

“SEVERAL COMMUNITY REPRESENTATIVES IN ALMOST ALL PARTS OF THE COUNTRY HAVE VISITED OUR BARANGAY AND WANTED TO REPLICATE THE PROJECT. HOWEVER, WHEN THEY ASK ABOUT THE CAPITAL, THEIR ENTHUSIASM BEGINS TO FALTER. MY ADVICE IS THAT THEY SHOULD REALIZE HOW BARANGAY HOLY SPIRIT STARTED. START SMALL. IN OUR CASE WE STARTED WITH MANUAL COMPOSTING AND SIMPLE WASTE SEGREGATION. THE KEY, REALLY, IS INITIATIVE.”
- JOVITA SANTOS, OIC, BARANGAY HOLY SPIRIT MRF

The garbage success story of Barangay Holy Spirit (BHS) in Quezon City emerged from the recognized need to revitalize the community and protect its citizens from illnesses and health problems. In the past, the lack of concern of the residents was evident in the prevailing unsanitary conditions in the barangay. The streets were littered with uncollected garbage, along with flies, mosquitoes and other disease-bearing pests. After more than a decade of hard work and despite an average of 66,000 kilos of waste generated daily, Barangay Holy Spirit has maintained its overall cleanliness and environmental sanitation through a successful Community-Based Solid Waste Management (CBSWM) program.

COLLECTION STRATEGY

Barangay Holy Spirit's CBSWM consists of segregation, recycling and mechanical composting. Households segregate their waste to “di-nabubulok” (non-biodegradable) and “nabubulok” (biodegradable). The ‘No Segregation, No Collection’ policy is practiced in the community. Every dump truck is accompanied by an officer from the Barangay Security and Development Office (BSDO) to facilitate implementation of this policy.

Eight garbage trucks, owned by the barangay, collect the solid wastes from the three zones of the area. Zone One's collection schedule is on Mondays and Thursdays, Zone Two is on Tuesdays and Fridays, Zone Three is on Wednesdays and Saturdays while all of the commercial areas' solid wastes are collected daily. These trucks are obliged to make their

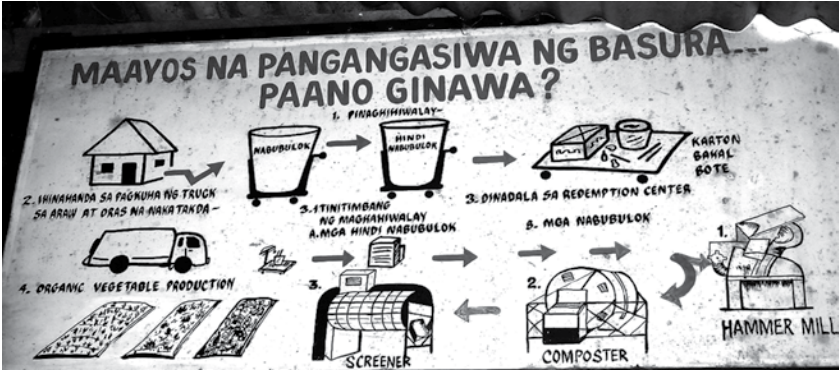
A GARBAGE SUCCESS STORY

by Rosalyn-Frances Marcelo



How Barangay Holy Spirit in Quezon City became a model for community-based solid waste management

SORTING AREA OF THE MATERIALS RECOVERY FACILITY



FROM TOP, CLOCKWISE: PROCESS OF SOLID WASTE MANAGEMENT; COMMUNITY VEGETABLE GARDEN; REVOLVING COMPOSTER DRUM; SHREDDER FOR BIODEGRADABLE WASTE.



rounds the whole day to make sure that all wastes are collected. The truck drivers and “paleros” (garbage collectors) are diligent in waste collection because their earnings also depend on the quantity of their collection. The more waste they collect, the higher the income they receive.

MATERIALS RECOVERY

The main facilities of Barangay Holy Spirit’s CBSWM are the Materials Recovery Facility (MRF), also called the Bayanihan Waste Redemption Center, and the “Bulaklakan at Gulayan” (Flower and Vegetable Garden).

For non-biodegradable materials, the MRF has a space for sorting and storage, a small office, and a handicrafts making area. At the sorting area, the non-biodegradable wastes are further segregated into paper (white and brown), metals and tin cans, plastics and bottles. Straws, old cloths, posters, cardboards and other plastics are converted into handicrafts or useful objects such as baskets, rags, and containers. These products are sold and serve as source of income for the wives of the paleros and SWM volunteers.

COMPOSTING

Biodegradable wastes that are not composted at the household level are brought to the MRF. The biodegradable wastes area is partitioned into: the mixing and shredding area (with mixing bins and one shredder); composting area with six composting drums; air-drying shed; sifting or screening area

(with one screener); and compost storage shed. After sorting and weighing, the wastes are transferred into drums/tumblers and mixed with coconut husks, saw dust (which absorbs the leach of kitchen waste) and lactobacilli—a bacterium used to remove any foul odor from wastes. They are stored inside the bins until the foul odor is removed. After composting they are grinded inside a shredder/hammer mill, and placed inside the six revolving composting drums. At the end of five composting days, they will be collected in the compost bin. To remove the methane from the compost, the mixture is dried in the covered air-drying shed for three to four weeks. Then it is sifted through the screener and transferred to sacks. This soil is either brought to the “Bulaklakan at Gulayan” or to the small vegetable garden located near the Barangay Hall where the BSDOs get their free vegetables as incentives.

