximately 106 households in the western Gigmoto Municipality, located 1.5kms from the town of Gigmoto and the main road (see Community Spot Map, right). San Pedro is roughly two hours from Virac by car and is perhaps best known for serving as the gateway to Nahalugan Falls, a minor tourist attraction. The majority of residents also earn their living through the abaca industry, with 20 farmers belonging to our target farmer group.

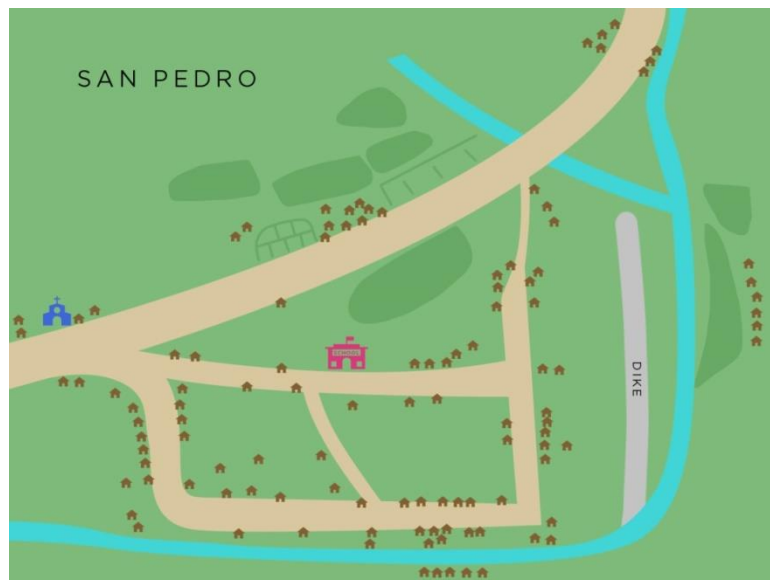


Figure 3: San Pedro Community Spot Map

Biong

Biong is located approximately 3kms from San Pedro in the Gigmoto Municipality, 1km from the town of Gigmoto. Unlike San Pedro, the community of Biong is situated directly upon the main road, with roughly 16% of households (homes) at risk of demolition due to government-sponsored road widening activities to take place at an indeterminate point in the future. The majority of residents earn their living through abaca although, given the community's direct access to the ocean, fishing represents a secondary source of income for roughly 20% of households. Community leaders estimate there are 224 households in Biong, with the target farmer group consisting of 10 farmers.

Community Name	# of Farmers
Summit	40
San Pedro	20
Biong	10
Total # of Farmers	70

Comparison between Communities

Summit, San Pedro, and Biong possess both similar and different characteristics which are important to underscore in order to understand how and why project implementation occurred the way that it did.

In addition to sharing culture, language, and ethnicity, the communities share the following key characteristics:

Key Similarities Between Communities (Pre-BSF Project)			
Topic/ Area	Summit	San Pedro	Biong
Average Annual Household Income ²	P196,658 (\$3,782) ³	P106,349 (\$2,045)	Data not available, although likely under P200,000 (\$3,846)
% of Households living below the poverty line ⁴	46% of households	56% of households	Data not available although likely similar to Summit/ San Pedro
Issues meeting basic expenses (2016) ⁵	78% reported being unable to meet basic household expenses	78% reported being unable to meet basic household expenses	Data not available, although likely similar to Summit/ San Pedro
Primary Livelihood	Abaca	Abaca	Abaca

In 2015, The Philippines Statistics Authority (PSA) set a per capita (per person) poverty threshold of P21,660 (\$417), establishing the minimum income required in order to meet basic needs including food, water, housing, and fuel. Individuals with income below this level are considered to be below the poverty line. During analysis for the CNA survey results, annual household income was divided by the number of people per household which was then compared to the per capita threshold provided by the PSA. This revealed that a large proportion of community members in Summit and San Pedro live below the poverty line. Because the CNA was conducted only in Summit and San Pedro, we do not have comparative data for Biong. However, based on information provided by the farmer group team, we believe households in Biong share a similarly low economic profile as well as the related issues.

All three communities suffer from low-levels of income and, as a result, the majority of households appear to struggle with meeting basic needs including food, shelter, education, and healthcare. As

² Based on findings from the Catanduanes Needs Assessment (CNA), 2017

³ Throughout this report, Philippine Pesos (P) have been converted to US Dollars (\$) using a conversion rate of P52 = \$1

⁴ Based on findings from the CNA, 2017

⁵ Based on findings from the CNA, 2017

discussed in the CNA, many households with insufficient income may be particularly vulnerable to financial shocks, including health emergencies or natural disasters. Low levels of income and the resulting household vulnerabilities are key similarities between these communities as they contribute to or exacerbate many of the other challenges faced by community members.

Although sharing similar culture, language, and ethnic markers, as well as low levels of income and the associated challenges, the pilot project communities are different from one another in the following key areas:

Key Differences Between Communities (Pre-BSF Project)			
Topic/ Area	Summit	San Pedro	Biong
Distance to Provincial Capital	1 hour	2 hours	2 hours
Perceived Proliferation of NGOs ⁶	High	Low	Unknown
Perceived Proliferation of Government-Sponsored Projects and Programs ⁷	High	Low	Unknown
Perceived Community Support of Barangay Representatives ⁸	50% supportive, 50% unsupportive	80% supportive, 20% unsupportive	Unknown
Size of Community ⁹	300-350 Households	106 Households	224 Households
Land Tenure Issues	Yes	No	Some

As mentioned in the community profiles above, Summit is positioned along a main road, approximately 1 hour by car from the provincial capital of Virac. Both San Pedro and Biong are considerably further away from Virac, with San Pedro facing an additional disadvantage of being located 1.5 kms from a main road. This impacts community member access to goods and services as well as the proliferation of both NGOs and Government-sponsored Projects and Programs within the community. As a result, community members in Summit report having more experience working with outside organizations whereas community members in San Pedro report that OUR ORGANIZATION is one of the few organizations to have both visited the community and completed a project. While community members in Biong were not asked to comment on their experience with outside organizations, OUR ORGANIZATION observed the presence of a Millennium Challenge Corporation (MCC) water system project as well as an upgraded school library funded by a donation from a previous resident. This suggests a low-to-medium level of exposure to outside organizations.

A community's level of exposure to outside organizations is likely to influence their perception of OUR ORGANIZATION, particularly if OUR ORGANIZATION holds different expectations for community involvement in project implementation than others. In Summit, community members stated the BioSand Filter project required a greater amount of time and effort than other projects, acknowledging there was a prevailing "hand out" mentality in the community. It is likely this expectation contributed to lower levels of participation in Summit than in San Pedro.

Another important difference between all three communities is the community's support of their elected Barangay Representatives. In Summit, the Barangay Captain was discovered to be a polarizing figure within the community for a variety of reasons. Although political rivalries exist within San Pedro,

⁶ Information gathered during qualitative interviews (2017 – 2019)

⁷ Information gathered during qualitative interviews (2017 – 2019)

⁸ Information gathered during qualitative interviews (2019)

⁹ Information gathered during qualitative interviews (2017 – 2019)

the majority of community members appear to support their elected representatives. Community members in Biong were not asked to comment on their Barangay Council as we did not involve the elected representatives in this project in their community. A community's support of their elected representatives becomes an important factor in a given project particularly if Barangay Representatives are involved in attempts to generate community support or influence implementation. In the case of Summit, the continued involvement of the Barangay Captain may have contributed to dwindling community support for the project over time.

In addition to saturation of outside influence and varying support for political representatives, size is a key difference between these communities. Summit is a larger community than San Pedro and, while many of the community members are related in both villages, the community of Summit overall does not seem to be as tight-knit as the community of San Pedro. Community members in Summit report that several members of the community are from "outside" and came to Summit from other parts of Catanduanes or from different islands altogether in order to participate in logging activities when it was still legal to do so. Conversely, community members in San Pedro report the majority of households are related to one another and pride themselves on welcoming outsiders "like family." We did not ask community members in Biong to provide information related to community composition or unity.

The size of a community can provide different challenges to project implementation particularly when considered alongside the closeness of familial and social ties. In larger communities, such as Summit, it can be harder to gain support from the majority of households especially if individual households are distant from one another, physically and socially. In smaller communities, like San Pedro, it can be easier to reach the majority of households especially if key families or family members are proponents of the project.

Finally, land tenure issues are a significant difference between project communities. The top half of the Summit (P.Vera) community has been legally designated as a protected watershed area. As such, the majority of current residents of this community are considered "illegal occupants," with the local government stating their intention to eventually relocate the community at an undetermined point in the future. Similarly, in the community of Biong, many of the houses along the main road are scheduled for demolition so the road can be widened. As such, the local government will need to



Figure 4: Summit, as viewed from above, faces land tenure issues.

relocate these households to an alternative, undetermined location at an undecided point in the future. The San Pedro community does not appear to suffer from land tenure concerns. Land tenure issues can impact stability both at the household and community level and influence a community's ability and willingness to plan for their future, including their participation in projects.

