

Helping Citizens Earn from Solid Waste



INTEGRATED SOLID WASTE MANAGEMENT

Notes 4-1999

Environmental Management



Recycling saves natural resources and energy, reduces the amount of garbage, creates jobs, and brings in money. LGUs can promote recycling as one of the best ways to deal with solid waste.

The Challenge to Promote Recycling

Many have heard of the three Rs—reduce, reuse, and recycle. Reduce means buying fewer things to be thrown away. Reuse is using things again or giving these to those who would. Recycling means processing materials like scrap iron or plastic to retrieve useful components so these can be used again.

Recycling is one of the best ways to handle waste. It cuts down on excessive use of natural resources because recycled materials find their way back into the manufacturing process. The result is less garbage thus keeping dumpsites and landfill from filling up sooner. This saves local government money that can be spent on other projects that benefit the community. Recycling saves energy because it takes more energy to make a product from new than from recycled materials.

Initiatives in recycling have proven that “May pera sa basura (There is money in garbage).” Streets leading to dumpsites in urban centers are lined with junk shops that thrive on trading in recyclable materials. Dumpsites themselves are a source of steady income for many scavengers.

Local government units (LGU) need to create a supportive environment for more recycling initiatives and enterprises to flourish. It is in the local government’s best interest to establish support measures, as recycling is a basic component of an integrated solid waste management program. Support can take the form of local laws requiring waste segregation, collection systems that make recycling easier, or tax incentives for recycling plants.

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Technology

Ways to Support Citizen Action and Private Initiative

Here are some pointers supporting citizen action on recycling:

1. Review or establish the solid waste profile of the locality and analyze the types and quantities of recyclable waste. Read *Local Governance Technical Notes (LGTN) on Integrated Solid Waste Management (ISWM) Notes 2-1999 on Appraising the Nature of Solid Waste in the Locality*.
2. Make a directory of junk shops and recycling plants within the municipality and nearby towns and cities, and determine the prices at these outlets for accepted recyclable materials.
3. Conduct a cross-visit to other LGUs and organizations with a well-

established recycling program and note the practices that are applicable in your locality.

4. Conduct a multi-sectoral action planning workshop on recycling. Among others, involve the LGU garbage collection unit. Read *LGTN-ISWM Notes 3-1999 on Organizing Joint Action on Integrated Solid Waste Management*. Issues discussed in this activity may include the following:

- Conducting an extensive information campaign for recovery of recyclable waste at source
- Organizing scavengers, junk shops, and recycling plant operators into cooperatives if necessary

- Revising the waste collection schedule and route to support the segregation activity, and

- Establishing low-cost pilot materials recovery centers in residential subdivisions, market places, and barangays through a cooperative or partnership between the LGU and a private organization. These centers could be as small as two square meters or as big as 50 square meters with structures for storage of collected recyclable waste.

5. Implement the action plan putting emphasis on priority doable actions.

Recycling Program Approaches

There are three modes of recycling in the Philippines: 1) collection crews segregate waste during collection and, for a fee, drop off recovered materials at junk shops; 2) scavengers pick recyclable waste at dumpsites; and 3) on a pilot scale, segregation at source is done to sort and recover waste materials from the bulk waste, and re-use or convert them into useful products.

Recycling works better when LGUs and their communities

1. Promote segregation at source. Encourage households and business

firms to sell recovered materials directly to junk shops or through organized street collectors in residential subdivisions, barangays, or the municipality.

2. Establish strategically located low-cost materials recovery centers as drop-off points for recyclable waste, if junk shops and recycling plants are not readily accessible. It is practical and economical to accumulate a certain amount of recyclable materials at the centers before transporting these to junk shops or recycling plants.

3. Organize street collectors and dumpsite scavengers into cooperatives

that will run the neighborhood collection system and Municipal Recovery Centers. Train members on the proper handling of waste materials.

4. Provide households, homeowners associations, and operators of commercial establishments and institutions a directory of junk shops, recycling plants, and materials recovery centers for easy access to outlets and markets.

5. Make the segregation and recycling program of the locality and the LGU or privately operated collection scheme compatible. Have a separate schedule for collection of recyclable waste from sources in the municipality. In places where there is only a single collection schedule for all types of waste, collection vehicles must be provided with compartments for biodegradable, recyclable, and discarded waste. Provide sacks or other containers to households for recyclable materials.

6. Incorporate the above-improved practices in a local ISWM ordinance, and ensure compliance by mobilizing both the local police and volunteer enforcers.



The success of recycling programs is dependent on modifying garbage collection systems so that they support segregation efforts.



Policy and Practice

Enabling Framework

The Implementing Rules and Regulations for Chapter XVII of Presidential Decree 856 (Code on Sanitation, Chapter on Refuse Disposal) provide specific guidelines for integrated solid waste management. They define the scope of segregation, recycling, and collection activities to support segregation.