IMPACT OF THE PROGRAM WASTE REDUCTION

Based on a study conducted by the Asian Development Bank, the daily waste generation of 330 cubic meters was reduced to 105 cubic meters with the segregation project of the barangay. And with almost 70 percent reduction in waste, garbage trucks make only 7.5 trips per day compared to 23.5 (the estimated number of trips for 120,000 residents and 0.55 kilo daily waste generation per person).

HOW TO IMPLEMENT A COMMUNITY-BASED SOLID WASTE MANAGEMENT PROGRAM

The following are the key implementation steps based on the experience of Barangay Holy Spirit:

- 1 Make a thorough assessment of the current state of the waste management and garbage collection system in the barangay.
- 2 Estimate the logistical requirements in terms of manpower, number of dump trucks needed, etc.
- 3 Acquire dump trucks and other equipment necessary for the implementation of the garbage collection program.
- 4 Create an Eco-Waste Management Group to supervise and monitor implementation of the project.
- 5 Establish a Garbage Redemption Center. This is the waste segregation and recycling area and the dropping point of all compostable and recyclable materials. Later this can be expanded into a full-fledged Materials Recovery and Composting Facility (MRCF).
- 6 Mobilize community participation by establishing a sense of project ownership. This includes holding regular meetings with purok (community) leaders to gain and sustain the cooperation of citizens in the garbage collection effort and to maintain the general cleanliness in their respective residences and their immediate vicinity.
- 7 Establish a systematic and regular garbage collection system by dividing the barangay into zones to make the collection of garbage more orderly and systematic.
- 8 Establish a garbage collection monitoring and evaluation system and have regular meetings to identify specific areas for improvement.
- 9 Implement the segregation of waste into biodegradable and non-biodegradable materials.
- 10 Recover recyclable materials from the non-biodegradable garbage and transform the biodegradable waste to useful organic fertilizer for the benefit of the community.

IN 2004, QC
GOVERNMENT
PASSED
ORDINANCE NO.
1191, PROVIDING
INCENTIVES TO
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UTILIZING THEIR
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FOR SOLID WASTE
COLLECTION IN
THEIR RESPECTIVE
BARANGAYS.



EMPLOYMENT AND INCOME OPPORTUNITIES

Apart from the job items for the personnel and monitoring aides of the Waste Management Office that provide employment to the barangay's constituents, this project has also generated several other opportunities for income generation. The Kariton Pangkabuhayan provides karitons (pushcarts) to out-of-school youths and aged individuals who want to be productive. With 30 units of karitons, it also supports the collection of garbage in the interior areas of the barangay. The Bayanihan Redemption Center conducts skills training for livelihood ventures using discarded but usable waste materials. Through the Entrepinay program, the wives of the paleros sell products such as soap, perfume, gel, shampoo, lotion, candles, pastry products, as well as accessories and home décor made from recyclable materials. The Bulaklakan at Gulayan provides jobs to poor families by employing them to plant vegetables. It also helps them avail of high quality vegetable products for lower prices.

IMPROVEMENT OF HEALTH AND SANITATION

Residents of the subdivisions, depressed areas, commercial and business sectors now enjoy the benefits of the cleaner environment. Less garbage mean less breeding ground for insects and pests and fewer risks on health and sanitation.

REDUCED BURDEN FOR THE CITY GOVERNMENT

Since they use and operate their own garbage trucks, the community is now independent as far as garbage collection is concerned.

PROMOTION OF DISCIPLINE AND SENSE OF RESPONSIBILITY

The residents, garbage collectors, and barangay officials all played their role according to the directions set by the barangay, which led to the success of the program. With equal distribution of tasks for each sector involved in the project, the barangay was awarded annually for its efforts. Now, the people are more vigilant in the exercise of their responsibility in protecting the environment.

KNOWLEDGE SHARING

The barangay is constantly being visited by students, entrepreneurs and government employees from all parts of the globe. The barangay shares its experiences and lessons learned through the Lakbay-Aral program of the National Government. Visitors from Ilocos Sur, Visayas, Pangasinan, Sorsogon, Catanduanes, Laguna and even Japan were able to observe and appreciate the practice of Barangay Holy Spirit.

ADVERSE REACTIONS

The first period of the implementation suffered adverse reactions from the residents of the depressed areas. As expected, they were resistant to change. The program sought the help of the BSDO who served as mediators and enforcers of the "No Segregation, No Collection" policy. Coupled with the persistent and consistent efforts of the barangay officers who imparted and explained comprehensively to its detractors the expected advantages of the project (the information and education campaign took about five to six months), the project eventually achieved the cooperation and support of the majority. Now, the people are more vigilant in the fulfillment of their responsibility in environmental protection. ■

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Elements of a Successful Solid Waste Management Program

As BHS has successfully demonstrated, the participation of the community in the SWM Project is the most critical factor in the attainment of its goals. To replicate the program, the following elements also need to be in place:

- Strong leadership, political will and commitment of the Punong Barangay (head of the administrative unit) and other local officials in starting and sustaining the project.
- Massive information campaign to engage the community in the cleanup of streets, alleyways and backyards of individual homes for a clean and green environment.
- Sufficient funds and/or initial seed capital from the local government unit for the purchase of dump trucks and other necessary garbage collection equipment and other day-to-day requirements.
- Constant supervision and monitoring to ensure the regular and efficient collection of garbage and other waste materials.
- Enactment of a local ordinance to institutionalize the program.