In later sections of this report, we call attention to other similarities and differences between these communities as they relate to our findings from the implementation of the BioSand Filter Project specifically.

BioSand Filter Project Overview

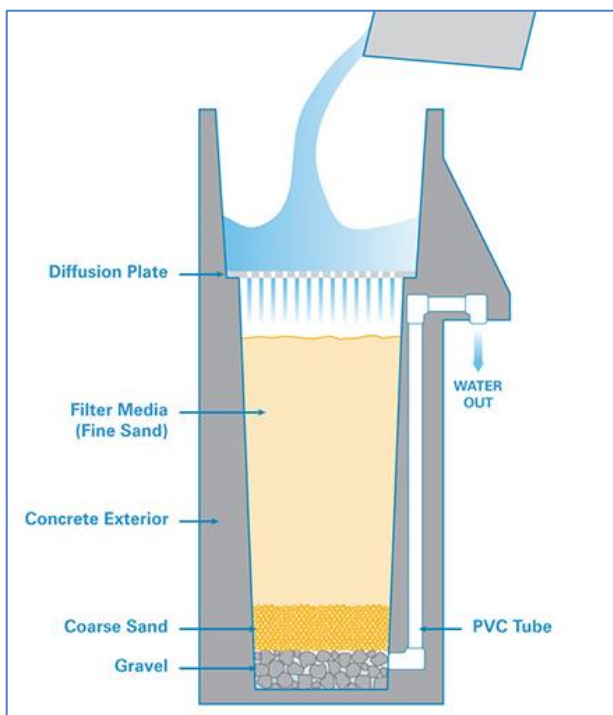
As noted by FARMER GROUP staff, all FARMER GROUP communities suffer in varying degrees from poor quality water. Community members in Summit and San Pedro also articulated concerns about water in focus group discussions in August, 2017. ASDSW confirmed this finding when water testing in both Summit and San Pedro revealed high levels of E.coli contamination in the majority of community water sources. Causes of contamination include households without sanitary toilets practicing open defecation, improper construction of sanitary toilets, and ineffective methods of household waste disposal. Filtration systems, including BioSand Filters, are a cost-effective, sustainable way to address E.coli contamination as they rely on locally available materials.

What is a BioSand Filter?

A BioSand Filter, sometimes known by its initials “BSF,” is a household-based water filtration system. Throughout the remainder of this report, the initials “BSF” will be used consistently.

For the BSF pilot project, BSF casings or containers have been made of concrete which are, in turn, filled with layers of sand and gravel which have been properly cleaned and sized to serve as filtration components. The sand removes pathogens (micro-organisms that cause sickness) and suspended solids from contaminated drinking water. With continued use, a biological community of bacteria and other micro-organisms grows in the top two centimeters of sand. This is called the “bio-layer” or “biofilm.” The micro-organisms in the bio-layer eat many of the pathogens in the water, improving the water treatment.¹⁰

The World Health Organization (WHO) estimates that an individual needs access to a minimum of 3 liters of water per day for drinking¹¹ with an additional 3 - 6 liters of water per day for cooking. If properly cared for, a BSF can provide up to 200 liters of clean water per day, easily meeting the basic needs of a 5-person household.



BSF Project Goals

In keeping with the principles of community-led development, ASDSW, with the support of OUR ORGANIZATION, encouraged local community leaders and volunteers to establish their own goals for the BSF Project.

¹⁰ [Source: Center for Affordable Water and Sanitation Technology \(CAWST\)](#)

¹¹ [Source: World Health Organization](#)

Summit Expected Outcomes

1. Per the request for funding submitted by Summit in July, 2018, the scope of the project in that community has been:
 - a. 444 BSFs produced, distributed, and installed in 444 households in Summit (P. Vera) within 6-7 months of using 4 BSF molds
 - i. Note: Based on updated information received by OUR ORGANIZATION in September, 2018, we believe there are actually closer to 300 households in the Summit (P. Vera) area
 - b. At least 10 residents trained on BSF production, installation, and monitoring

San Pedro Expected Outcomes

1. Per the request for funding submitted by San Pedro in July, 2018, the expected outcomes of the BSF Project in that community are:
 - a. 107 BSFs produced, distributed, and utilized by the residents of San Pedro
 - i. Note: Based on updated information received by OUR ORGANIZATION in February, 2019, there are actually 96 distinct homes eligible for a BSF in San Pedro
 - b. At least 15 people trained to produce, install, and monitor BSFs
 - c. At least 15 people trained in entrepreneurship
 - d. 1 training on BSFs and Entrepreneurship conducted
 - e. 15 people trained regarding proper WaSH Advocacy
 - f. San Pedro will become a Zero Open Defecation (ZOD) community
 - g. BSFs produce safe drinking water in the community

Biong Expected Outcomes

Biong was not included in the original pilot project scope and recipients in this community were added at a later date due to their proximity to San Pedro. As a result, ASDSW did not complete in-depth project planning and design activities in Biong and we do not have community-driven expected outcomes for this project in this community. Given time restrictions and other community considerations including the potential impact of the road widening project, OUR ORGANIZATION focused on providing BSFs exclusively to the 10 FARMER GROUP member households.

Timeline of Project Activities

- June, 2018: WaSH Needs Assessment
 - a. With oversight provided by ASDSW, community volunteers in Summit and San Pedro determine majority of water sources are contaminated with E.coli bacteria
- June + July, 2018: Project Planning and Design Activities
 - a. Community representatives in Summit and San Pedro establish WaSH-specific goals, prioritizing solutions, and discussing risk mitigation strategies with guidance from ASDSW
- August, 2018: Submission of Request for Funding
 - a. Using outputs from project planning and design activities, Summit and San Pedro representatives each submit two requests for funding via ASDSW
 - b. Of the two submitted proposals, OUR ORGANIZATION selects the request for BSF Project in both communities
- September + October, 2018: Launch of BSF Project
 - a. BSF Construction and Installation Training provided by ASDSW
 - b. Small Business Planning and Marketing Training also provided in San Pedro
- October, 2018 – May, 2019: BSF Project Implementation
 - a. Community volunteers construct and install BSFs in interested households in Summit and San Pedro, respectively

- b. OUR ORGANIZATION field-based Project Manager provides on-going support to community volunteers with a focus on helping them overcome implementation challenges
- November, 2018: OUR ORGANIZATION and Partner agree to provide BSFs to FARMER GROUP Farmers in Biong
 - a. April, 2019: BSFs installed in Biong by project participants from San Pedro
- May, 2019: Project Evaluation and start of Close Out Activities
 - a. OUR ORGANIZATION determines final “course correction” activities to assist with close out activities in Summit
- June – August, 2019: Completion of Project Close Out Activities
 - a. Project End: August 31st, 2019

Beneficiaries

While neither Summit nor San Pedro reached their goals of BSF installation in 100% of households, more than 853 people have become beneficiaries of the BSF Project, including 70 FARMER GROUP farmers and their families. The table below provides a breakdown of beneficiaries, with the total number of installed BSFs appearing in a separate table on page 14.

Community Name	# HH Beneficiaries	Estimated # Beneficiaries outside of HH* ¹²	Total # of Beneficiaries
Summit	438	35	473
San Pedro	360	28	388
Biong	55	4	59
Total	853	67	920

For OUR ORGANIZATION, this represents a tangible step towards our organizational goal of positively impacting the farmers and collectors in TM source communities. It also represents an opportunity for us to refine our approach to community-led development, particularly as our approach to each community was similar and yet produced different results. Note that, in Summit, an additional BioSand Filter was installed at the Elementary School during subsequent Project Close Activities, although it isn’t counted in the totals listed above or discussed in later sections of this report.

Methodology

The OUR ORGANIZATION research team utilized a mixed-methods approach to the BSF Project Close Evaluation consisting of both quantitative (collecting measurable data) and qualitative (interviews and observations) approaches. This rigorous method of data collection provides richer information while also making data easier to synthesize and triangulate. This allows for investigations of increased depth and breadth into each area of inquiry which are, in turn, more likely to provide more accurate results.

Quantitative Research

With input from both ASDSW and ASSRC, OUR ORGANIZATION drew upon previous research efforts to draft a 29-question survey to be given to all BSF recipient households in Summit, San Pedro, and Biong. The survey was designed to collect information in three categories: general household information, information related to water access and quality, and information specific to the installation, use, and care of the BSF in the household. To ensure the data collected was representative of respondents’ opinions, all survey questions were asked without providing answer options to the respondent. Survey

¹² The estimates for this category were calculated by considering the percentage of households who reported sharing their filter and by inferring an approximate number of people who would be associated with this percentage. For example, in Summit, 50% of survey respondents reported sharing their filter, a percentage equivalent to 35 households. Based on our knowledge of the communities, we inferred that at least 1 person from outside the household might use each filter, giving us an additional 35 beneficiaries. We believe this is a conservative estimate as some households may share their water with more than 1 person.

enumerators were instructed to document a respondent’s answer by selecting one of the provided answer options. In the case of answers that did not fit into a provided category, surveyors were instructed to select “other” and then document the respondent’s answer. In some situations, survey respondents were able to list more than one answer to a given question and, as a result, listed percentages of responses per question add up to greater than 100%. These have been noted throughout this report as they occur.