Republic Act No. 7160, the Local Government Code of the Philippines, mandates LGUs to enforce sanitation laws and prepare a solid waste management program. Section 3, Article I encourages the participation of private sector in local governance.

Memorandum Circular No. 39-A of January 19, 1988 from the Office of the President enjoins LGUs to establish integrated solid waste management systems that include: management of waste generation; handling and on-site storage; collection, transfer, and transport; processing and recovery; and disposal.

An example of a local ordinance promoting recycling is Ordinance No. 115, series of 1998 of Dumaguete City which establishes an Integrated Solid Waste Management System. It also establishes Barangay Resource Recovery Centers as a facility for collecting, storing, buying, and trading

recyclable materials from households and institutions. Barangay-based cooperatives, nongovernmental organizations (NGO), or the barangay can operate these centers. The Ordinance provides guidelines for the formation of a group of barangay resource recovery agents from unemployed and displaced scavengers and collection agents. The Ordinance also stipulates color codes for containers of collected materials which operators of resource recovery centers are required to follow, e.g., blue for plastic and gray for metals.

Practices That Are Working

Whereas the private sector has taken the lead in materials recovery initiatives, the City Government of Dumaguete spearheaded the Barangay Resource Recovery Center. They launched the program in late 1998, with five barangays as pilot sites. The first step the City took was to organize the junk shops. With the cooperation of the junk shop dealers, they standardized the prices of recyclable materials and assigned areas where "resource agents" will collect recyclable materials. The City then provided each pilot barangay with a center, a pushcart, and uniforms for resource agents. The barangay was responsible for hiring resource agents who were usually the barangay street sweepers. The resource agents were lent money to buy recyclable materials and earn a commission from the proceeds of each day's sale. While each household earned about P50 a month from the sale of bottles, the Barangay Recovery Center earned about P300 a month.

Among the five barangay centers in Dumaguete City, the Buñao Barangay Resource Recovery Cen-

ter is a good example. The program was launched in October 1998 with a two-week massive information campaign through local newspapers and radio stations. Volunteers from Silliman University and barangay resi-

dents participated in disseminating information. The program has covered around half of the barangay's area, with an estimated weekly volume of about 20 sacks of recyclable materials hauled to the junk shops.



Dumaguete City spearheaded the creation of Barangay Resource Recovery Centers in five pilot barangays and, in cooperation with junk shop owners, initiated steps to promote recycling.



LGU Action Agenda

Other Initiatives

These NGO-initiated actions provide insights on how LGUs can further promote recycling.

Linis Ganda was organized by Ms. Leonarda Camacho of the Women's Balikatan Movement in Metro Manila. The Balikatan Movement organized scavengers into teams of "eco-aides" to collect recyclable materials from households. At present, there are about 100 eco-aides under the supervision of ten junk shop owners. Eco-aides are provided P2,000 a day to purchase recyclable materials and paid P100-150 per day as compensation. To learn more of this initiative, you may call Ms. Leonarda Camacho at (02) 725-7232.

The **Condo-Residential Donor Beneficiary Scheme** of Ayala Foundation organized people's organizations to collect recyclable materials. Households are encouraged to segregate at home. Recyclable materials are collected from residential areas and business establishments, and sold to junk shops. Materials such as paper and glass bottles are sold to recycling plants of paper mills and bottling companies. You may call Ms. Sarah Sevilla of Ayala Foundation at (02) 894-5620, and ask her how they did it.

Dagat-Dagatan Polymedic Foundation's **Zero Kalat sa Kaunlaran Project** encouraged households to segregate their waste. It organized community volunteers to collect waste daily using pushcarts. Biodegradable waste is shredded and composted. Compost is used in vegetable gardens and nurseries that were made as part of the project. Reusable and recy-

clable waste is stored in the redemption center where junk dealers buy them. A cooperative was organized to operate the redemption center and oversee livelihood activities such as papermaking and crafts. You may call Dr. Maria Judea Meliora, Dagat-Dagatan Polymedic Foundation, Navotas at (046) 414-0390 for inquiries.



In Dagat-dagatan, Navotas a cooperative operates the redemption center where junk dealers buy accumulated recyclable waste.

Resources and References

For more information on the Dumaguete City recycling project, you may call the Metro Dumaguete Solid Waste Management Program Secretariat at (035) 225-0386.

The **Presidential Task Force on Solid Waste (PTFWM)** will be able to assist you with more information on how to start your recycling program; call (02) 426-2524. You may also get in touch with the **Recycling Movement of the Philippines (RMP)** at (02) 928-8895.

Regional offices of the **Department of Science and Technology (DOST)** or local offices of the **DENR** will also be able to help you.

Some must-read references:

Mag-“Recycle” Tayo: A “How-To” Guide for Recycled Products. World Bank and the Metropolitan Environmental Improvement Program. Department of Environment and Natural Resources. Manila: 1999.

Solid Waste Management for Local Governments. 2nd Ed. Presidential Task Force on Waste Management and the Environmental Management Bureau, Department of Environment and Natural Resources. Manila: 1998.