Survey enumerators recorded respondent answers on a paper survey which was later cross-checked for accuracy and completion by the Survey Team Lead before being entered into the digital Survey Gizmo platform. OUR ORGANIZATION Team members used the Survey Gizmo platform to sort data and perform basic data analysis to identify trends by community.

Although our intention was to survey all BSF Recipient households in all three communities, some households did not have a representative present at the time of surveying activities which occurred over the course of five days. However, given that we were able to complete surveys for the majority of BSF Recipient households, we were able to achieve an exceptional response rate.

Community Name	Total # of BSF Recipient Households	Total # of Surveys Completed	% of BSF Recipient Households Surveyed
Summit	71	70	99%
San Pedro	74	72	97%
Biong	10	10	100%

Qualitative Research

In an effort to triangulate and supplement information gathered through the Evaluation Survey, OUR ORGANIZATION Team members conducted a series of semi-structured interviews with community-based BSF Recipients, Project Leaders and Helpers, and Key Informants and/or Community Leaders. In selecting interview subjects from the list of BSF Recipients, OUR ORGANIZATION made an effort to select a diverse range of community members in order to capture a potentially diverse range of experiences with and opinions about the project. The table below provides a summary of interviews conducted by community. For a complete list of interview subject names and descriptions, see Appendix 1.

Community Name	# of BSF Recipients Interviewed	# of Project Leaders & Helpers Interviewed	# of Key Informants/ Community Leaders
Summit	5	3	1
San Pedro	5	3	1
Biong	4	N/A	1

In addition to community-based interviews, OUR ORGANIZATION Team members also spoke at length with the field-based Project Manager and five members of the FARMER GROUP Team to gather their perspective on successes and challenges related to project implementation as well as their perception of community dynamics particularly related to perceptions of the project. Information gathered during these discussions has been included throughout this report where appropriate.

This report also includes observations made by the OUR ORGANIZATION Team during evaluation activities as well as throughout the life cycle of the BSF Project. When possible, these observations have been triangulated by quantitative and/or other qualitative data. Finally, where appropriate, this report references findings from previous efforts, including the results of the WaSH assessment conducted under the direction of ASDSW.

Please reference the Glossary of Terms in Appendix 2 for definitions of commonly used terms and phases from this report.

Findings

Key findings below have been disaggregated by community (i.e. Summit, San Pedro, and Biong) and have been organized into the following topical areas:

1. Water Access
2. Water Quality
3. BSF Use
4. BSF Care
5. BSF Project Perception

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San Pedro

Prior to the start of Evaluation Activities, Project Leaders reported that 81 filters had been constructed in San Pedro. However, after arriving in the community, the survey team discovered that only 74 filters had been installed. The findings below represent a combination of quantitative and qualitative data focusing primarily on those households possessing an installed BSF.

San Pedro Key Findings Overview	
Topic	Finding
Water Access	San Pedro does not suffer from water insufficiency
Water Quality	71% of survey respondents believe their main source of water is “safe” to drink 89% of survey respondents practiced some form of water treatment prior to receiving their BSF
	Water testing conducted in June, 2018 revealed all water sources are contaminated with E.coli
BSF Use	50% of survey respondents reported using their BSF every day 40% of survey respondents discussed sharing water from their filter with people outside their household
BSF Care	97% of respondents stated that someone had explained how to use and maintain their filter during installation Of these, almost 83% remembered they had been told to “clean the diffuser plate regularly/ ‘swirl and dump,’” 63% recalled the importance of daily use
BSF Perception	97% of survey respondents stated their household had experienced benefits from having a filter Of these, 92% listed “health benefits” and almost 50% stated they had “less worry”

Water Access

General Access

1. Fifty-four percent of survey respondents stated they had a direct-to-household water connection
 - a. This finding is at odds with the 2018 WaSH Assessment which found that community members surveyed either accessed a public/communal tap stand or a spring, with none reporting a direct-to-household connection
 - i. It is worth noting that the WaSH Assessment only surveyed a representative population sample of 33% of the community
 - ii. However, as the sample was considered to be representative of the community overall, we assumed that no community members had access to a direct-to-household connection
 - iii. During qualitative interviews, OUR ORGANIZATION observed one possible direct-to-household connection in the San Pedro community

- b. Further follow-up is needed to determine if this finding is in error
- 2. Almost 24% listed a public or communal tap stand as their primary source of drinking water
- 3. Twenty-two percent of survey respondents stated their primary source of drinking water was an undeveloped spring, river, or public refilling station
 - a. One of the Project Leaders stated the spring is “far” from the community which is why so many people chose to travel by hired tricycle to Gigmoto to purchase water, especially during times when the water “looks dirty” [More on this below]
- 4. San Pedro’s Elementary School does not have a water connection
 - a. Students fetch water from a public faucet across the street for use in school, returning home to drink water from their BSF [More on this below]

Insufficient Water Supply

- 5. Questions related to water sufficiency were not included in the Evaluation Survey since the intention of the BSF Project was not to address sufficiency issues
- 6. During semi-structured interviews, only one interview subject mentioned insufficient water supply in San Pedro in passing
- 7. With minor exceptions, it appears San Pedro does not suffer from water sufficiency issues, at least not on the same scale as Summit (P. Vera)
 - a. This is a significant difference between the communities [More on this in the Conclusions section]

Water Quality

Water “Safe” to Drink

- 1. Almost 71% of survey respondents stated that their main source of water is safe to drink
 - a. When asked why, 56% of these stated “no one got sick”
 - b. Thirty-six percent stated “I was told it was safe”
 - c. Thirty-two percent¹³ of respondents explicitly said they thought the water was safe to drink because they “practice household water treatment”
- 2. Water testing completed during the community needs assessment in June, 2018 revealed the presence of E.coli in all water sources, making it unsafe for human consumption unless filtered correctly
 - a. Testing results were presented at a Barangay Assembly in July, 2018 and explained to the 56 community members who were in attendance, representing approximately 53% of households in San Pedro
 - i. Two of the three Project Leaders stated that these results were not surprising to community members and yet they do not feel the water is unsafe [More on this in the next section below]

“They already know [the water is dirty] and took the information. We are already old. We drink water from the source and we aren’t dead yet so it’s ok to drink from this source.” – Melinda, Project Leader

¹³ Note: These figures add up to greater than 100% as respondents could list multiple reasons for believing their water is safe.

3. As in Summit, ASDSW states that the perception that the water is “safe” to drink, despite being contaminated, may be a contributing factor to lower demand for water filtration in the San Pedro community [More on this below]

Water “Unsafe” to Drink

4. Only 29% of respondents stated their main source of water is unsafe to drink
 - a. When asked why, 76% stated that the “water is turbid (cloudy)”
 - b. Almost 48% stated that the “water has sediments”
 - c. Another 47% listed “other” reasons for water contamination including “people swimming [at the source],” “presence of animals [at the source],” “presence of insects,” “presence of leaves,” and “presence of bacteria”
5. The majority of semi-structured interview participants agreed that water in San Pedro was generally “unsafe”
 - a. This represents a difference between quantitative (survey) and qualitative findings
 - i. It may be that interview participants were more aware of water quality issues than the general population
 - b. When asked why they believed the water was “unsafe,” several interview participants mentioned a diarrhea outbreak which occurred in 2016
 - c. Several interview participants, including both Project Leaders and BSF Recipients, mentioned the water testing results which showed the water was “dirty”
 - i. Although not all participants identified “E.coli” as the contaminant, many remembered testing results
 - ii. It is encouraging that so many interview participants mentioned the testing results
 1. This suggests Project Leaders have discussed water testing more frequently in the community or that their method of communication was more memorable to recipients
6. As mentioned above, water testing has confirm the presence of E.coli in all community water sources
 - a. These results were presented to community members during a Barangay Assembly and again during house-to-house outreach conducted by Project Leaders and Members of the Barangay Council
 - i. This was confirmed during semi-structured interviews with Project Leaders and BSF Recipients
 - b. Community members seem to have accepted the results although, as mentioned above, many seem to think consumption of the contaminated water is not a big deal

“We kind of have the mindset that it was ok [to drink the water] as long as we’re healthy, as long as we’re still here.” – Jonny, Project Leader

Water Treatment Pre-BSF

7. Although the majority of survey respondents stated their water is safe to drink, almost 89% of respondents stated that their household practiced some form of water treatment prior to receiving the BSF
 - a. Of these, 75% stated they “always” practiced filtration with a piece of cloth or clothing
 - i. OUR ORGANIZATION Team Members observed this in practice, with community members tying a piece of clothing onto the faucet of a public tap stand while collecting water for their household

1. Although rudimentary, ASDSW states this method can be an effective way to remove large particulates, including mosquito eggs, from the water
 2. However, this method of filtration may also introduce other contaminants into the water, particularly if the cloth is dirty
 - b. Almost 23%¹⁴ stated they “sometimes” boiled their water
 - c. The prevalence of water treatment in this community pre-BSF project is a positive sign as this existing behavior can be slightly modified to encourage adoption of the BSFs
8. During semi-structured interviews, only one participant explicitly mentioned water treatment prior to receiving his BSF
- a. He stated he used to filter his drinking water with a cloth
 - b. While not explicitly discussed as “water treatment,” the majority of interview participants discussed traveling to Gigmoto, approximately 1.5kms away, for their drinking water

“Even before the BSF Project began, we were fetching water from Gigmoto because the taste from the faucet [in San Pedro] is not good and the water from Gigmoto tastes better, it was tested.” – Mary Jane, BSF Recipient

- i. Project Leaders estimate that roughly 60% of households in San Pedro used to get potable water from outside the community
 1. BSF Recipients stated fetching water from a different community was time consuming and costly [More on this below]

Purchasing Drinking Water

9. Prior to receiving their BSF, only 26% of survey respondents stated they spent money on or purchased water used for drinking
- a. Of these, 35% stated they spent P50 - P70 (\$0.69 - \$1.35)¹⁵ per week
 - b. Twenty-five percent stated they spent more than P70 (\$1.35) per week
10. During semi-structured interviews, the majority of interview participants discussed traveling to Gigmoto for their drinking water, as discussed above
- a. The transportation costs alone can be burdensome for low-income residents
 - i. Two BSF Recipients stated that the tricycle ride to-and-from Gigmoto cost P50 (\$0.96), with fetched water lasting her approximately one week
 - ii. One of the Project Leaders stated her husband would ride his motorcycle to Gigmoto three times per week, costing him P60 (\$1.15)
 - b. In addition to covering the cost of transportation, some participants stated they also purchased mineral water for drinking
 - i. One of the Project Leaders stated she would spend P30 (\$0.58) per container, three times per week, for an approximate weekly total of P90 (\$1.73)
 1. These cost estimates are in-line with what was reported on the survey
 - c. Finally, the cost of getting water from outside the community also includes the opportunity cost of time spent fetching water versus time spent doing other things, including attending to household responsibilities and/or participating in income generating activities

¹⁴ Note: These figures add up to greater than 100% as respondents could list multiple methods of water treatment

¹⁵ Throughout this report, Philippine Pesos (P) have been converted to US Dollars (\$) using a conversion rate of P52 = \$1

11. A lower number of survey respondents reported spending money on water for drinking in San Pedro than in Summit
 - a. However, participants in semi-structured interviews in San Pedro spent more time discussing the cost of purchasing drinking water before receiving their BSF
 - i. This may be indicative of lower income levels in San Pedro than in Summit and the associated strain on household budgets caused by additional expenses, like purchasing water
12. Given the low-income levels in the community overall, purchasing water is an additional expense which may prevent households from purchasing items such as food and school supplies

BSF Use

Number of Beneficiaries

1. Since BSFs are intended for use on the household level, respondents were asked to provide us with the number of people living in their household, not including themselves
 - a. The average response was 4 household members, 5 including the survey respondent
 - i. This is consistent with the figure the Philippine government typically uses to estimate household size
 - b. The highest number was 11 household members, 12 including the survey respondent
 - c. The total number of household members was 286, a number which grows to 360 when including survey respondents

Use Outside of Household

2. When asked if people from outside their household drink the water from the BSF, almost 40% of respondents stated “yes”
 - a. Of these, almost 86% stated this occurs “sometimes”
 - i. It is possible that respondents under-reported the frequency with which they share water from their filter, especially as ASDSW has communicated that BSFs are intended for household use only
 1. As mentioned in the Summit Key Findings section, BSFs are intended to be a household-level filtration system and are not designed to provide water beyond the immediate household needs, up to 200 liters per day
3. During semi-structured interviews, only one BSF Recipient admitted to sharing the water from their BSF, with one Project Leader mentioning an additional instance of a community member sharing a BSF with a family member
 - a. The BSF Recipient is a teacher at San Pedro Elementary school and shares water from her BSF with the other teachers
 - i. The BSF Recipient stated the students go home to drink the water from their own filter since almost all have one
 - b. The Project Leader stated that, there was a community member whose house was under construction, and she was sharing her mother’s BSF until her own filter could be installed
 - c. Given that the majority of households in San Pedro have received a BSF, it is unsurprising that fewer recipients report sharing BSFs with people outside their household
 - i. However, again, it is possible interview participants are under-reporting instances of sharing as they know it isn’t ideal
4. Sharing water from household BSFs is consistent with observed cultural norms and is typical of a relatively small, rural community

- a. Many community members are related to one another and freely share resources among households
5. Since there are a few known examples of sharing water from household BSFs, we can adjust our number of project beneficiaries

Uses for Filtered Water

6. When asked to state the uses of the filtered water, almost 96% of respondents listed “drinking”
- a. Almost 74%¹⁶ of survey respondents listed “cooking”
7. During semi-structured interviews, the majority of respondents mentioned using their filter every day with the implication being it was used primarily for “drinking” even if not explicitly stated
- a. A few interview participants also mentioned “cooking”
 - b. One BSF Recipient stated she used water from the filter for “everything, except cleaning,” including cooking, washing her face, making ice, and making ice candy to sell

Average Use

8. Fifty percent of survey respondents stated they use their BSF every day
- a. Almost 31% percent stated they use their BSF 3-4 days a week
 - b. Only 14% stated they use their BSF 1-2 days a week
9. In semi-structured interviews, the majority of respondents explicitly stated they use their filter every day
- a. When asked why, respondents provided a variety of reasons including consistent or high-volume use by household members and the feeling of security that came with daily use (“to feel safe and be safe”)
 - b. Project Leaders all mentioned “daily use” as an important part of their messaging to community members
 - i. However, Project Leaders acknowledge that despite this messaging, not all households use the filter every day.

“[We tell them] they should use the filter daily because it will filter E.coli. What stuck in their minds is that they can use it in the rainy days because the water is more dirty looking them.” - Melinda, Project Leader
 - c. Although not all households appear to practice daily use, daily use was mentioned more frequently in San Pedro than during Summit interviews
 - i. Higher access to water likely contributes to more frequent use of BSF filters
 - 1. As it is easier to get water in San Pedro, BSF Recipients may be more inclined to use their filters more frequently
 - d. It is worth noting that based on survey responses alone, BSF Recipient households in both Summit and San Pedro practice daily use of their filter at almost exactly the same rate, 51% and 50%, respectively
 - i. This finding suggests that semi-structured interview participants either use their BSF filter more frequently than the majority of survey respondents or that they were more likely to report daily use

¹⁶ Note: These figures add up to greater than 100% as respondents could list multiple uses for the filtered water

1. In the case of the latter, it is possible that semi-structured interview participants discussed daily use with the OUR ORGANIZATION interview team because they assumed it was something we wanted to hear
10. As mentioned in the Summit Key Findings section, ASDSW states that daily use of the filter is a preferred way to ensure the health of the biofilm layer and related efficacy of the BSF
 - a. However, assuming the BSF is properly cared for in other ways, the biofilm layer is unlikely to die if the filter is used several days per week
 11. Almost 92% of respondents stated they poured between 0 and 50 liters of water into the filter per day (estimated average)
 - a. This estimate may not be reliable as community members may not have a way to measure or conceptualize “liters of water”
 - i. Survey enumerators were instructed to visually inspect the household water jug or bucket and make assist survey respondents in making an educated guess about the amount of water used each day
 - b. Assuming an average of five people per household, 50 liters per of water would meet the WHO minimum standards of water consumption

Person Pouring Water

12. Almost 89% of respondents stated that the female head of household poured water into the top of the BSF
 - a. Forty-three percent¹⁷ of respondents stated a child or children pour(s) water into the top of the filter
 - b. Forty percent of respondents stated the male head of household pours water into the top of the filter
13. This finding suggests that women are primarily responsible for pouring water into the filter which is consistent with findings from the WaSH assessment which shows that women were primarily responsible for fetching water
 - a. However, it is encouraging that so many respondents also discussed a child or children as well as the male head of household as having a role in pouring water into the filter as this indicates filter use
 - i. This indicates filter use is seen, at least partially, as a shared household responsibility in this community
 - ii. This also indicates that children are likely learning about the filter through their participation in BSF Use

BSF Care

Care Instructions

1. Ninety-seven percent of respondents stated that someone had explained how to use and maintain the filter at the time of filter installation
 - a. Of these, almost 83% remembered they had been told to “clean the diffuser plate regularly / “swirl and dump”
 - b. Almost 63% recalled the “importance of daily use”
 - c. Twenty percent discussed “proper storage” of the BSF

¹⁷ Note: These figures add up to greater than 100% as respondents could list multiple household members as pouring water into the top of the BSF

2. During BSF construction, installation, and maintenance training, ASDSW described five factors as an important part of caring for BSF filters: “importance of daily use,” “store filter in a protected location,” “clean spout daily,” “clean diffuser plate regularly,” and “do not add chemicals (like chlorine)”
 - a. While it is encouraging that the majority of community members remembered at least two of these factors, these findings suggest that BSF Recipients would likely benefit from a refresher course in BSF care and maintenance
 - b. Proper BSF care ensures the health of the BSF by preventing the build-up or introduction of additional bacteria into the filter

Care in Practice

3. Survey enumerators observed that 100% of BSFs were stored properly (i.e. protected from weather, on a level surface, away from animals)
 - a. Proper storage of BSFs suggests they are valued possessions in recipient households
 - b. Additionally OUR ORGANIZATION observed that many of the BSFs in San Pedro have been painted in a variety of colorful designs and patterns
 - i. This is another indication that BSFs are a valued possession in recipient households
4. When asked which member(s) of the household care(s) for the filter, 86% of respondents listed the female head of household
 - a. Almost 21% listed the male head of household
 - b. Almost 17% listed a child or children
5. As described in the “BSF Use” section, this is consistent with previous assessments which revealed the female head of household to be primarily responsible for fetching water, as well as other household responsibilities such as cooking and cleaning
6. Although almost 63% recalled “the importance of daily use,” only 50% of survey respondents stated they use their BSF every day
 - a. As mentioned above, ASDSW states that daily filter use of the BSF ensures a healthy biofilm and contributes to the efficacy of the filter
 - b. However, provided the BSF is being cared for in other ways, use every few days is unlikely to cause harm to the filter

BSF Perception

Difference in Water

1. When asked to list the ways in which the filtered water is different from the primary source of water, almost 78% of respondents stated that the “water is clean”
 - a. Almost 67% noted that the “water is cool”
 - b. Fifty-one percent¹⁸ stated that the “water has a palatable taste”
 - c. Almost 38% stated the “water is safe (less sickness)”
2. Findings from the survey were echoed by almost all semi-structured interview participants
 - a. Almost all participants noted the water from the filter was “safe”
 - b. The majority of interview participants also mentioned both the taste and the cool temperature of the water

¹⁸ Note: These figures add up to greater than 100% as respondents could list multiple differences

"[The filtered water] tastes good and it's clear. The BSF water is better than the water at the tap. It has a sweet taste. All of us drink it. All of us like it.

– Monica, BSF Recipient

3. As discussed in the Summit Key Findings section, we had expected participants to note the cleanliness of the water, but were pleasantly surprised to hear so many of them discuss the filtered water was cool or tasty
 - a. ASDSW notes that the coolness of the water is a commonly reported benefit from BSF users across the Philippines
 - b. ASDSW believes the concrete casing, stored out of direct sunlight, and the sand filtration components work together to cool the water much like a canopy of trees and a sandy bottom cool a mountain stream

Benefits

4. Ninety-seven percent of respondents stated that their household had experienced benefits from having a household filter
 - a. Of these, almost 92% listed "health benefits," including less/ no sickness
 - b. Of these, almost 50%¹⁹ stated they had "less worry"
 - c. Of these, 38% stated that the "water has a better taste"
 - d. Almost 30% explicitly mentioned "money saved"
 - e. Almost 16% explicitly mentioned "time saved"
5. These findings were echoed by participants in semi-structured interviews, with each participant focusing on the benefits they believed to be most important
 - a. As mentioned above, the majority of participants mentioned the safety of the water, with 3 explicitly discussing the "health benefits" of having a BSF, particularly for children and/or the family overall

"[The BSF benefits us because] it's more safe and we save money.

In terms of health, my grandkids became safe." – Norma, BSF Recipient

- b. More than half of interview participants listed "money saved" as a benefit [More on this below]
- c. Two interview participants mentioned time saved from having to fetch water as a result of getting a filter
 - i. One Project Leader stated that time spent fetching water can now be dedicated to other activities including household responsibilities
- d. Project Leaders explicitly stated they marketed BSF to members of the community by describing the benefits of the filter

"[I tell people] this [filter] is a benefit for you, it's for your health, for your children. You will save money and time instead of having to go to Gigmoto proper or the filling station."

– Angelica, Project Leader

6. When asked if they had been spending money or paying for drinking water since getting a BSF, 99% of respondents said "no"
 - a. Five interview participants explicitly mentioned saving money
 - b. When asked what they were doing with the money they used to spend on water, three of the five participants stated they were spending it on their children through allowances, school fees, and food
 - i. This is indicative of positive ripple effects of the BSF Project related to children's education and nutrition

¹⁹ Note: These figures add up to greater than 100% as respondents could list multiple benefits

1. Further follow up is needed to determine if this remains true over the long term
- c. One participant stated she was saving the money for “future expenses”
- d. No participants mentioned the cost of hospital visits or medication related to treating water borne illness
- e. Given low levels of income, and the frequency with which saving money was discussed by interview participants, “money saved” and/or impact on household budget may be a positive impact of the BSF Project
 - i. Further follow up is needed to determine if this remains true over the long term

BSF Project Perception

The Project Close Evaluation Survey did not ask questions related to the perception of the BSF Project in the community. Semi-structured interviews were considered a more appropriate forum for discussions related to successes and challenges of the project

7. In semi-structured interviews, all interview participants explicitly stated the BSF Project was a positive thing for their community
 - a. All Project Leaders stated that the majority of community members were supportive of the project
 - i. One Project Leader stated that, in particular, the mothers (female heads of household) were most thankful for the project as it reduced the amount of time they spent fetching and filtering water
 - ii. When asked how many people were unsupportive, Project Leaders estimated there were only 4 – 5 households who were unwilling to participate
 1. This is a significant difference from Summit

“Mostly, [people in the community] are very thankful for the project because they don’t suffer for fetching water, for transporting water. They don’t have to pay anything because they have a filter... The people who said it wasn’t helpful for them are the people who don’t have a BSF. They don’t really know the benefits.” – Jonny, Project Leader

- iii. Two interview participants stated that the people who were unsupportive of the project were being unsupportive for political reasons
 1. Although the San Pedro Barangay Captain does not appear to be a polarizing figure in the community, his political opponents have been known to resist projects or programs which he supports
- b. Two BSF Recipients discussed their early skepticism of the project and the filters but stated that, as soon as they saw the filters in action, tasting the clean water for themselves, they were convinced
 - i. According to Project Leaders, door-to-door outreach²⁰ was a key component of convincing community members to accept BSFs
 1. This allowed for the repetition of key information and provided an opportunity for Project Leaders to directly address questions or concerns
 - ii. This aligns with ASDSW recommendations to incorporate continued education around water testing results and the impact of consuming contaminated water
 1. Without this kind of outreach, it is possible that misconceptions about the “safety” of unfiltered water may contribute to low demand for BSFs

²⁰ Project Leaders described going house-to-house to share information about the BSF Project and, specifically, to provide information related to the benefits of having a BSF installed in each house.

8. Project Leaders in San Pedro state that BSFs have been distributed to all households that want them
 - a. After taking into account multiple families living in the same house, this means filters have been installed in 77% of all households in San Pedro
 - i. OUR ORGANIZATION is satisfied that the majority of the households in this community have a BSF and believe this is an indication of a positive reception for this project in San Pedro
 1. This is a notable difference between Summit and San Pedro



Figure 5: Melinda, a San Pedro Project Leader, poses with a BSF

SAMPLE EDITED FOR LENGTH – PORTIONS REMOVED

Project Implementation Reflections

When asked to reflect on the implementation of the BSF Project in their communities, Project Leaders and Helpers provided insight into challenges as well as potential solutions. These reflections have been used to inform key “Lessons Learned” which appear in the Conclusion section of this report.

San Pedro

1. During Project Planning and Design activities in June and July, 2018, San Pedro community representatives identified water access and quality as priority needs in their community
 - a. To address these needs, these representatives submitted two requests for finding:
 - i. A request for a Level III (direct-to-home) water system
 - ii. A request for a BSF Project
 - b. Of these, OUR ORGANIZATION elected to fund the request for a BSF Project given its smaller size and scope
 - i. As mentioned above, this was communicated to the community leaders who agreed the BSF Project would be an opportunity to demonstrate their commitment to the project and ability to work together
 - c. The submitted request to fund the BSF Project listed a goal of 107 BSFs installed in all San Pedro households
 - i. Community leaders state the figure for number of households is widely used by government programs to determine who is eligible for benefits
 - ii. However, some individual households live under the same roof meaning that, in some cases, two “households” may actually share a BSF
 1. With this in mind, there are actually 96 distinct houses in San Pedro meaning there are 96 households who are eligible for a BSF
2. Fourteen community members, primarily Barangay Representatives, attended the BSF construction and installation training offered by ASDSW in September, 2018
 - a. Of these, 10 members remained active participants in the BSF project for the first few months of the project
 - b. Over time, this group dwindled in size to three people as group members returned to their income generating activities [More on this below]
 - c. As in Summit, ASDSW training in San Pedro was delayed due to issues with the BSF concrete molds which arrived in need of immediate repair
 - i. However, unlike Summit, this delay in training did not appear to have an immediate impact on San Pedro group participation
3. When asked, San Pedro Project Leaders discussed the different payment and/or labor options they provided to potential BSF Recipients
 - a. Initially, Project Leaders calculated a cost of P1,000 (\$19.23) per filter as a reasonable amount for each San Pedro community recipient to pay to cover the cost of labor to construct and install the filter
 - i. This payment would then be split among the Leaders and/or Project Helpers who were involved in construction and installation
 1. One Project Leader stated this amount was more than most could afford, so some households negotiated a lower rate of P500 (\$9.62) – P700 (\$13.50)

- a. She estimates that only 4 households were willing to pay even this lower amount
 - i. These households had “higher economic status” in the community
 - b. As part of the initial planning process, Project Leaders stated that households who were unable to pay would be allowed to “earn” their filter by contributing a certain amount of labor to the project (i.e. collecting gravel from the river, or washing sand and gravel, or by helping with construction) over the course of several days
 - i. However, one Project Leader states that many households did not have the time to contribute labor over several days
 - 1. Many people, especially abaca farmers, need to work consistently to earn an income, echoing statements from the Summit community
 - a. In weeks leading up to holiday periods (i.e. before Christmas and Easter), work on the abaca farm increases with multiple family members traveling to the farm to earn money for holiday expenses
 - 2. She states Project Leaders agreed to a compromise, which was to have these households contribute a snack or food to the people who were constructing and installing their filter
 - a. These households had “lower economic status” in the community
 - 3. This finding is aligned with findings from the Summit community
4. Initially inspired by discussions about payment options for BSF installation, San Pedro project group members decided to pursue BSF installation as an income generating opportunity outside of the San Pedro community
 - a. All 14 members agreed to form a small business, Crystal Drop, to complete BSF installations in San Pedro and then begin marketing BSFs to other communities
 - b. Of these original members, Project Leaders state that only 10 members are still active in the group
 - i. However, Project Leaders also state that not all group members have been consistently available
 - 1. At times, only 3 group members were available to participate

“In the beginning, things were good and we had a great organization... After Philippa left, things changed, people started fighting. Part of the plan was that everyone was supposed to help but then only three ladies were really helping and working every day... Some of the members lost motivation.” – Melinda, Project Leader

 - 2. This finding highlights the influence caused by the presence of OUR ORGANIZATION staff in the community
 - 3. This finding also highlights the extent to which women were an essential part of making this project a success
- c. Project Leaders began to offer “incentives” (money or food) to group members who were active in the construction or installation of filters
 - i. If BSF Recipients could not pay these incentives, one of the Project Leaders would pay this expense out of pocket
 - 1. This represents his commitment to the project
- d. Project Leaders have described the conflict as a “personal” conflict between one member of the group and the others
 - i. The group is working to resolve the conflict although state that feelings have been hurt

1. When asked, two Project Leaders stated that community youth, particularly young men, had been asked to participate in project activities
- e. One Project Leader stated that youth were the main participants as older people have a more difficult time participating
 - i. This is another difference between the community of San Pedro and Summit
 1. In support of the Crystal Drop Business, OUR ORGANIZATION paid Project Leaders P2,000 per filter to install BSFs in each FARMER GROUP household in the neighboring community of Biong
- f. Project Leaders state that installations in Biong were, overall, a success
 - i. One Project Leader explicitly stated that community members in Biong were “excited” as they were not expecting to receive BSFs
 - ii. Another Project Leader explicitly stated that community members in Biong were “stubborn” although did not provide an explanation as to why
- g. However, there were also challenges with the installation
 - i. Prior to installation, no one scouted the location which meant that the group was surprised to find some of the houses were located at the top of a steep hill
 1. This required the group to pay an additional “transportation fee” to have men carry the filter up the hill
 - ii. Although Project Leaders were able to offer a labor stipend to installation participants, the amount was not very much

“If we are going to compare [the rate] to abaca, it’s not enough.” – Melinda, Project Leader

- iii. This is aligned with ASDSW assumptions that the high daily rate of abaca farming relative to other agriculture activities may have created additional issues around sustaining voluntary or low-paid labor for BSF construction and installation [Details on this provided above in Summit Section]
- h. There were also group challenges following the installation
 - i. As OUR ORGANIZATION paid a total of P20,000 for the installation of 10 BSFs, group members had an expectation that there would be money left over
 1. However, there was no clear communication about how much money was left over, if any
 2. There was also no group consensus on what would be done with the remaining funds
 3. OUR ORGANIZATION has advised Crystal Drop that they need to improve group communication and accounting practices so there is more transparency around funds
 - ii. One Project Leader states that some group members suspect him of taking the additional funds and/or project materials although this is not the case
 1. This is indicative of waning levels of trust among group members
 2. Improved communication and accounting practices will hopefully restore trust within the group
 - a. OUR ORGANIZATION’s Project Manager will provide support to the group to establish these practices until the official close of the project on August 31st, 2019
 - iii. As not all group members are interested in continuing with the small business, Project Leaders are concerned that they will not have enough capable (trained) people to complete future BSF installations

“As much as possible, we would want the members who attended the training to do the construction to ensure the quality of the BSF... rather than having laborers.” – Angelica, Project Leader

- iv. ASDSW states that entrepreneurship is an individual rather than group activity and that the success of the business will depend more on the drive of one or two individuals rather than the continued involvement of the majority of group members
 - 1. A driven individual will seek creative solutions to challenges, such as lack of trained labor, and will likely be a more effective marketer of the product
- 5. In order to pursue their business further, Crystal Drop is in need of startup capital to cover the initial cost of marketing, materials, and labor
 - a. OUR ORGANIZATION has agreed to provide startup capital in installments, provided certain conditions are met
 - i. These conditions include the improvement of communication and accounting practices (as mentioned above), installation of at least 5 BSFs outside of the San Pedro community, and the establishment of a group/ “company” bank account
 - ii. OUR ORGANIZATION’s Project Manager will provide support to Crystal Drop to accomplish these tasks until the official close of the project on August 31st, 2019
 - b. ASDSW has emphasized the importance of establishing and following clear roles within the group
 - i. Differentiation between group members should facilitate the launch of the business by allowing different people to focus on completing different essential tasks
 - 1. Although OUR ORGANIZATION can provide support and encouragement to this process, ultimately, assigning and executing upon different roles relies upon the drive and commitment of the group members themselves
 - 2. As mentioned above, OUR ORGANIZATION’s Project Manager will provide support in this matter through the official close of the project on August 31st, 2019
- 6. Despite minor challenges related to group dynamics, overall, Project Implementation in San Pedro has been a success
 - a. Community interest has remained consistent overtime, despite issues sustaining voluntary labor over the course of the project
 - b. As a result, 100% of FARMER GROUP households have access to a BSF, with 77% of community households overall containing a filter
 - i. Out of 96 households, 10 households formally declined their BSF for a variety of reasons
 - 1. Of the remaining 86 households, 74 households have received a BSF
 - a. Only 4 households are still waiting to receive a BSF once construction on their house is completed
 - ii. This is a significant difference between the San Pedro and Summit communities [More on this below]
 - c. The success of the project in this community have been used to inform key Lessons Learned which will appear in a later section

Comparison between Communities

When comparing data from the Project Close Evaluation Survey as well as information gathered during qualitative interviews, a few trends emerge. In an effort to understand both similarities and differences between the communities, we have captured these trends as a comparison.

Similarities

The communities of Summit, San Pedro and Biong have notable similarities related to the quality of water before the BSF Project, the care and use of their BSFs, noted benefits of having a BSF, and overall implementation of the BSF Project.

Notable Similarities Across BSF Project Communities			
Topic	Summit	San Pedro	Biong
Water Quality Pre-BSF Project			
Water from source is “safe” to drink	80% believe it is	71% believe it is	70% believe it is
Water Treatment practiced before having a BSF	93% said yes	89% said yes	100% said yes
Presence of E.coli in water sources	Yes	Yes	Yes
BSF Care & Use			
BSF properly stored in household	96% were properly stored	100% were properly stored	100% were properly stored
BSF care instructions – “clean diffuser plate” ²¹	60% recalled this instruction	81% recalled this instruction	80% recalled this instruction
BSF care instructions – importance of daily use ²²	68% recalled this instruction	61% recalled this instruction	60% recalled this instruction
Daily BSF Use (per survey)	51% stated they did	50% stated they did	60% stated they did
Sharing water from BSF	50% stated they did	40% stated they did	40% stated they did
BSF Difference & Benefits			
Benefits experienced from having a BSF	94% stated they had	97% stated they had	100% stated they had
Health as benefit of having a BSF ²³	89% listed health	87% listed health	100% listed health
Water from the BSF is cleaner than water from the source	78% listed cleanliness	71% listed cleanliness	80% listed cleanliness
Water from BSF is cooler than water from the source	67% listed coolness	77% listed coolness	80% listed coolness
BSF Project Overall			
Challenges with voluntary labor for BSF Project	Yes	Yes	N/A
Coverage of BSFs in FARMER GROUP farmer households	100%	100%	100%

As mentioned in earlier sections, all three communities access water sources contaminated with E.coli bacteria. Despite this contamination, the majority of survey respondents in all communities believe the water from the source is safe to drink. In all communities, interview participants stated they believed the water was safe because they had been drinking the water their entire lives and were “fine.” This indicates that community members have likely grown accustomed to intestinal discomfort caused by

²¹ This percentage is taken as a percentage of all survey respondents rather than those who had answered “yes” to the previous question: “When someone installed your filter, did they explain how to use and maintain the filter?” As a result, this percentage differs slightly from percentages listed previously in this report

²² Same as previous footnote

²³ This percentage is taken as a percentage of all survey respondents rather than those who had answered “yes” to the previous question: “Has your household experienced benefits from having a household filter?” As a result, this percentage differs slightly from percentages listed previously in this report

consumption of E.coli bacteria, although OUR ORGANIZATION's Project Manager states their prevailing beliefs are also a consequence of "stubbornness." Nevertheless, although the majority of respondents believe the water is safe to drink, the majority of survey respondents stated they also practiced some form of water treatment prior to receiving their BSF. This finding is aligned with earlier research and suggests that utilizing BSFs to treat water will require minor behavior modification.

Findings from the survey indicate that the majority of BSF Recipients in all three communities properly use and care for their filter, although not all practice daily filter use. This indicates that BSFs are valued by recipient households, which is a positive indication that filters will be cared for and used in the long term. Inconsistent reports of daily use, particularly in Summit, may be linked to water access concerns with recipients choosing to store filter water for use over several days rather than collecting water to be filtered every day. Responses to the survey show that many BSF Recipients share the water from their filter with people outside their household, which is aligned with cultural norms of sharing resources and extending hospitality. As mentioned in early sections of this report, sharing filtered water expands the reach of the BSF project as people beyond recipient households are able to access clean water. While BSFs are intended primarily for household use, we consider this a positive outcome of this project.

BSF Recipients across all three communities shared similar experiences with their filtered water and report comparable benefits. In a sign of support, the overwhelming majority of BSF Recipients reported they had experienced at least one benefit from have a filter. In all communities, the majority of recipients listed "health," making it the most commonly reported BSF benefit. While we had expected community members to experience health benefits as a result of drinking clean water, we were surprised when a Project Leader reported that his brother had been hospitalized from drinking unfiltered water. This suggests filter recipients may lose their previous immunities to contaminated water, which would be an unanticipated outcome of this project. Further follow up is necessary to determine if this finding is true for additional recipients over the long term. Notably, the majority of BSF recipients commented on the cool temperature of the filtered water which was an unexpected finding. It is possible that the cool temperature of the water and associated improvement in taste will encourage continued consumption of water from the BSFs. Further follow up is necessary to determine if this assumption is true in the long term.

Finally, the communities shared similarities related to the overall implementation of the BSF Project. Summit and San Pedro community members struggled to maintain voluntary labor over the course of the project. While a day of voluntary labor is within cultural norms, unpaid labor over several days or weeks impacts household ability to generate income. As a result, community members are unable to remain involved in a long-term project unless they receive pay or food-based compensation. This was a significant Lesson Learned which will be discussed in greater detail in the Conclusions Section below. It is important to note that in spite of some challenges, all FARMER GROUP farmers in all three communities now have access to a BSF and, as a result, access to clean drinking water. This is an important and notable outcome for this project.

Differences

The communities of Summit, San Pedro and Biong have notable differences related to both their access to potable water before the BSF Project, the care and use of their BSFs, noted benefits from having a BSF, and the overall implementation of the BSF Project.

Notable Differences Between BSF Project Communities			
Topic	Summit	San Pedro	Biong
Water Access & Quality Pre-BSF			
Water insufficiency	Yes, seasonal	No	No
Traveling to get drinking water (per interviews)	Mentioned by one interview participant	Mentioned by majority of interview participants	Not mentioned by interview participants
Paying for water Pre-BSF	44% stated they did	26% stated they did	90% stated they did
BSF Care & Use			
Painted BSFs (observed)	No	Yes	Some
Daily BSF Use (per interviews)	Not mentioned by interview participants	Mentioned by majority of interview participants	Mentioned by some interview participants
BSF Difference & Benefits			
Spending money on water since having a BSF	76% said no	99% said no	80% said yes
Saving money as benefit of BSF (per survey) ²⁴	23% listed saving money	29% listed saving money	0% listed saving money
Saving money as benefit of BSF (per interviews)	Mentioned by some interview participants	Mentioned by majority of interview participants	Not mentioned by interview participants
BSF Project Overall			
Number of trained BSF Project Leaders and Helpers	4	14	N/A
Youth involvement in project	No	Yes	N/A
Coverage of BSFs in community overall	24% of households	77% of households	N/A
BSF Project perception in community	Fair	Excellent	N/A
Desire for different project (i.e. water system upgrades)	Yes	No	N/A

As mentioned in earlier sections, while San Pedro and Biong have reliable access to water, community members in Summit are impacted by seasonal water insufficiency. Their diminishing access to water over the lifecycle of the project is a contributing factor to diminishing interest as community members do not wish to “waste” limited water on BSF construction. Conversely, although San Pedro residents have uninterrupted access to water year-round, the available water is unsuitable for consumption if not properly treated. Prior to the BSF Project, the majority of community members traveled to the neighboring town of Gigmoto in order to fetch potable water, a costly effort both in terms of time and money. By receiving a BSF, community members in San Pedro in effect improved their access to water as they can now drink filtered water from the source closest to their home. This is a contributing factor to

²⁴ This percentage is taken as a percentage of all survey respondents rather than those who had answered “yes” to the previous question: “Has your household experienced benefits from having a household filter?” As a result, this percentage differs slightly from percentages listed previously in this report

the widespread acceptance of the BSF Project within the San Pedro community and a notable difference between pilot project communities.

Although BSF recipients across all three communities share similar, positive patterns of BSF use and care, there were also notable differences. In San Pedro, the majority of BSF recipients elected to paint their filter, and OUR ORGANIZATION observed many with elaborate designs. This provides further proof that BSFs are valued by recipients and suggests that BSF recipients in San Pedro may value their filters more than recipients in other communities. Additionally, while survey respondents reported similar frequencies of use, qualitative interview participants in San Pedro and Biong were more likely to discuss using their filter on a daily basis than those in Summit. It is possible that water insufficiency in Summit contributes to less frequent filter use than in San Pedro and Biong. Daily use contributes to filter efficacy, and diminished filter use may affect the positive impact of the BSF project in the long term. Further follow up will be necessary to determine if this is the case.

When asked to discuss the benefits of having a BSF, recipients in the three communities had different experiences with money spent on and saved from drinking water. The majority BSF recipients in both Summit and San Pedro reported they were no longer spending money on drinking water, although this occurred at a much higher frequency in San Pedro. Despite this decrease in spending, “saving money” was reported as a BSF benefit by less than 30% of respondents in both communities. As mentioned elsewhere in this report, this correlates to earlier research showing a prevailing “cash in hand” mentality whereby community members spend what little money they have rather than saving it. “Saving money” was more frequently mentioned as a benefit by qualitative interview participants in San Pedro than in Summit, although many also discussed reallocating the “saved” funds to other expenses such as food and education. The frequent mention of financial benefits is likely due to lower levels of income in the San Pedro community relative to Summit. Conversely, the majority of BSF recipients in Biong reported that they were still spending money on drinking water with no respondents and no interview participants reporting “money saved” as a BSF benefit. This finding is unusual and will require further follow up to determine why this is the case.

The final and perhaps most notable differences between these communities are related to the level of participation in, and overall acceptance of, the BSF Project. Given the physically demanding nature of BSF construction and installation, involvement by a higher number of participants is vital to reducing the amount of labor completed by an individual. In Summit, only four community members completed training whereas, in San Pedro, 14 community members completed training for BSF construction and installation. Although member participation in both BSF groups decreased over time, this was less detrimental in San Pedro as they could fall back on a bigger pool of people. Additionally, San Pedro BSF group members were both young and old, with Project Leaders making an explicit effort to involve youth outside of school hours. This worked to their advantage as younger group members were in better physical condition and therefore able to complete more physically demanding work. Conversely, the Summit BSF group was comprised primarily of “senior citizens,” which meant that the majority of labor was left to a single person: the Project Leader. This greatly impacted their ability to produce and install BSFs, contributing to the slow roll-out of the project in the Summit community.

In San Pedro, we achieved BSF installation in 77% of households whereas in Summit, only 24% of households received a BSF. This indicates vastly different levels of acceptance of the project. Community and project leaders in San Pedro believe the project is perceived positively by the majority of the community whereas, in Summit, community and project leaders expressed concerns about community interest in the project. As BSF installation in Biong targeted FARMER GROUP farmer households, we do not have comparable data for BSF Project perception in the community overall. In Summit, divided community interest in BSFs is partially related to a community preference for water system upgrades. In

part, this is likely related to seasonal water insufficiency but may also be connected to the community's frequent exposure to both governmental and non-governmental projects and resulting "NGO fatigue." As San Pedro does not have many opportunities to work with external organizations, it appears the majority of their community is satisfied with BSFs and likely had limited expectations for a different project. This is an important finding and will likely influence our approach to working in other communities in the future.



Figure 6: Jonny (right), a San Pedro Project Leader, poses with his daughter, Elghie (left) and a BSF

Conclusions

Although the BSF Project has been met with varying degrees of enthusiasm in each community, the project improved access to clean water in three of six FARMER GROUP farming communities, reaching an estimated 920 beneficiaries. Additionally, the project allowed us to test different methods of community engagement resulting in key lessons learned.

Lessons Learned

1. Balance between community ownership and pay for work
2. Importance of involving diverse range of community members
3. Influence of socio-political relationships on project success

Balance between community ownership and pay for work

OUR ORGANIZATION believes in the importance of encouraging community ownership in all levels of project design and implementation. Before beginning the BSF Project, our hypothesis was that communities could demonstrate their commitment to a project by completing project activities without financial compensation. This hypothesis was encouraged by ASDSW who stated that, across the Philippines, community members typically use “bayanihan” (collective voluntary labor) to complete a variety of activities within the community. With this in mind, the expectation was that community members would unite around the shared need to address poor quality water, taking turns to complete BSF construction and installation tasks in order to balance project needs with individual household responsibilities and income generating activities. ASDSW advised the BSF Project groups in both Summit and San Pedro to implement a construction and installation schedule, designating different group members to work on different days. ASDSW also encouraged both groups to require that each BSF Recipient contribute a certain amount of labor or pay a labor fee towards the construction and installation of the household BSF. These guidelines were intended to ensure participants would not be overly burdened by project implementation.

As the BSF Project continued beyond the initial launch, the application of this hypothesis proved problematic. In Summit, only four group members completed training for BSF construction and installation. The limited amount of trained labor made it much harder for group members to take turns completing project tasks. The limited number of hands also meant that each project task took longer to complete. Within a few weeks, the proposed construction and installation schedule was rendered obsolete, with the Project Leader completing the majority of construction and installation tasks alone. When OUR ORGANIZATION inquired about whether or not BSF Recipient households were contributing labor or paying a labor fee, the Project Leader reported many people did not have the time or money to do so although some community members had offered food as a form of compensation. Initially, this was a surprising finding given that ASDSW estimated that each BSF should only take 48 hours to complete. However, Project Leaders report that community members need to work constantly in order to support their families, a finding which is indicative of low levels of income and which confirms OUR ORGANIZATION’s earlier research. In recognition of the Project Leader’s work, and in an effort to increase the number of filters installed in the community, OUR ORGANIZATION offered to pay the Project Leader P1,000 (~\$19) for each BSF installed in FARMER GROUP households. Within two months of offering this payment, the Project Leader completed installations in the 35 remaining FARMER GROUP farmer households. The Project Leader reports he was able to use this funding to improve his family piggery, another income generating activity, representing a positive ripple effect of the BSF Project in this community.

In San Pedro, 14 group members completed training for BSF construction and installation, which meant that, in theory, it should have been easier for group members to take turns completing project activities. Additionally, these group members received small business and marketing training in order to turn BSF

production into an income generating enterprise. ASDSW encouraged the group to quickly finish the installations in San Pedro so they could reap the benefits of expanding their reach to other communities and earn additional income. However, as the holiday season approached, the majority of group members reduced or stopped their participation in the project in order to focus on earning additional income. This practice is common across abaca farming communities where low-income households often work double-time to afford additional expenses associated with Christmas and Easter. While this caused delays in the proposed project implementation schedule, the project continued after the holiday season, albeit with fewer group members as some elected to remain with their income generating tasks rather than returning to the project. When OUR ORGANIZATION inquired about whether or not BSF Recipient households were contributing labor or a labor fee, Project Leaders reported many people did not have the time or money to do so although some had offered food as a form of compensation. This echoes statements from the Summit community.

Based on the rate negotiated during the small business training, OUR ORGANIZATION offered to pay project participants P2,000 (~\$38) for each BSF installed in FARMER GROUP households in Biong. With the payment as incentive, the majority of San Pedro group members came together to complete installations in 10 Biong FARMER GROUP farmer households over the course of one week. Project Leaders state that, when compared to the income earning potential of abaca, the rate of offered to group members for BSF installation is low. This suggests that, while abaca farmers are likely to be project beneficiaries, they would be less likely to participate in BSF construction and installation activities long-term even if payment were offered for completing project tasks. This raises additional questions about determining payment amounts for the completion of project activities and will require further thought work to refine OUR ORGANIZATION's approach.

Encouraging community ownership at all levels of project design and implementation remains a core component of OUR ORGANIZATION's work. However, through the implementation of the BSF Project, the need to balance community ownership with individual needs became apparent. Although it is possible for participants to finish short-term activities without compensation, long-term project implementation requires some form of payment for those completing or managing activities. Such a payment could be cash or could take the form of other needed items such as food or supplies. Given low levels of income in many herb farming and collecting communities worldwide, this lesson will be influential as OUR ORGANIZATION considers projects elsewhere.

Importance of involving diverse range of community members

When learning about community needs and designing projects, OUR ORGANIZATION prioritizes gathering input from a variety of community members including different genders, ages, and socio-economic groups. Including diverse perspectives is necessary to ensure information collected is robust and representative of the collective experience rather than the experience of one particular group or individual. Before the launch of the BSF Project, prior research efforts in FARMER GROUP communities met this goal and revealed water quality to be a shared, high-priority need in both Summit and San Pedro. However, through ASDSW training and the subsequent roll out of BSF construction and installation activities, maintaining the involvement of a diverse range of community members required careful attention.

In both communities, ASDSW encouraged community leaders to invite representatives from different neighborhoods and community groups, emphasizing the importance of collective participation as a sign of commitment to the project. In Summit, a variety of different community representatives attended the first few days of training but, over time, participation dwindled to a core group of committed participants. This group skewed heavily towards senior citizens and women likely because younger, male community members had more pressing commitments to income generating activities. As a result, the

Summit project group became limited not only by the low number of participants but also by the physical capabilities of those participants. Although committed to the project, elderly group members were unable to perform many of the physically demanding tasks associated with project implementation, and, as a result, the majority of BSF construction and installation tasks were left to the young Project Leader. The limited availability of trained labor was a contributing factor to the slow pace and limited number of BSF installations.

Conversely, the San Pedro project group had greater diversity among its members including a balance of men and woman and a balance of young and old participants. Additionally, San Pedro Project Leaders intentionally invited youth to participate in construction and installation activities outside of school hours. As a result, the San Pedro project group reported less difficulty in completing labor-intensive tasks even as the size of the group dwindled over time. This emphasizes the importance of involving a diverse range of community members at all stages of a project.

Influence of socio-political relationships on project success

Although OUR ORGANIZATION utilized a similar approach to community engagement and eventual BSF Project Implementation in both Summit and San Pedro, these efforts produced different results. Although the varying degrees of success can be explained by a variety of factors, including the desire for paid labor as well as the participation of a diverse range of group members, socio-political relationships have been an influential component of project success.

In Summit, the Barangay Captain was heavily involved in ASDSW training and was initially a vocal proponent of the BSF project. OUR ORGANIZATION assumed the intense support of a community leader was a positive sign and had hoped this was an indication the community overall would be supportive of the project. However, as project implementation continued, community support for the project appeared divided and OUR ORGANIZATION learned the Barangay Captain was a polarizing figure with roughly half the community avoiding or opposing anything with her support. Had OUR ORGANIZATION known this was the case prior to project launch, we would have made a more conscious effort to minimize the impact of the Barangay Captain in order to ensure a warmer reception for the project. Conversely, in San Pedro, community leaders are supported by the majority of community members, and, as a result, the involvement of popular community leaders in this project was a contributing factor to its acceptance by the community.

Given their complexity, the influence of socio-political relationships on project success cannot be understated. As OUR ORGANIZATION considers projects in other herbal farming and collection communities, understanding these relationships should be prioritized.

Next Steps

OUR ORGANIZATION will complete tasks associated with BSF Project Close by August 31st, 2019. It is OUR ORGANIZATION's intention to return to BSF Project communities one year from this date and the official project close to conduct further evaluation activities and determine the long term impact of BSF Filters.